

Building on strengths: Agriculture, Forestry, and Fisheries

Motu economic & public policy research

Isabelle Sin, Shannon Minehan, and Thomas Benison

July 2024



Document information

Author contact details

Isabelle Sin

Motu Economic and Public Policy Research

isabelle.sin@motu.org.nz

Shannon Minehan

Motu Economic and Public Policy Research

shannon.minehan@motu.org.nz

Thomas Benison

Motu Economic and Public Policy Research

thomas.benison@motu.org.nz

Acknowledgements

This research was funded by Te Puni Kōkiri, the Ministry of Māori Development. The authors thank Roger Macky (Te Puni Kōkiri) and Richard Jefferies (Ngāti Tūkorehe, Ngāti Raukawa; Te Puni Kōkiri) for providing helpful discussion, feedback, and cultural context, and participants at the New Zealand Association of Economists annual conference 2022 for useful suggestions. They also thank Will Workman (Ngāti Kahungunu Ki Wairarapa), whose work helped inspire this research.

Disclaimer

The opinions, findings, recommendations, and conclusions expressed in this paper are those of the authors, not Te Puni Kōkiri or Motu Economic and Public Policy Research.

These results are not official statistics. They have been created for research purposes from the Integrated Data Infrastructure (IDI) and Longitudinal Business Database (LBD) which are carefully managed by Stats NZ. For more information about the IDI or LBD please visit <https://www.stats.govt.nz/integrated-data/>.

The results are based in part on tax data supplied by Inland Revenue to Stats NZ under the Tax Administration Act 1994 for statistical purposes. Any discussion of data limitations or weaknesses is in the context of using the IDI for statistical purposes, and is not related to the data's ability to support Inland Revenue's core operational requirements.

Motu Economic and Public Policy Research

PO Box 24390 info@motu.org.nz +64 4 9394250

Wellington www.motu.org.nz

New Zealand

© 2023 Motu Economic and Public Policy Research Trust and the authors. Short extracts, not exceeding two paragraphs, may be quoted provided clear attribution is given. Motu Working Papers are research materials circulated by their authors for purposes of information and discussion. They have not necessarily undergone formal peer review or editorial treatment.

Abstract

This is one of 15 “specialty profiles” associated with the report “Building on strengths: Educational pathways that benefit Māori students” (2023). In this specialty profile we investigate the pathways through education associated with strong labour market outcomes for Māori students who showed an interest in and aptitude for Agriculture, Forestry, and Fisheries at NCEA level 2. The specialty is heavily dominated by men, so we focus primarily on them.

In general, we find very low labour market returns to qualifications above level 2 for men in this specialty, though returns to industry training are higher than returns to other types of qualifications. Men with industry training qualifications at level 4 or above do weakly better than similar other men. The fields in which men study may contribute to the low returns to education, but it seems that even men in the specialty with low qualifications tend to do fairly well in the labour market, and it could be that they have considerable potential to learn on the job without formal qualifications. However, we look at their outcomes for only 12 years after NCEA level 2, and in the longer term their lack of formal qualifications may limit their earnings growth.

Study at levels 4 to 6 in Agriculture, Environmental, and Related Studies, the natural extension of Agriculture, Forestry, and Fisheries, does not appear beneficial for men’s savings, and study at level 7 or above in the field actually seems detrimental. However, study at levels 4 to 6 in Engineering and Related Technologies, particularly if it results in a qualification, may lead to strong labour market outcomes. Architecture and Building study at levels 4 to 6 may also be valuable.

JEL codes

I20, I30, I23, I26, J15, J24

Keywords

education, Māori, tertiary study, New Zealand education system, employment, labour market

Contents

1. Introduction	3
2. Overview of the students who specialised in Agriculture, Forestry, and Fisheries	3
3. How do savings vary with level of qualifications?	7
3.1 Cumulative and annual savings by level of highest qualification	7
3.2 Qualification levels of top cumulative and annual savers	11
4. How do savings vary with fields of study in higher education?	14
4.1 Cumulative and annual savings by fields of study	14
4.2 Fields of higher study of top cumulative and annual savers	16
5. How do savings vary with self-employment?	19
5.1 Self-employment by level of highest qualification	19
5.2 Cumulative and annual savings by self-employment status	20
6. How do savings vary with pathways through life outside education?	21
7. Conclusions	22

Tables and Figures

<i>Figure 1: Distribution of level of highest qualification</i>	4
<i>Figure 2: Distribution of field of highest qualification</i>	5
<i>Figure 3: Cumulative savings over time by gender</i>	6
<i>Figure 4: Annual savings over time by gender</i>	7
<i>Figure 5: Savings over time by level of highest qualification for men</i>	8
<i>Figure 6: Savings over time by level of highest qualification for women</i>	9
<i>Figure 7: Cumulative savings 12 years after NCEA level 2 by gender and level of highest qualification</i>	10
<i>Figure 8: Annual savings 12 years after NCEA level 2 by gender and level of highest qualification</i>	11
<i>Figure 9: Cumulative savings 12 years after NCEA level 2 by gender and field of highest qualification</i>	15
<i>Figure 10: Annual savings 12 years after NCEA level 2 by gender and field of highest qualification</i>	15
<i>Figure 11: Self-employment over time by highest qualification for men</i>	19
<i>Figure 12: Cumulative savings over time by whether ever self-employed for men</i>	20
<i>Appendix Table 1: Qualification levels of men who are top savers</i>	24
<i>Appendix Table 2: Qualification levels of women who are top savers</i>	25
<i>Appendix Table 3: Regressions of being a top saver on level of highest qualification for men</i>	26
<i>Appendix Table 4: Fields of study at school of men who are top savers</i>	27
<i>Appendix Table 5: Fields of study at school of women who are top savers</i>	28
<i>Appendix Table 6: Fields of tertiary study of men who are top savers</i>	29
<i>Appendix Table 7: Fields of tertiary qualification of men who are top savers</i>	30
<i>Appendix Table 8: Regressions of being a top saver on field of higher study for men</i>	31
<i>Appendix Table 9: Non-education characteristics of men who are top savers</i>	33
<i>Appendix Table 10: Regressions of being a top saver on pathways outside education for men</i>	34

1. Introduction

This report details the pathways through education that are associated with strong labour market outcomes for Māori students in Aotearoa New Zealand who showed an interest and aptitude in Agriculture, Forestry, and Fisheries at NCEA level 2. It is one of 15 “specialty profiles” associated with the main report “Building on strengths: Educational pathways that benefit Māori students” (2023). The goals of the overall project are to support the development of policy that improves Māori outcomes and inform advice that will help Māori students choose beneficial pathways through education. See the main report for a description of the project and detailed explanations of the study population, outcomes, and pathway variables.

The first measure of labour market success we consider is cumulative savings, which measures the financial resources the students could have accumulated since gaining NCEA level 2.¹ This captures the opportunity cost of higher education as well as any earnings benefit it provides within the 12-year window after NCEA level 2 that we study. However, students who gain higher qualifications may have low cumulative savings even 12 years after NCEA level 2, but high annual income. This would mean they have the potential to rapidly increase their cumulative savings in subsequent years. We thus also consider annual savings, which captures the rate at which students’ financial resources could be increasing each year.

