



# **Business of Ageing 2021**

## **Ngā Mahi o te Pakeke Haeretanga**

NZIER report for the Office for Seniors



**Te Tari Kaumātua**  
Office for Seniors



**Te Kāwanatanga o Aotearoa**  
New Zealand Government

## **Acknowledgement**

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## Key points

The current report updates the Business of Ageing framework set in the original 2011 report. Key findings are listed below.<sup>1</sup>

- Our older population (aged 65+) is expected to increase rapidly from 819,500 to 1,875,000 in the next 50 years. Gender distributions within 10-year age bands are expected to even out by 2071 using median population projections.
- More and more older people are part of our workforce. Currently, we have 194,700 older people in the workforce, and this is expected to double by 2071. The 65–69 age band continues to account for the majority of our older workforce. This workforce is projected to continue to be predominantly male.
- Even though our older workforce is increasing, the overall participation rates based on the ratio of workforce to population increase is dropping. More specifically, the rate of population increase for older age bands rises more rapidly than the workforce projections.
- Earnings from remunerated work for older people is currently at \$6.39 billion in 2021 and is projected to rise to around \$27.64 billion in 2071. In relative terms, based on older population projections, that is an increase from \$7,800 per older person in 2021 to \$14,700 per older person in 2071.
- Self-employment income is likely to increase from \$3.98 billion in 2021 to \$17.19 billion by 2071 (2017\$). In relative terms, that is an increase from \$4,900 per older person in 2021 to \$9,200 per older person in 2071.
- The largest contribution of income to older people is government transfers, the value of which is projected to quintuple from 2021 to 2071 – from \$17.35 billion to around \$85.13 billion.
- The value of all tax paid by older people could rise from \$9.7 billion in 2021 to \$46 billion by 2071, based on the calculations and assumptions stated within the report. In relative terms, based on the projected older population, that is an increase from \$10,900 per older person in 2021 to \$22,600 per older person in 2071.
- We reviewed the proxy wage for value of unpaid work and projected the value of unpaid work using both the 2015 carer wage and the 2021 minimum wages. The value of the unpaid work of older people is estimated to rise between \$55 and \$62 billion in the next 50 years. That is an increase from between \$14 and \$15 billion per year in 2021 to between \$69 and \$77 billion per year by 2071.
- The total value of expenditures by older people is projected to increase from \$31 billion per year in 2021 to \$149 billion per year in 2071. Aside from housing and household utilities groups presenting as outliers due to data limitations, the current spending patterns suggest that foodstuffs, transport, and recreation are the next highest contributors to older people expenditure.

<sup>1</sup> Note: the figures provided in the “key points” section are all in 2021\$. Unless otherwise noted, the figures quoted in the rest of the report are in 2017\$ to enable better comparison to the 2017 report. The full range of model outputs in both 2021\$ and 2017\$ is appended at the end of this report.

## **Building on existing work**

This report presents the results of the Business of Ageing 2021 update. This is the fifth update since 2010, which attempts to value the economic contribution of New Zealand's increasing older population.

The fifth entry in the series builds on the framework set in the 2011 report. This report needs to be read in conjunction with the 2015 and 2017 reports (Te Tari Kaumātua – Office for Seniors, 2021). These reports cover the technical aspects of model design, sensitivity, and probability issues. More detail on this research can be found on the Office for Seniors website.

The data update to the existing model includes:

- Population projections
- Labour force projections
- Calculation of labour force participation
- Value of remunerated work and other income
- Re-calculation of the value of unpaid work
- Estimated expenditure
- Re-base of the model to 2017 and 2021 dollars

To be consistent across each report in the series, we use the same model framework for the projections. Additionally, extra care was taken to ensure the input data series was as close to prior data as possible for this update. We have noted in later sections where this was not practicable due to series discontinuation or alteration of series definitions.