The remainder of this report proceeds as follows. Section 2 describes the backgrounds and labour market outcomes of students who specialised in Agriculture, Forestry, and Fisheries. Section 3 shows the levels of highest qualification that are associated with strong outcomes. Section 4 shows the fields of study at each level of education that are associated with strong outcomes. Section 5 investigates the self-employment of these students and its relationship to savings. Section 6 shows the pathways outside education that are associated with strong outcomes. Finally, Section 7 summarises the pathways through education and life that look likely to lead to strong labour market outcomes for men and women who specialised in Agriculture, Forestry, and Fisheries at school.

2. Overview of the students who specialised in Agriculture, Forestry, and Fisheries

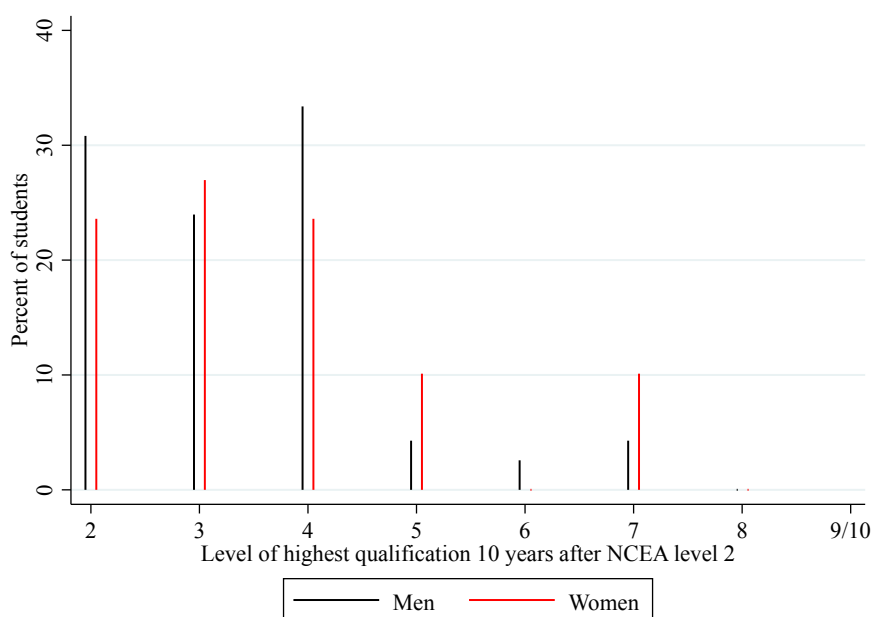
Māori students who specialised in Agriculture, Forestry, and Fisheries are defined as students who showed strong results in NCEA level 2 standards in subjects such as agriculture, horticulture,

¹ The overall magnitude of savings is sensitive to the assumptions we use to calculate it, so the dollar values should not be taken too seriously. However, differences between students are relatively robust, so more weight can be put on the comparisons between students with different characteristics.

and animal care and handling.² The sample is limited to those who achieved NCEA level 2 between 2004 and 2007 when aged 16 to 19, and who were not in the top 10% of their year academically. A total of 426 students specialised in Agriculture, Forestry, and Fisheries, 20% of whom are female, and 34% of whom gained NCEA level 2 at a tertiary institute. Because of the low number of women in this specialty, we analyse the men in more detail.

Figure 1 shows the highest level of qualification attained within 10 years of gaining NCEA level 2 by men and women who specialised in Agriculture, Forestry, and Fisheries. Highest qualifications at levels 2, 3, and 4 are most common for both men and women, each attracting around 25% of women and 25% to 33% of men. Women are more likely than men to achieve level 5 or level 7 qualifications. Ten percent of women and 4% of men attain qualifications at level 7, and essentially no students attain higher qualifications.³

Figure 1: Distribution of level of highest qualification



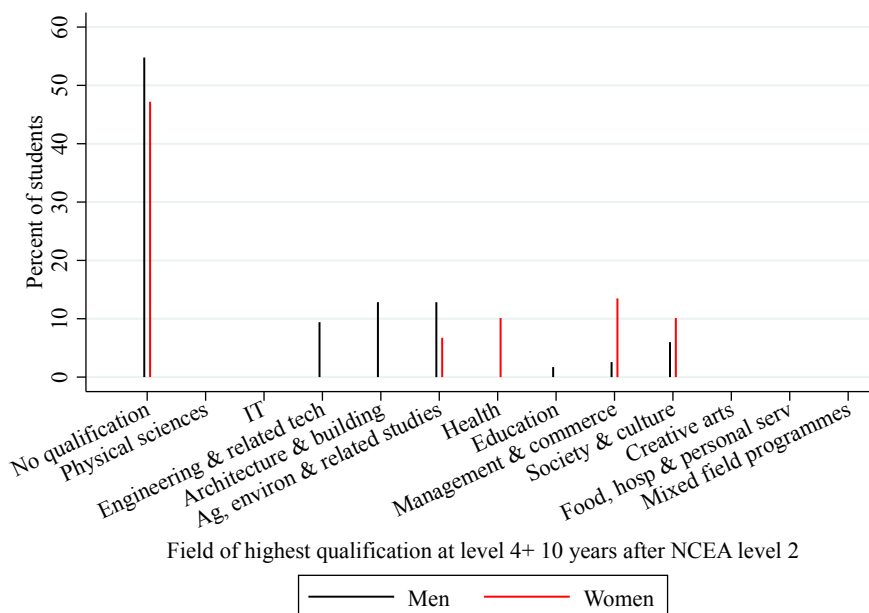
Notes: This figure shows the highest level of qualification gained by men and women who specialised in Agriculture, Forestry, and Fisheries. To be counted, qualifications must have been gained within 10 years of achieving NCEA level 2. Small but non-zero values may be presented as zeros for confidentiality reasons.

² The full list of subjects included in the specialty Agriculture, Forestry, and Fisheries is: land skills; agriculture; conservation; forestry; horticulture; pest management; solid wood processing; equine; animal care and handling; pork production; wool harvesting; seafood; rural contracting; mahi hi ika; poultry production; sports turf; greyhound racing industry; and primary sector. Not all of these subjects are necessarily available to study at level 2.

³ Some small but non-zero values may be represented as zeros in the figure for confidentiality reasons.

Figure 2 shows the distribution across fields of study of the highest qualifications of men and women who specialised in Agriculture, Forestry, and Fisheries at level 2. Most students do not gain qualifications at level 4 or above. Among those who do gain qualifications at level 4 or above, the most common fields of study for men are Architecture and Building and Agriculture, Environmental, and Related Studies, with around 13% of students in each. Engineering and Related Technologies is also common, attracting just under 10% of men. Women are most likely to gain qualifications at level 4 or above in Management and Commerce (13%), followed by Health and Society and Culture. About 7% of women gain qualifications in Agriculture, Environmental, and Related Studies.