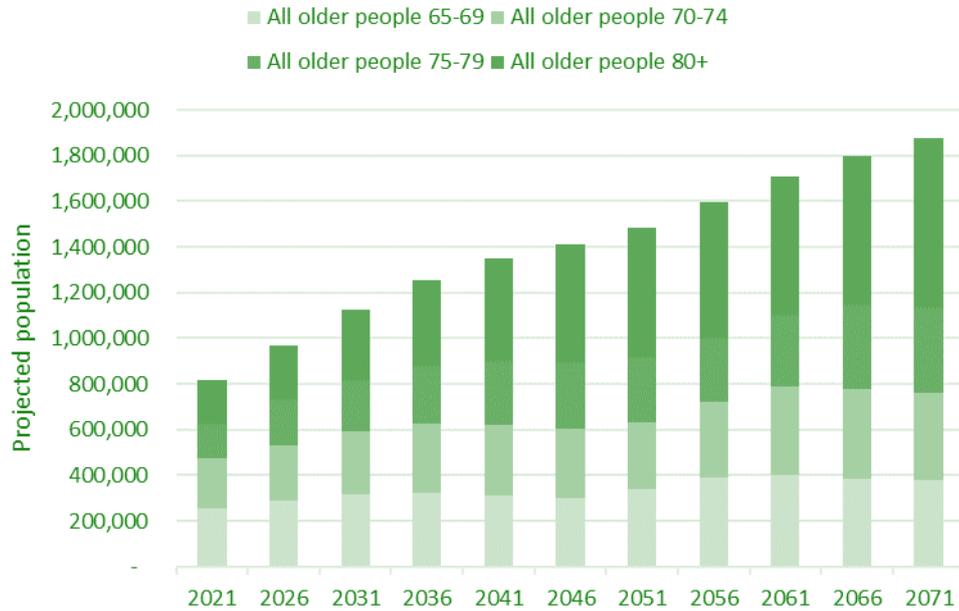
## **Key findings from model update**

### **Our older population is expected to increase rapidly**

New Zealand's older population (aged 65+) is projected to increase from 819,500 to 1,875,000 over 50 years. The 80+ age band is expected to become the largest age band for people over the age of 65 by 2071.

An interesting feature of the median population projections is the rate of increase for the under-80 age bands. The rate of increase for these age bands levels off from 2041 but experiences a stepped increase across the groups from 2051. This contrasts with the 80+ age band, which is expected to have a steady increase through to 2071.

**Figure 1 Median population projection for all older people (aged 65+)**



Source: Stats NZ

The age-gender distribution for people aged 80+ is projected to shift from a male to female ratio of ~40:60 closer to around a 45:55 ratio by 2071. The remaining age groups have similar 50:50 age-gender distributions and have less of a distribution shift from 2021 to 2071.

**Table 1 Summary of population projections for older people (aged 65+)**

Median population projection (base 30 June 2020)

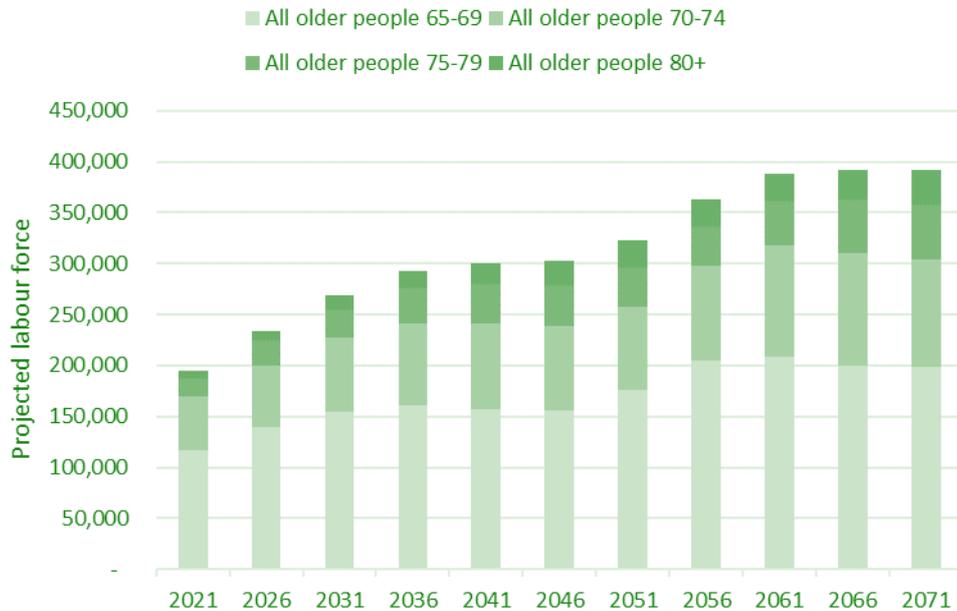
Gender	Age group	2021	2051	2071
Older males	65–69	123,100	166,700	190,000
	70–74	106,800	143,500	187,600
	75–79	71,700	134,200	187,400
	80+	81,900	244,700	332,100
<b>Total males</b>		<b>383,500</b>	<b>689,100</b>	<b>897,100</b>
Older females	65–69	131,100	172,200	191,200
	70–74	113,100	151,000	190,600
	75–79	79,600	149,300	190,800
	80+	112,300	325,000	405,300
<b>Total females</b>		<b>436,100</b>	<b>797,500</b>	<b>977,900</b>
All older people	65–69	254,200	338,900	381,200
	70–74	219,900	294,500	378,200
	75–79	151,300	283,500	378,200
	80+	194,100	569,700	737,400
<b>Total older people</b>		<b>819,500</b>	<b>1,486,600</b>	<b>1,875,000</b>

Source: Stats NZ

### More and more older people are part of our workforce

According to this latest set of median labour force projections, we are expected to observe more people aged 65+ remaining in our workforce. Currently, we have 194,700 older people in our workforce, and this is projected to double (increase to 392,400) by 2071. Unsurprisingly, the 65–69 age band will continue to account for much of the overall older workforce through to 2071.