Figure 2: Distribution of field of highest qualification



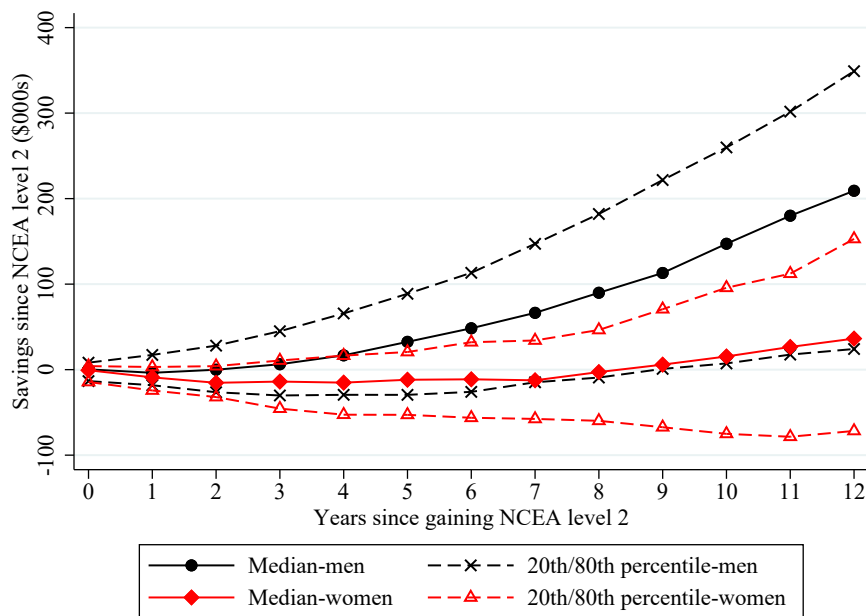
Notes: This figure shows the percentage of students whose highest qualification (at level 4 or above) is in each field among those who specialised in Agriculture, Forestry, and Fisheries. Students may be included in more than one field if they have multiple highest qualifications at the same level. Those whose highest qualification is below level 4 are included in the “No qualification” category. To be counted, qualifications must have been gained within 10 years of achieving NCEA level 2. Small but non-zero values may be presented as zeros for confidentiality reasons.

Figure 3 shows the evolution over time of the distribution of cumulative savings for men and women who specialised in Agriculture, Forestry, and Fisheries. Median cumulative savings for men are negative for only a brief period after NCEA level 2, but median cumulative savings for women become negative straight away and remain that way for seven years, indicating earnings that insufficient to cover estimated living costs and tertiary fees. By the time women’s

median cumulative savings reach zero in year 8, men’s are around \$90,000. By 12 years after NCEA level 2, median men’s savings are around \$210,000, more than five times as high as women’s. The gender gap in cumulative savings is large throughout the distribution. At 12 years, women’s 80th percentile cumulative savings lag men’s median cumulative savings by over \$50,000, and men at the 20th percentile have almost the same cumulative savings as women at the median.

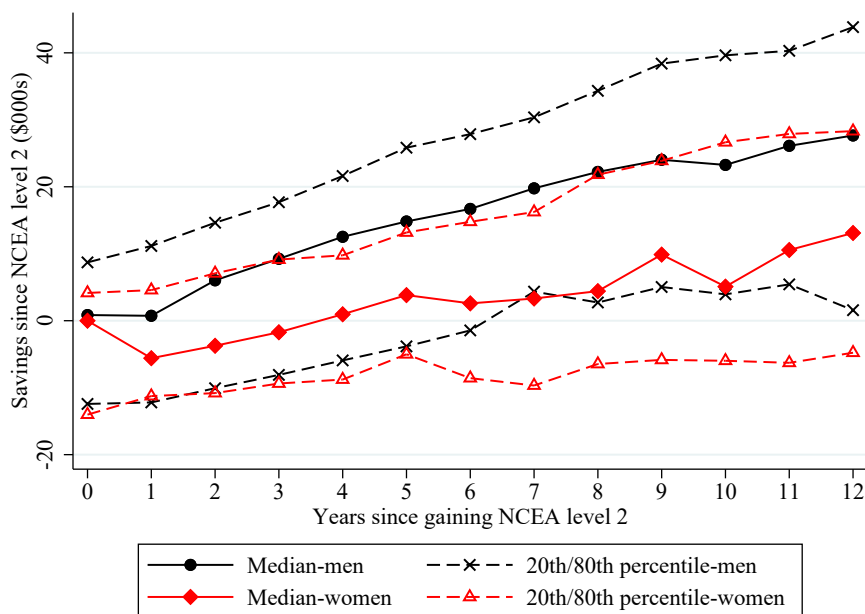
Figure 4 similarly shows how the distribution of annual savings changes over time for men and women who specialised in Agriculture, Forestry, and Fisheries. It shows the median man’s annual savings begin to pull ahead of the median woman’s immediately after NCEA level 2, and by year 12 are around \$15,000 higher. Men’s savings at the median are also very similar to the savings of women in the 80th percentile. The large annual savings gap in year 12 suggests men’s cumulative savings in later years will continue to pull further ahead of women’s.

Figure 3: Cumulative savings over time by gender



Notes: This figure shows how the median, 20th percentile, and 80th percentile of cumulative savings since gaining NCEA level 2 change over time for men and women who specialised in Agriculture, Forestry, and Fisheries.

Figure 4: Annual savings over time by gender



Notes: This figure shows how the median, 20th percentile, and 80th percentile of annual savings change over time for men and women who specialised in Agriculture, Forestry, and Fisheries.

3. How do savings vary with level of qualifications?

This section shows how the cumulative and annual savings of students who specialised in Agriculture, Forestry, and Fisheries vary with their highest level of qualification.

3.1 Cumulative and annual savings by level of highest qualification

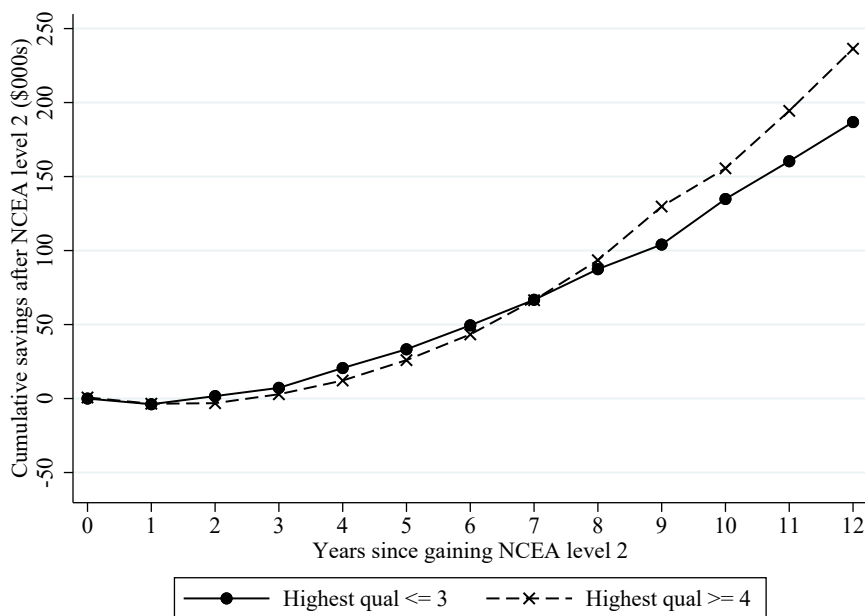
Figures 5 and 6 show how median cumulative and annual savings change over time after gaining NCEA level 2 for men and women who achieve different levels of highest qualification. Figure 5 shows men with low qualifications (level 2 or 3) have similar cumulative savings to those with higher qualifications (level 4 or above) until year 8 at which point men with higher qualifications pull ahead. By year 12, men with higher qualifications have saved around \$50,000 more than men with low qualifications. In terms of annual savings, higher qualified men initially have very similar savings compared to lower qualified men. At year 5, however, the two begin to diverge and men with higher qualifications pull ahead. By year 12, more qualified men save \$30,000 annually compared to \$24,000 for less qualified men.