**Figure 2 Median labour force projection for all older people (aged 65+)**



Source: Stats NZ

We are still expecting more males than females to make up our older workforce. The gender distribution of the labour force projections reports the 118,300 older male workforce in 2021 is likely to increase to 236,800 by 2071, and the same proportional increase is seen for females, with 76,400 in 2021 rising to 155,400 by 2071.

**Table 2 Summary of labour force projections for older people (aged 65+)**

Median labour force projection (base 30 June 2020)

Gender	Age group	2021	2051	2071
Older males	65–69	68,300	99,700	113,700
	70–74	33,600	51,000	66,500
	75–79	11,800	25,400	35,700
	80+	4,600	15,300	20,900
<b>Total males</b>		<b>118,300</b>	<b>191,400</b>	<b>236,800</b>
Older females	65–69	49,100	75,900	84,500
	70–74	19,000	31,400	39,700
	75–79	5,600	13,700	17,700
	80+	2,700	10,700	13,500
<b>Total females</b>		<b>76,400</b>	<b>131,700</b>	<b>155,400</b>
All older people	65–69	117,400	175,500	198,200
	70–74	52,600	82,500	106,300
	75–79	17,400	39,100	53,500
	80+	7,300	26,000	34,400

Gender	Age group	2021	2051	2071
Total older people		194,700	323,100	392,400

Source: Stats NZ

The percentage of older people in the national labour force is projected to increase from 6.7% in 2021 to 10.6% by 2071. This measure follows similar gender trends, with more older males than older females as a proportion of our national workforce (7.6% and 5.6% in 2021, increasing to 11.9% and 9.1% in 2071, respectively).

**Figure 3 Older workforce (aged 65+) as a proportion of national workforce, by gender**

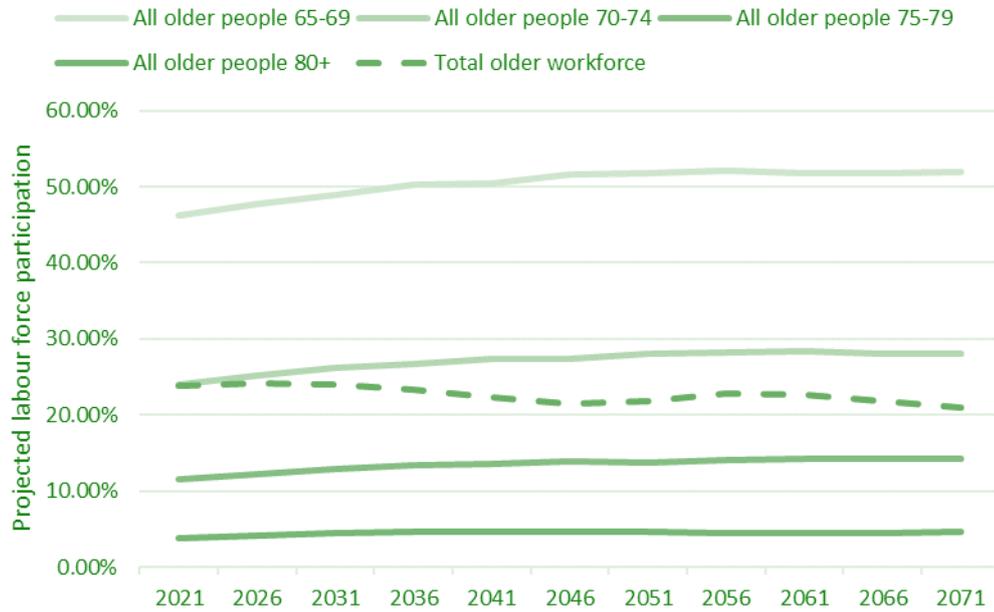


Source: NZIER

### Our overall participation rates declining

Based on the median projections for both the labour force and older population, the overall labour force participation rates for older people are steadily declining. This initially seems counter-intuitive since the age-specific participation rates are increasing over time. The denominator of the participation rates (projected population increase) grows more rapidly for the 80+ age band over the projected 50 years. This is expected to outgrow the increase in 65–69-year-olds in the workforce relative to their smaller increase in population. As a result, the overall labour force participation rates drop over this period.

**Figure 4 Age-specific projected labour force participation rates for older people (aged 65+)**



Source: NZIER

The age-gender-specific participation distribution changes between age bands. The male and female participation rates are comparable for the 65–69 age band but become more disparate for older age bands. This is most clearly seen in the doubling in the difference of the measure for the 80+ age band (consistent across the projection period).