Figure 6 shows the median cumulative savings of more qualified women fall slightly behind those of less qualified women for seven years after NCEA level 2, after which point the more qualified women experience substantial growth in their annual savings, and their median cumulative savings overtake those of their less qualified peers. By year 12, more qualified

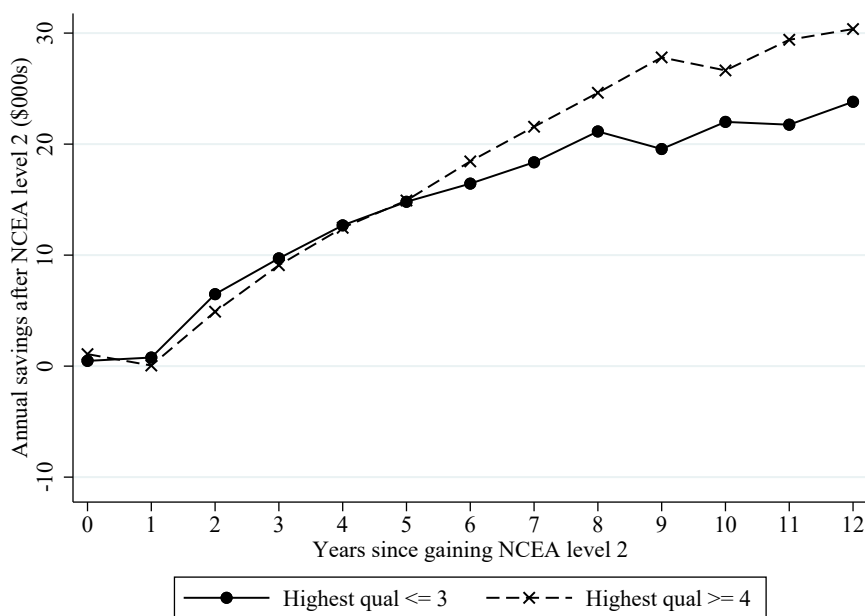
women have accumulated \$60,000 of savings, while their less qualified peers have approximately \$0. Their annual savings too are around \$15,000 higher.

Figure 5: Savings over time by level of highest qualification for men

Panel A: Cumulative savings

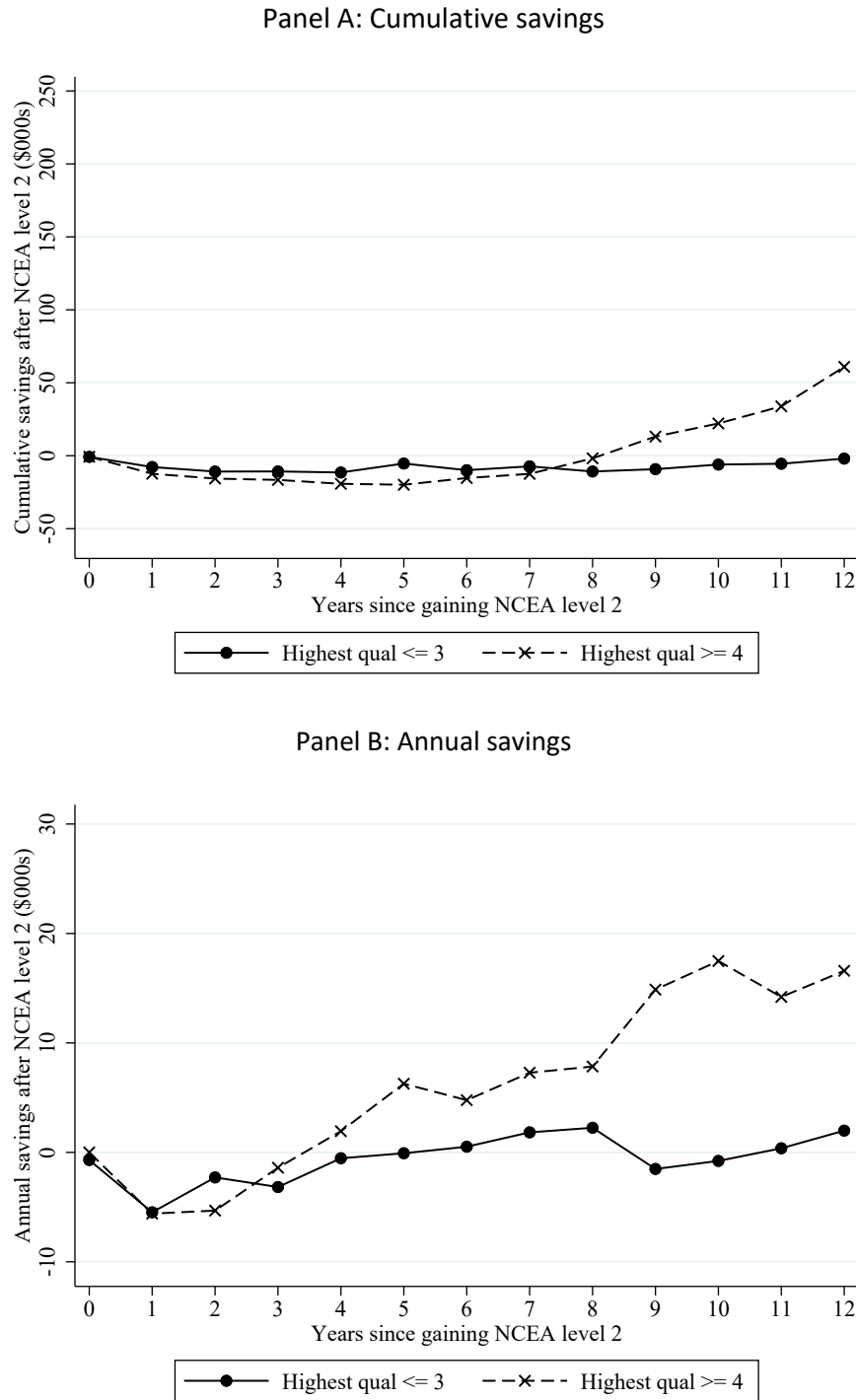


Panel B: Annual savings



Notes: This figure shows changes over time in the median of cumulative savings since gaining NCEA level 2 (Panel A) and median of annual savings (Panel B) for men who specialised in Agriculture, Forestry, and Fisheries and achieved different levels of highest qualification. Qualifications are included if they were gained within 10 years of NCEA level 2.

Figure 6: Savings over time by level of highest qualification for women



Notes: This figure shows changes over time in the median of cumulative savings since gaining NCEA level 2 (Panel A) and median of annual savings (Panel B) for women who specialised in Agriculture, Forestry, and Fisheries and achieved different levels of highest qualification. Qualifications are included if they were gained within 10 years of NCEA level 2.