**Table 3 Summary of labour force participation rates for older people (aged 65+)**

Calculated age-specific rates

Gender	Age group	2021	2051	2071
Older males	65–69	55.48%	59.81%	59.84%
	70–74	31.46%	35.54%	35.45%
	75–79	16.46%	18.93%	19.05%
	80+	5.62%	6.25%	6.29%
<b>Total males</b>		<b>30.85%</b>	<b>27.78%</b>	<b>26.40%</b>
Older females	65–69	37.45%	44.08%	44.19%
	70–74	16.80%	20.79%	20.83%
	75–79	7.04%	9.18%	9.28%
	80+	2.40%	3.29%	3.33%
<b>Total females</b>		<b>17.52%</b>	<b>16.51%</b>	<b>15.89%</b>
All older people	65–69	46.18%	51.79%	51.99%
	70–74	23.92%	28.01%	28.11%

Gender	Age group	2021	2051	2071
	75–79	11.50%	13.79%	14.15%
	80+	3.76%	4.56%	4.67%
<b>Total older people</b>		<b>23.76%</b>	<b>21.73%</b>	<b>20.93%</b>

Source: NZIER

### Remunerated work and other income expected to quintuple

We have updated the real wage increase multiplier using basic projections from the Salary and Wage Rates series (LCI001AA) released 2021Q2 on Stats NZ's Infoshare website. This is an improvement from the previous model update and adjusts the base data taken from 2006. Please note that relative values are given in relation to total older population projections.

According to the model output, using the updated real wage increase multiplier, wage and salary (remunerated work) earnings by people aged 65+ are expected to rise from \$5.9 billion in 2021 to around \$25.6 billion in 2071 (2017\$). In relative terms, that is an increase from \$7,200 per older person in 2021 to \$13,600 per older person in 2071.

Self-employment income is likely to increase from \$3.7 billion in 2021 to \$15.8 billion by 2071 (2017\$). In relative terms, that is an increase from \$4,500 per older person in 2021 to \$8,500 per older person in 2071.

The largest contribution of income to older people is government transfers, the value of which is projected to quintuple from 2021 to 2071 – from \$16 billion to around \$79 billion (2017\$). In relative terms, that is an increase from \$19,600 per older person in 2021 to \$42,000 per older person in 2071. Similarly, the value of income from investment and other transfers will increase from \$8.5 billion to \$42 billion (2017\$) across the same period. In relative terms, that is an increase from \$10,400 per older person in 2021 to \$22,300 per older person in 2071.

**Figure 5 Projected income by source for older people (aged 65+)**



Source: NZIER

### Value of tax paid by older people

Tax paid by older people was calculated based on the average weekly earnings of people aged 65+ for remunerated work (wages and salaries, and self-employment), government transfers, investments and other income. A weighted average for wages and salaries and self-employment was taken into account for the different tax brackets these come under (Inland Revenue, 2021). The GST calculation assumes that all remaining income is spent after income tax is deducted from the total earnings.

The value of all tax paid could rise from \$8.95 billion in 2021 to \$42.45 billion by 2071 (2017\$) based on the calculations and assumptions above. In relative terms, based on the projected older population, that is an increase from \$10,900 per older person in 2021 to \$22,600 per older person in 2071.

**Table 4 Projected tax paid by older people (aged 65+)**

2017\$ Bn

	2021	2051	2071
Tax on earnings from remunerated work	1.48	3.99	6.38
Tax on government transfers	2.81	8.30	13.77
Tax on investments and other income	0.89	2.64	4.39
GST (assumed all income spent)	3.78	10.90	17.91
<b>All tax including GST</b>	<b>8.95</b>	<b>25.83</b>	<b>42.45</b>

Source: NZIER

## Reviewing the proxy wage for the value of unpaid work

Previous reports have projected the value of unpaid work based on the 2013 carer wage of \$16.10 per hour, which has not been re-estimated since. Re-basing the 2013 carer wage into 2017\$ or 2021\$ affords a value of \$17.01 and \$18.41 per hour, respectively. This is below the minimum wage at \$20.00 per hour as of 1 April 2021. To account for this, we have projected the value of unpaid work using both the 2015 carer wage and the 2021 minimum wages as proxy values.

**Table 5** Projected value of unpaid work for older people (aged 65+)

Calculated values, 2017\$ Bn

Wage type	2021	2051	2071
Carer wage (2013)	12.86	38.48	64.04
Minimum wage (2021)	14.31	42.81	71.24

Source: NZIER

The value of the unpaid work of older people is estimated to rise between \$51 and \$56.94 billion in the next 50 years. That is an increase from between \$13 and \$14.31 billion per year in 2021 to between \$64 and \$71 billion per year by 2071.

Not included in the update of the model is gender participation in unpaid work. The base data used for the projections are from the Time Use Survey of 2008–2009, which places the unpaid work hours disproportionately at 4 hours per day for males and 4.5 hours per day for females.

Additionally, the type of unpaid activities undertaken by older people is not reflected in the model projections. According to the 2018 Census, 79.3% of unpaid activities includes household work and gardening. Voluntary work accounted for less than 20%, and caring for someone else (including ill persons and childcare) accounted for 35%.

## Estimating the average annual expenditure of older people

Series updates for the Household Expenditure Survey meant that age-specific cuts were no longer available. Proxy values were obtained using a weighted average of spending by people aged 65+ by household type (couple-only and single-person).

It should be noted that the spending patterns may differ from the actual cohort of people aged 65+, especially regarding housing and household utilities expenditures. Caution is advised when using these proxy values, which are primarily indicative of spending growth but not necessarily spending distribution.

**Table 6 Average weekly expenditure by household type of older people (aged 65+)**

Household Expenditure Survey, 2019\$

Expenditure category	Couple-only household	Single-person household
Food	219.10	94.70
Alcoholic beverages and tobacco	30.80	17.30
Clothing and footwear	37.00	12.40
Housing and household utilities	313.90	212.30
Household contents and services	61.30	28.10
Health	49.70	24.10
Transport	239.40	93.80
Communication	34.70	22.80
Recreation and culture	163.60	63.40
Education	7.10	0.90
Miscellaneous goods and services	130.90	55.00
Interest payments	62.20	31.50

Source: Stats NZ

**Table 7 Weighted average annual expenditure of older people (aged 65+)**

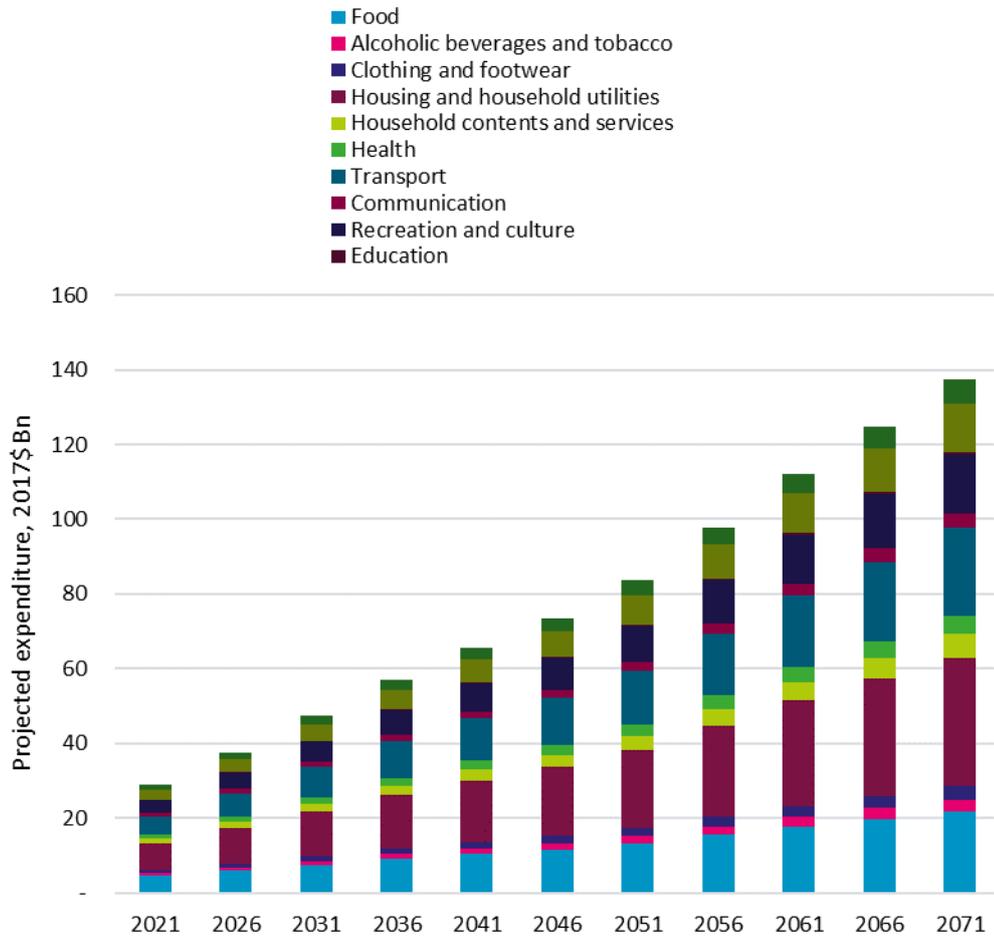
Weighted average based on the proportion of people aged 65+ in couple-only and single-person households, 2017\$