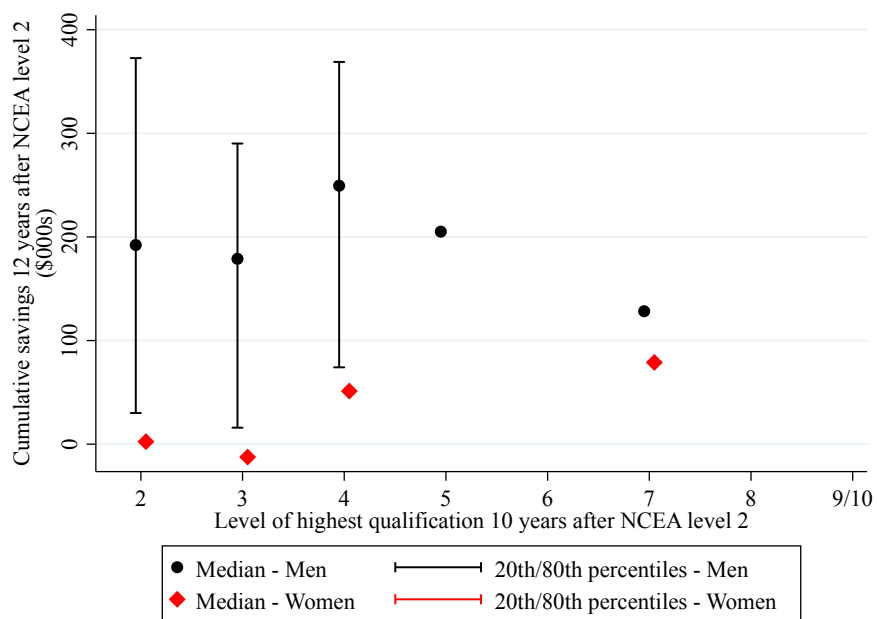
Although the median cumulative savings of less qualified women are roughly zero 12 years after NCEA level 2, this doesn't mean such women have zero income. We assume everyone must

pay some minimal costs of living, so the median women at this stage has earned enough to cover this living cost.

Taken together, these findings show men and women who specialised in Agriculture, Forestry, and Fisheries tend to do better in the labour market if they obtain qualifications at level 4 or above. However, men with this specialty outperform women in terms of labour market outcomes by a wide margin.

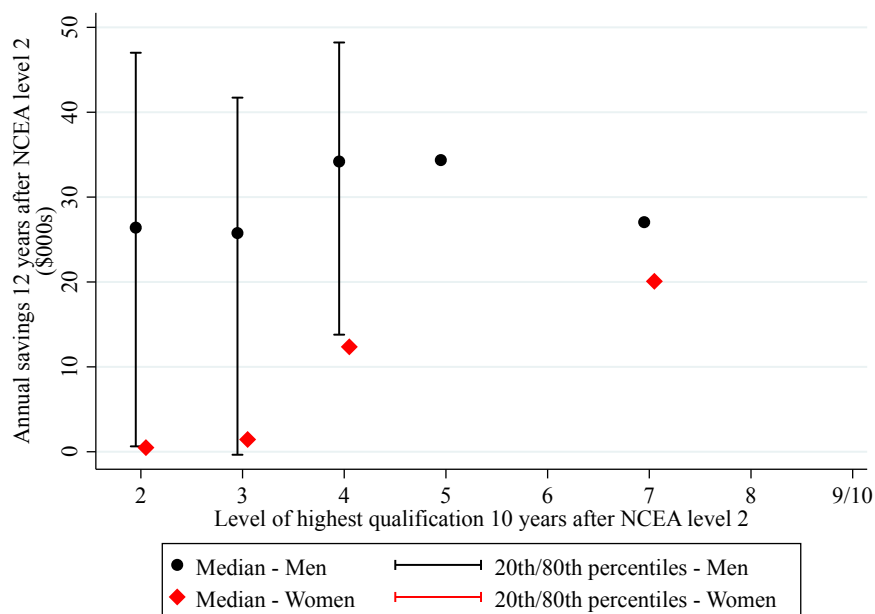
Figures 7 and 8 explore the distribution of cumulative and annual savings after 12 years for men and women with this specialty by disaggregated level of highest qualification. They show women’s savings benefit from level 7 qualifications compared with any level 4 or below, but level 4 is also better than levels 2 or 3. Men’s savings seem to be highest with level 4 qualifications.

Figure 7: Cumulative savings 12 years after NCEA level 2 by gender and level of highest qualification



Notes: This figure shows the median and 20th and 80th percentiles of cumulative savings 12 years after NCEA level 2 of men and women who specialised in Agriculture, Forestry, and Fisheries by the detailed level of their highest qualification. Qualifications are included if they were gained within 10 years of NCEA level 2. Note the median is plotted if the number of observations is 10 or larger, and the 20th and 80th percentiles are plotted if the number of observations is 50 or larger.

Figure 8: Annual savings 12 years after NCEA level 2 by gender and level of highest qualification



Notes: This figure shows the median and 20th and 80th percentiles of annual savings 12 years after NCEA level 2 of men and women who specialised in Agriculture, Forestry, and Fisheries by the detailed level of their highest qualification. Qualifications are included if they were gained within 10 years of NCEA level 2. Note the median is plotted if the number of observations is 10 or larger, and the 20th and 80th percentiles are plotted if the number of observations is 50 or larger.

3.2 Qualification levels of top cumulative and annual savers

In this section we categorise men and women who specialised in Agriculture, Forestry, and Fisheries by whether they are top cumulative savers or top annual savers, and show the level of qualifications and types of education providers attended that are associated with being a top saver. A student is considered a top cumulative (or annual) saver if their cumulative (annual) savings 12 years after NCEA level 2 are in the top 20% of cumulative (annual) savings for Māori students of their gender who specialised in Agriculture, Forestry, and Fisheries. Note the comparisons in this section are all with other students of the same gender in the same speciality, so being a top saver means a student does well in the labour market compared with similar students. This can be but is not necessarily the same as doing well in absolute terms.

Appendix Tables 1 and 2 show for men and women respectively the characteristics associated with being a top cumulative saver or top annual saver. The left-hand side of each table describes each characteristic. Column (1) gives the percentage of students who are *not* top cumulative savers who have the characteristic, and column (2) gives the percentage of students who *are* top savers who have the characteristic. Column (3) is the odds ratio, defined as the proportion of students *with* the characteristic who are top cumulative savers divided by the

proportion of students *without* the characteristic who are top savers. Thus an odds ratio of 1 means the probability of being a top cumulative saver is unrelated to whether a student has the characteristic, an odds ratio above 1 means a student is *more* likely to be a top cumulative saver if they have the characteristic, and an odds ratio below 1 means a student is *less* likely to be a top cumulative saver if they have the characteristic. Asterisks on the odds ratio indicate whether it is statistically significantly different to 1. Columns (4) to (6) replicate columns (1) to (3) but for annual instead of cumulative savings.

Appendix Tables 1 and 2 explore the characteristics top savers are more likely to have, but they consider only one characteristic at a time. Appendix Table 3 uses regressions to explore for men only the relationship between having various characteristics and being a top saver, controlling for students' backgrounds and a selection of other characteristics. (We do not repeat this analysis for women due to the low observation count.) The first four columns of Appendix Table 3 investigate the correlates of being a top cumulative saver, while the last four columns look at being a top *annual* saver. On each side of the table, the first column controls for background characteristics only, the second adds level of highest qualification of any type, and the third distinguishes highest qualifications by whether they are industry training qualifications or not. In the third column, the comparison group for all the level of qualification variables is students whose highest qualifications are at level 2 and are not industry training qualifications. To compare, for instance, the probability a student with a level 4 industry training qualification is a top saver with the probability a comparison group student is a top saver, the coefficients on "highest qualification is level 4" and "highest industry training qualification is level 4" are added together. The fourth column on each side of the tables does not explicitly distinguish industry training qualifications from other types of qualifications, but controls for level of highest qualification and the types of tertiary institute attended. Here the coefficients on type of tertiary institute attended should be interpreted as conditional on students' background characteristics and level of highest qualification. The remainder of this section discusses the results from Appendix Tables 1 to 3.