Expenditure category	Annual average expenditure
Food	3,981.17
Alcoholic beverages and tobacco	590.71
Clothing and footwear	644.34
Housing and household utilities	6,300.51
Household contents and services	1,126.35
Health	923.47
Transport	4,274.70
Communication	691.28
Recreation and culture	2,915.76
Education	112.12
Miscellaneous goods and services	2,366.24
Interest payments	1,166.16

Source: NZIER

The total value of expenditures by older people is projected to increase from \$29 billion per year in 2021 to \$137 billion per year in 2071 in 2017\$. Aside from the housing and household utilities outlier, the current spending patterns suggest that foodstuffs, transport, and recreation are the next highest contributors to expenditure.

**Figure 6 Projected annual expenditure of older people (aged 65+)**



Source: NZIER

## Contributions of older people beyond model predictions

The contributions of older people are not fully expressed within the constraints of the model, some of which do impact the interpretations of the model output. For example, this model seeks to value the income of the older workforce but does not address issues affecting the potential and performance of our ageing workforce.

A study done by Keeling et al. (2020) outlined the different opportunities and challenges older New Zealanders face as part of the workforce. They present the physical and mental wellbeing aspects as well as other lifestyle factors to be of significance when managing older employees. Other issues around succession, retirement and ageism were also tackled as part of this case study. This depth of investigation furthers the discussion beyond labour force participation and remuneration contributions of older New Zealanders.

The growing number of senior entrepreneurs will also likely shift the value of remuneration for the self-employed. The current COVID-19 pandemic has seen an increase in older people starting their own businesses, to which they face different barriers than their younger counterparts (*"The Older Entrepreneur"*, 2021). The extent of the shift in remuneration for this group is yet to be determined.

The current model update highlights the age-gender distributions of workforce participation, earnings (paid and unpaid), and tax. However, extensive cohort analysis was performed by Curtin (2019), who investigated the factors driving the age-gender gaps. This affords better resolution data (due to disaggregation of age-gender groups) than the value of government transfers and other income presented in the model update.

To retain a consistent series, such studies were considered but not integrated into this model update. Further extensions to the current model design, such as the attribution of retirement savings schemes, could also be considered in the future. Although the model in its current form is fit for purpose, retaining a consistent series, it is clear that context is still key to support the discussion of the value of the economic contribution of New Zealand's increasing older population.

## References

- Curtin, J. (2019). *A Review of Gender Differences in Retirement Income (Version 1)*. The University of Auckland. <https://doi.org/10.17608/k6.auckland.9699443.v1>
- Inland Revenue. (2021). *Tax rates for individuals*. Retrieved 21 May 2021 from <http://www.ird.govt.nz/income-tax/income-tax-for-individuals/tax-codes-and-tax-rates-for-individuals/tax-rates-for-individuals>
- Keeling, S., Davey, J., & Alpass, F. (2020). *Maximising workforce participation for older New Zealanders – Opportunities, challenges and prospects. Case study 2: Employer needs and practices*. [https://www.massey.ac.nz/massey/fms/Colleges/College%20of%20Humanities%20and%20Social%20Sciences/Psychology/HART/publications/reports/HART\\_Case\\_Study\\_2\\_Report.pdf](https://www.massey.ac.nz/massey/fms/Colleges/College%20of%20Humanities%20and%20Social%20Sciences/Psychology/HART/publications/reports/HART_Case_Study_2_Report.pdf)
- Te Tari Kaumātua – Office for Seniors. (2021.) *Ageing research: Business of ageing*. <https://officeforseniors.govt.nz/our-work/ageing-research/>
- The older entrepreneur – making life better*. (2021, 13 October). RNZ. <https://www.rnz.co.nz/programmes/the-detail/story/2018815583/the-older-entrepreneur-making-life-better>

## Appendix A – Additional data tables

**Table 8 Summary of model outputs in 2017\$ for older people (aged 65+)**

	2021	2026	2031	2036	2041	2046	2051	2056	2061	2066	2071
<b>Population and workforce</b>											
Number of older people	819,500	970,100	1,122,900	1,255,000	1,349,900	1,410,900	1,486,600	1,599,400	1,711,100	1,798,600	1,875,000
Participating males	118,300	140,700	160,100	173,200	177,500	179,400	191,400	215,900	233,600	236,800	236,800
Participating females	76,400	93,700	109,400	120,100	123,100	123,200	131,700	147,800	155,100	155,700	155,400
<b>Total older workforce</b>	<b>194,700</b>	<b>234,300</b>	<b>269,500</b>	<b>293,300</b>	<b>300,600</b>	<b>302,600</b>	<b>323,100</b>	<b>363,600</b>	<b>388,800</b>	<b>392,400</b>	<b>392,400</b>
Participation rate – males	0.31	0.31	0.31	0.30	0.29	0.28	0.28	0.29	0.29	0.28	0.26
Participation rate – females	0.18	0.18	0.18	0.18	0.17	0.16	0.17	0.17	0.17	0.17	0.16
<b>Overall participation rate</b>	<b>0.24</b>	<b>0.24</b>	<b>0.24</b>	<b>0.23</b>	<b>0.22</b>	<b>0.21</b>	<b>0.22</b>	<b>0.23</b>	<b>0.23</b>	<b>0.22</b>	<b>0.21</b>
<b>Value of remunerated work (\$ Bn)</b>											
Paid work	5.91	7.77	9.74	11.52	12.78	13.90	15.99	19.33	22.16	23.93	25.55
Self-employment	3.67	4.83	6.06	7.16	7.95	8.64	9.94	12.02	13.78	14.88	15.89
<b>Total value of remunerated work</b>	<b>9.58</b>	<b>12.61</b>	<b>15.80</b>	<b>18.68</b>	<b>20.73</b>	<b>22.54</b>	<b>25.93</b>	<b>31.36</b>	<b>35.95</b>	<b>38.81</b>	<b>41.43</b>
<b>Value of paid tax (\$ Bn)</b>											
Tax on earnings from remunerated work	1.48	1.94	2.43	2.88	3.19	3.47	3.99	4.83	5.53	5.98	6.38
Tax on government transfers	2.81	3.63	4.58	5.56	6.48	7.31	8.30	9.59	11.00	12.37	13.77
Tax on investments and other income	0.89	1.16	1.46	1.77	2.06	2.33	2.64	3.06	3.50	3.94	4.39
GST (assumed all income spent)	3.78	4.91	6.18	7.45	8.56	9.57	10.90	12.76	14.63	16.27	17.91
<b>All tax including GST</b>	<b>8.95</b>	<b>11.64</b>	<b>14.65</b>	<b>17.65</b>	<b>20.29</b>	<b>22.68</b>	<b>25.83</b>	<b>30.23</b>	<b>34.67</b>	<b>38.56</b>	<b>42.45</b>
<b>Value of unpaid work (\$ Bn)</b>											
Based on 2013 carer wage	12.86	16.61	20.97	25.55	29.95	33.97	38.48	44.22	50.69	57.27	64.04

	2021	2026	2031	2036	2041	2046	2051	2056	2061	2066	2071
Based on 2021 minimum wage	14.31	18.47	23.33	28.42	33.32	37.79	42.81	49.19	56.39	63.71	71.24
<b>Total income (\$ Bn)</b>											
Remunerated work	9.58	12.61	15.80	18.68	20.73	22.54	25.93	31.36	35.95	38.81	41.43
Government transfers	16.03	20.75	26.16	31.76	37.00	41.77	47.41	54.81	62.87	70.69	78.68
Investments and other	8.51	11.01	13.89	16.86	19.64	22.18	25.17	29.10	33.38	37.53	41.77
<b>Total value</b>	<b>34.13</b>	<b>44.37</b>	<b>55.86</b>	<b>67.31</b>	<b>77.38</b>	<b>86.49</b>	<b>98.51</b>	<b>115.26</b>	<b>132.19</b>	<b>147.03</b>	<b>161.88</b>
<b>Expenditure (\$ Bn)</b>											
Groceries, clothing, alcohol and tobacco	6.02	7.82	9.85	11.87	13.65	15.25	17.37	20.33	23.31	25.93	28.55
Housing and household utilities	8.57	11.14	14.03	16.90	19.43	21.72	24.74	28.94	33.19	36.92	40.65
Health	1.07	1.39	1.74	2.10	2.42	2.70	3.08	3.60	4.13	4.59	5.05
Transport and communication	5.73	7.45	9.38	11.30	12.99	14.52	16.54	19.35	22.19	24.69	27.18
Recreation, culture and education	3.49	4.54	5.72	6.89	7.92	8.85	10.08	11.80	13.53	15.05	16.57
Miscellaneous	2.73	3.55	4.47	5.38	6.19	6.92	7.88	9.22	10.58	11.76	12.95
Interest	1.35	1.75	2.20	2.65	3.05	3.41	3.88	4.54	5.21	5.80	6.38
<b>Total expenditure</b>	<b>28.95</b>	<b>37.64</b>	<b>47.39</b>	<b>57.10</b>	<b>65.65</b>	<b>73.38</b>	<b>83.57</b>	<b>97.79</b>	<b>112.15</b>	<b>124.75</b>	<b>137.35</b>