Only 17% of men and 28% of women achieve a level 3 NCEA certificate within 1 year of NCEA level 2. By 5 years after level 2, this has increased to 32% of men and 37% of women. However, the bivariate analysis shows men who gain level 3 within 1 year are less than half as likely as men who don't to be top cumulative savers. Conversely, women who achieve level 3 within 5 years are substantially but insignificantly more likely to be top annual savers.

In regressions that control for students' backgrounds, men with any qualification above level 2 are less likely to be top cumulative savers than are men with only level 2 qualifications;

when we consider only men who did not gain industry training qualifications, all these differences are at least weakly statistically significant. However, there is no statistically significant relationship between men's highest level of qualifications and being a top annual saver. Data are not sufficient to draw any conclusions about how the probability of women being top savers vary with their levels of highest qualification, but Figures 7 and 8 above suggested women with level 7 qualifications seem to have the strongest labour market outcomes.

Industry training is a very common pathway taken by men: 61% complete industry training credits, 35% complete credits at level 4 or above, and 20% gain an industry training qualification at level 4 or above. The bivariate analysis suggests this route is highly beneficial for men, particularly in terms of cumulative savings but also in terms of annual savings. However, the regressions tell a somewhat weaker story. Compared with men with similar backgrounds who complete only level 2 non-industry training qualifications, men who complete level 2 or 3 industry training qualifications are most exactly as likely to be top cumulative and annual savers. Those who complete level 4 or level 5 to 6 industry training qualifications are slightly but insignificantly more likely than similar men with only level 2 qualifications to be top cumulative or annual savers. As previously mentioned, non-industry training qualifications at any level are even worse financially. One possible explanation for this almost total lack of return to any qualifications above level 2 is that men who stay in the field and gain hands-on experience (for instance, on a farm) may learn about as much and experience similar growth in earnings potential even though they don't gain any formal qualifications.

A more modest but still considerable 37% of women pass any industry training credits, and a quarter gain an industry training qualification at level 2 or above. The bivariate analysis suggest they benefit substantially from this, particularly in terms of cumulative savings. A woman who did any industry training is more than four times as likely as a woman who didn't to be a top cumulative saver, and 1.7 times as likely to be a top annual saver (though the latter is insignificantly different to 1). A woman with an industry training qualification is three times as likely as one without to be a top cumulative saver and substantially though insignificantly more likely to be a top annual saver.

Less than 14% of men who specialised in Agriculture, Forestry, and Fisheries attend a wānanga. Conditional on student background characteristics and the highest level of qualification they achieve, such men are substantially less likely to be top cumulative or annual savers. The bivariate analysis suggests women who attend an industry training organisation (44%) are more likely than those who don't to be top cumulative savers, and women who attend a university (26%) are more likely to be top annual savers.

In the bivariate analysis, the 45% of men who attend a school or tertiary institute in a secondary urban area are more likely than other men to be top cumulative savers, but this relationship is not evident for women.

In addition to controlling for students' pathways through education, the regressions in Appendix Table 3, described at the start of this section, control for various student background characteristics (the first five controls presented at the top of the table). They show men are more likely to be top cumulative savers if they were younger when they achieved NCEA level 2, attended a higher decile school, or attended school outside the main urban areas. Conditional on the levels of highest qualification they attain and the types of tertiary institute they attend, men who are stronger academically (indicated by a high percentile score) are also more likely to be top cumulative savers. We do not explore these relationships for women due to the small sample size.

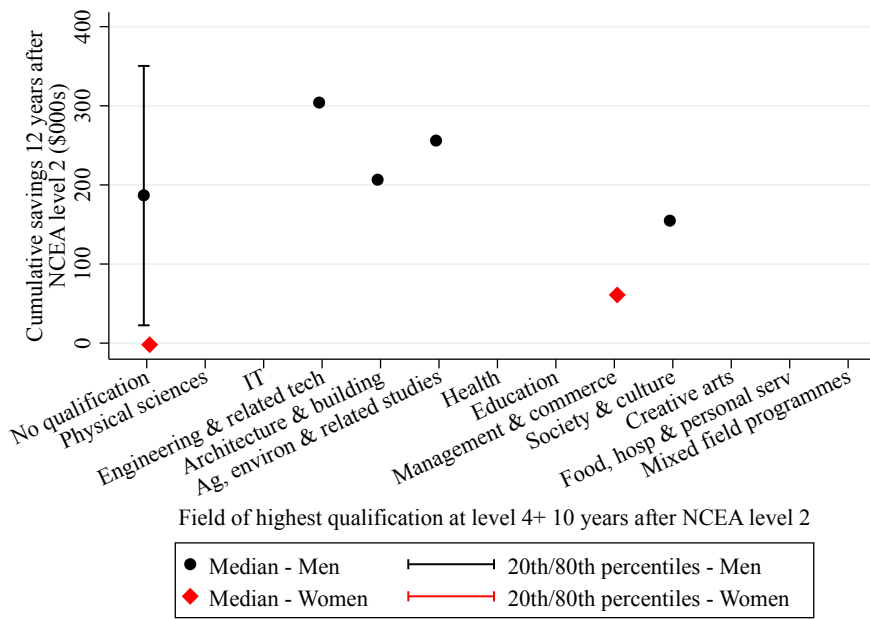
4. How do savings vary with fields of study in higher education?

This section shows how the cumulative and annual savings of students who specialised in Agriculture, Forestry, and Fisheries vary with the fields in which they study at various levels and gain qualifications.

4.1 Cumulative and annual savings by fields of study

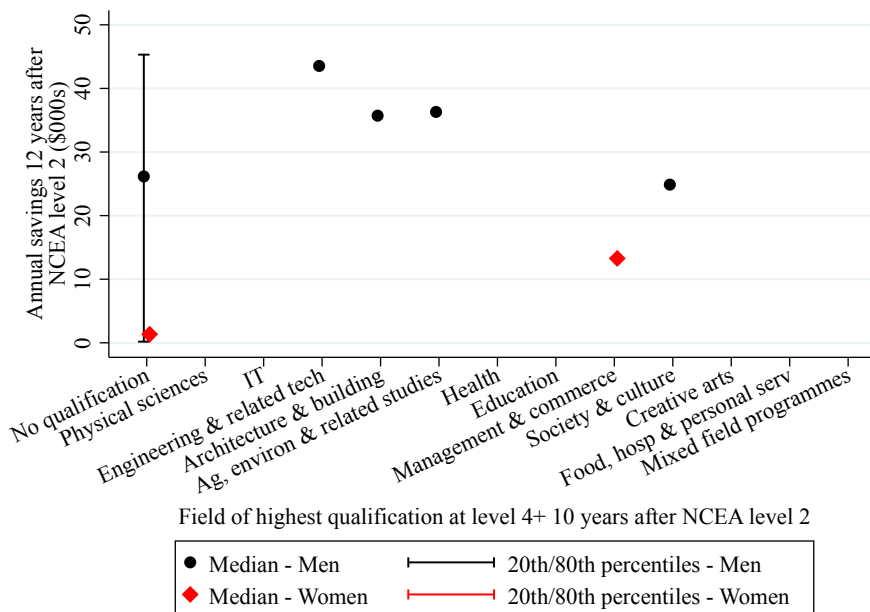
Figure 9 shows how the cumulative savings after 12 years differ for men and women whose highest qualifications at level 4 or above are in different fields. Figure 10 shows the same but for annual rather than cumulative savings. As Figure 2 showed, the highest proportion of men and women have no qualification at level 4 or above. Such men have cumulative savings just under \$190,000 at the median, compared with around \$0 for women, and annual savings of \$26,000 compared with barely above \$0 for women.