Source: NZIER

**Table 9 Summary of model outputs in 2021\$ for older people (aged 65+)**

	2021	2026	2031	2036	2041	2046	2051	2056	2061	2066	2071
<b>Population and workforce</b>											
Number of older people	819,500	970,100	1,122,900	1,255,000	1,349,900	1,410,900	1,486,600	1,599,400	1,711,100	1,798,600	1,875,000
Participating males	118,300	140,700	160,100	173,200	177,500	179,400	191,400	215,900	233,600	236,800	236,800
Participating females	76,400	93,700	109,400	120,100	123,100	123,200	131,700	147,800	155,100	155,700	155,400
<b>Total older workforce</b>	194,700	234,300	269,500	293,300	300,600	302,600	323,100	363,600	388,800	392,400	392,400
Participation rate – males	0.31	0.31	0.31	0.30	0.29	0.28	0.28	0.29	0.29	0.28	0.26
Participation rate – females	0.18	0.18	0.18	0.18	0.17	0.16	0.17	0.17	0.17	0.17	0.16
<b>Overall participation rate</b>	0.24	0.24	0.24	0.23	0.22	0.21	0.22	0.23	0.23	0.22	0.21
<b>Value of remunerated work (\$ Bn)</b>											
Paid work	6.39	8.41	10.54	12.46	13.83	15.04	17.30	20.92	23.98	25.89	27.64
Self-employment	3.98	5.23	6.56	7.75	8.60	9.35	10.76	13.01	14.91	16.10	17.19
<b>Total value of remunerated work</b>	10.37	13.64	17.10	20.21	22.43	24.39	28.05	33.93	38.89	41.99	44.83
<b>Value of paid tax (\$ Bn)</b>											
Tax on earnings from remunerated work	1.60	2.10	2.63	3.11	3.45	3.76	4.32	5.22	5.99	6.47	6.90
Tax on government transfers	3.04	3.93	4.95	6.01	7.01	7.91	8.98	10.38	11.90	13.39	14.90
Tax on investments and other income	0.97	1.25	1.58	1.92	2.23	2.52	2.86	3.31	3.79	4.26	4.75
GST (assumed all income spent)	4.09	5.31	6.69	8.06	9.27	10.36	11.79	13.80	15.83	17.61	19.38
<b>All tax including GST</b>	9.68	12.59	15.85	19.10	21.96	24.54	27.95	32.71	37.51	41.72	45.93
<b>Value of unpaid work (\$ Bn)</b>											
Based on 2013 carer wage	13.91	17.97	22.69	27.64	32.40	36.75	41.64	47.84	54.85	61.96	69.29
Based on 2021 minimum wage	15.48	19.99	25.24	30.75	36.05	40.89	46.32	53.23	61.02	68.94	77.09

	2021	2026	2031	2036	2041	2046	2051	2056	2061	2066	2071
<b>Total income (\$ Bn)</b>											
Remunerated work	10.37	13.64	17.10	20.21	22.43	24.39	28.05	33.93	38.89	41.99	44.83
Government transfers	17.35	22.45	28.31	34.37	40.04	45.19	51.30	59.30	68.02	76.49	85.13
Investments and other	9.21	11.92	15.03	18.25	21.25	23.99	27.23	31.48	36.11	40.61	45.19
<b>Total value</b>	<b>36.92</b>	<b>48.01</b>	<b>60.44</b>	<b>72.83</b>	<b>83.73</b>	<b>93.58</b>	<b>106.58</b>	<b>124.72</b>	<b>143.03</b>	<b>159.09</b>	<b>175.15</b>
<b>Expenditure (\$ Bn)</b>											
Groceries, clothing, alcohol and tobacco	6.51	8.47	10.66	12.84	14.77	16.50	18.80	22.00	25.22	28.06	30.89
Housing and household utilities	9.27	12.05	15.18	18.29	21.02	23.50	26.76	31.32	35.92	39.95	43.98
Health	1.15	1.50	1.89	2.27	2.61	2.92	3.33	3.89	4.47	4.97	5.47
Transport and communication	6.20	8.06	10.15	12.23	14.06	15.71	17.90	20.94	24.01	26.71	29.41
Recreation, culture and education	3.78	4.91	6.19	7.46	8.57	9.58	10.91	12.77	14.64	16.29	17.93
Miscellaneous	2.95	3.84	4.84	5.83	6.70	7.49	8.53	9.98	11.44	12.73	14.01
Interest	1.46	1.89	2.38	2.87	3.30	3.69	4.20	4.92	5.64	6.27	6.91
<b>Total expenditure</b>	<b>31.32</b>	<b>40.73</b>	<b>51.27</b>	<b>61.78</b>	<b>71.03</b>	<b>79.39</b>	<b>90.43</b>	<b>105.81</b>	<b>121.34</b>	<b>134.98</b>	<b>148.61</b>

Source: NZIER