Figure 9: Cumulative savings 12 years after NCEA level 2 by gender and field of highest qualification



Notes: This figure shows the median and 20th and 80th percentiles of cumulative savings 12 years after NCEA level 2 of men and women who specialised in Agriculture, Forestry, and Fisheries by the field of their highest qualification at level 4 or above gained within 10 years of NCEA level 2. “No qualification” includes qualifications at level 3 and below. The median is plotted if the number of observations is 10 or larger, and the 20th and 80th percentiles are plotted if the number of observations is 50 or larger.

Figure 10: Annual savings 12 years after NCEA level 2 by gender and field of highest qualification



Notes: This figure replicates Figure 9 but presents annual savings rather than cumulative savings.

The most common field for higher qualifications for women, and the only field with enough women to make a comparison, is Management and Commerce. This offers women considerably higher cumulative and annual savings than does no qualification at level 4 or above (\$60,000 and \$13,000 respectively). For men, the most common fields for higher qualification are Architecture and Building and Agriculture, Environment, and Related Studies. The median men in these two fields have cumulative savings of \$210,000 and \$255,000 respectively, and annual savings of around \$35,000. The highest annual and cumulative savings for men occur in the field Engineering and Related Technologies, where median annual savings are \$45,000 and cumulative savings are \$305,000. Men who gain a qualification in Society and Culture at level 4 or above actually have lower median cumulative and annual savings than men with no qualification at this level.

4.2 Fields of higher study of top cumulative and annual savers

In this section we again categorise men and women who specialised in Agriculture, Forestry, and Fisheries by whether they are top cumulative savers or top annual savers, and show how the fields in which they study and gain qualifications are associated with being a top saver of either kind. As in Section 3.2, we conduct bivariate analysis for both genders and regression analysis for men only. Again, being a top saver means doing well compared with other students of the same gender in the same specialty, and is not a statement about how well the student is doing in absolute terms.

4.2.1 *Fields of study at school level*

We first consider fields of study at NCEA levels 2 and 3. This is school-level study, but may be done either at school or at a tertiary institute after the student leaves school. The bivariate analysis discussed in this section is presented in Appendix Tables 4 and 5, and the regressions for men are in Appendix Table 8. The first three columns in the regression table explore the correlates of being a top cumulative saver, and the other three columns look at being a top annual saver. On each side of the table, the first column controls only for student background characteristics (high school decile, percentile score etc) and fields of study at level 3. Here the coefficient on passing 14 credits in a subject at level 3 compares students with the same background and who passed 14 credits in all the same level 3 subjects except for that one. The coefficient can be interpreted as the difference in probability of being a top saver related to that one field in which they differ.

In many cases, the subjects in which a student passes 14 credits at level 3 affect the student's subsequent pathway through education, such as their fields of study at higher levels,

and these in turn affect their ability to save. In the first column, all such impacts are captured by the coefficients on the variables for passing credits in level 3 subjects. In subsequent columns, we add controls for either fields of higher study or fields of higher qualification. In these columns, the coefficients on level 3 subject credits can be interpreted as differences in the probability of being a top saver based on passing the level 3 credits in that field, given the field the student went on to study or gain qualifications in.

Few men who specialised in Agriculture, Forestry, and Fisheries passed at least 14 level 2 credits in the academic subjects. For instance, only 19% passed 14 English credits and less than 7% passed 14 Maths credits. The bivariate analysis provides little evidence any level 2 subjects are associated with a higher probability of men being top cumulative or annual savers. Women in the specialty are somewhat more academically inclined, with 38% passing 14 level 2 English credits. Where data are available, there is again no evidence these credits are related to being a top saver.

The bivariate analysis shows the 5% of men who passed at least 14 credits at level 3 in Maths are 2.7 times as likely as men who did not to be top annual savers. Men who passed 14 credits in either the Service Sector (21%) or Engineering and Technology (10%) are also at least twice as likely as men who did not to be top cumulative and annual savers. Of these fields, the regressions that control for students' backgrounds examine only the Service Sector, and find it remains strongly associated with being a top cumulative and annual saver for men. Level 3 credits in Agriculture, Forestry, and Fisheries, which 56% of men gain, are not significantly associated with being a top saver.

Sixty percent of women pass at least 14 credits at level 3 in Agriculture, Forestry, and Fisheries, but the bivariate analysis provides no evidence this study is significantly related to being a top saver.

4.2.2 Tertiary-level fields of study

In this subsection, we consider fields of study primarily at levels 4 and higher. Study at level 4 and above is tertiary-level study, which is not done at school. Level 7 qualifications include bachelor's degrees and other qualifications at the same level. The qualifications above level 7 are honours degrees, master's degrees, and doctorates, all of which generally involve original research. Note the field categorisations available in the data at this level differ from the categorisations used above for school-level study (levels 2 and 3) above. We focus on men only because the data for women are too suppressed to be informative. The bivariate analysis discussed in this section is presented in Appendix Tables 6 and 7, and the regressions are in Appendix Table 8.

Columns (2) and (5) in the regression table control for student background and level 3 fields of study, and also the common fields in which students pass at least 0.5 EFTS of courses at level 4 and above and separately at level 7 and above. The coefficient on each field of study at level 4 and above compares the probability of being a top saver for two students with the same earlier educational history, but one of whom left education after level 3, and the other of whom studied in that field at level 4 to 6. To compare the probability of being a top saver of a student who completed at least 0.5 EFTS of courses in a field at level 7 or above with that of a similar student who left education after level 3, the coefficients on “passed at least 0.5 EFTS at level 4+ in the field” and “passed at least 0.5 EFTS at level 7+ in the field” must be added together. Columns (3) and (6) in the table replace the EFTS controls with controls for qualifications gained. Here the comparison student is someone with the same background and level 3 fields of study, but who left education without gaining a qualification at level 4 or above. As before, to compare this student with a similar student who gained a qualification at bachelor’s level or above in a particular field, the coefficients on “gained qualification at level 4+ in the field” and “gained bachelor’s degree+ in the field” must be added together.

Agriculture, Environmental, and Related Studies is the field in which men are most likely to pass at least 0.5 EFTS of courses at level 4 and above. Seventeen percent of men do so, and 14% gain a qualification in this field at level 4 or above. In the regressions, men who pass EFTS (or gain qualifications) in this field at levels 4 to 6 are not significantly more or less likely to be top savers than are students with the same backgrounds and level 3 fields of study, but who don’t study (gain qualifications) above level 3. However, men who study in this field at level 7 or above are less likely than similar education-leavers to be top cumulative or annual savers.

Architecture and Building is the next most popular field of study for men. The regressions show men who study Architecture and Building at level 4 to 6 are insignificantly but substantially more likely to be top annual savers than are men with the same background characteristics and level 3 fields of study, but who don’t study above level 3. However, the benefit disappears at higher level study, where the field is associated with a *lower* probability of being a top cumulative or annual saver compared with a similar education-leaver.

Eleven percent of men study Engineering and Related Technologies at level 4 to 6, and 9% complete a qualification at this level. These men have weakly higher probabilities of being top cumulative savers than do similar education-leavers, and substantially higher probabilities of being top annual savers, particularly if they complete a qualification.

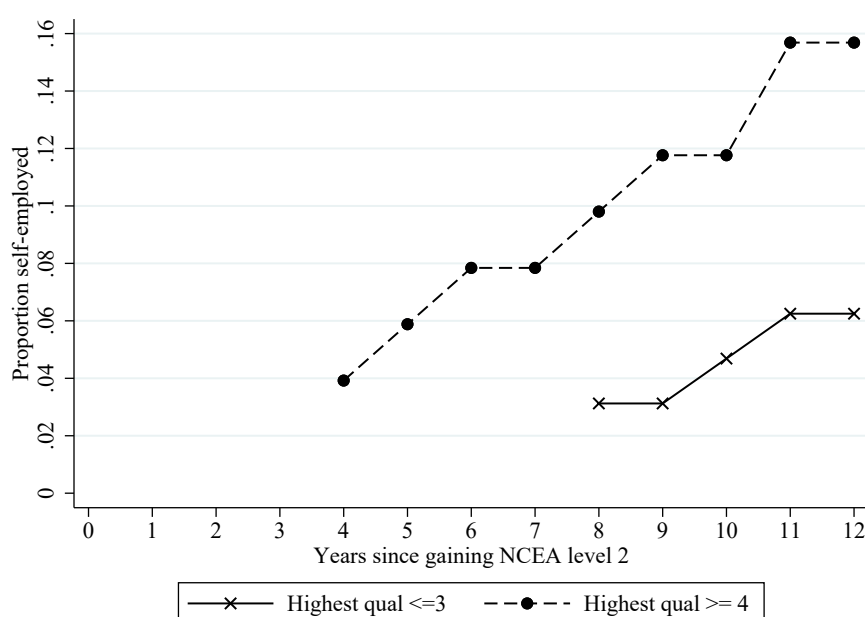
5. How do savings vary with self-employment?

This section first shows how self-employment rates vary over time and by level of highest qualification for students who specialised in Agriculture, Forestry, and Fisheries. It then shows how cumulative and annual savings differ for those who are ever self-employed.

5.1 Self-employment by level of highest qualification

This section shows how the self-employment of students who specialised in Agriculture, Forestry, and Fisheries varies over time for each level of highest qualification. Due to data limitations, we examine self-employment for men only. Figure 11 shows self-employment is higher for men with at least level 4 qualifications than for less qualified men, and grows steadily from 4 years after NCEA level 2. By year 12, nearly 16% of men with qualifications at level 4 or above are self-employed, which is a high self-employment rate compared with most other specialties. In comparison, only 6% of less qualified men are self-employed after 12 years.

Figure 11: Self-employment over time by highest qualification for men

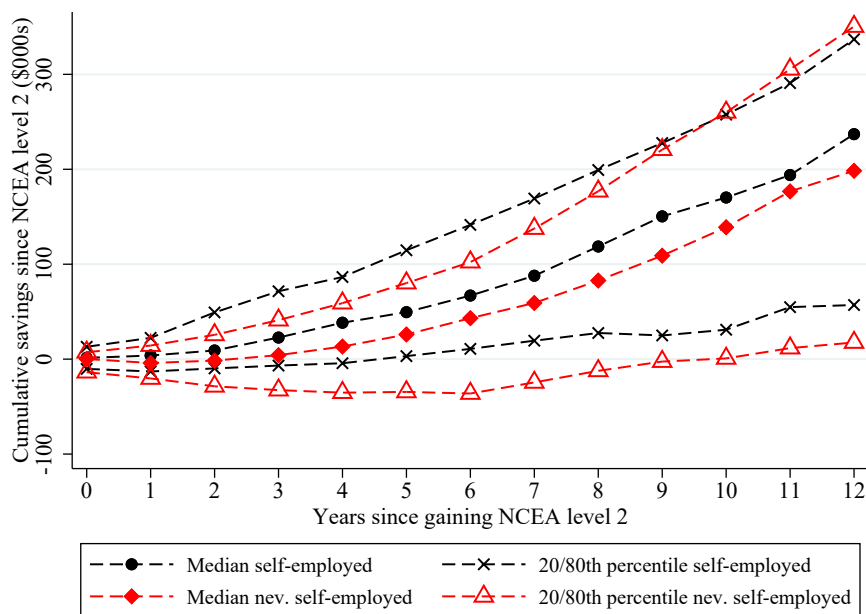


Notes: This figure shows how the proportion of self-employed workers changes over time for men who specialised in Agriculture, Forestry, and Fisheries and achieved different levels of highest qualification. Qualifications are included if they were gained within 10 years of NCEA level 2. Missing values denote self-employed counts so low they must be suppressed under Statistics New Zealand's confidentiality rules.

5.2 Cumulative and annual savings by self-employment status

Figure 12 compares the cumulative savings of men who were ever self-employed in the first 12 years after NCEA level 2 with the savings of those who were never self-employed in this period. The savings of the two groups could differ for several reasons. First, self-employment could affect savings, for instance, if self-employed people give up wage income while establishing their businesses or earn profits that differ from what their wages would have been. Second, those who choose to become self-employed may not be representative of the population as a whole. They may have a history of higher or lower earnings, depending on the motivations that drive people to become self-employed.⁴ Third, self-employment involves a change in the way income is recorded and reported, and for tax purposes self-employed individuals tend to have an incentive to make their income appear as low as possible. Thus the measurement error in income may differ for the self-employed relative to those not self-employed.

Figure 12: Cumulative savings over time by whether ever self-employed for men



Notes: This figure shows the median and 20th and 80th percentiles of cumulative savings of men who specialised in Agriculture, Forestry, and Fisheries by whether they were self-employed in any year from the year they gained NCEA level 2 to the 12th year after that.

Figure 12 shows that men who are ever self-employed tend to have higher cumulative savings than men who are never self-employed throughout the savings distribution. This gap

⁴ For instance, self-employment may be a way for successful employees to keep a higher proportion of the value they create (positive selection into self-employment), or it may be a last resort for individuals who can't secure employment or who place high value on objectives other than income (negative selection).

appears soon after NCEA level 2, but decreases in size in later years when self-employment is higher, particularly at the top end of the savings distribution. Although not proof, this pattern is consistent with men with high savings potential self-selecting into self-employment, but experiencing a decrease in income as a result.

6. How do savings vary with pathways through life outside education?

This section shows how the cumulative and annual savings of students who specialised in Agriculture, Forestry, and Fisheries vary with their fertility decisions, overseas experience, and work experience in the first five years after NCEA level 2. Due to data limitations, we focus solely on men. We again categorise men by whether they are top cumulative savers or top annual savers, and show how the pathways they take outside education are associated with being a top saver of either kind. As in previous sections, we conduct both bivariate and regression analysis. Again, being a top saver means doing well compared with other students of the same gender in the same specialty.

The bivariate analysis is presented in Appendix Table 9. As previously, these tables show the proportion of top and non-top savers who have each characteristic and the odds ratio (calculated as the probability a student with the characteristic is a top saver divided by the probability a student without the characteristic is a top saver). Many of the characteristics shown in these tables relate to work experience. In particular, we look at whether the student worked for a certain type of employer for at least one year or at least three years in the first five years after NCEA level 2. Note here we limit the sample considered to those students who had at least that many years of work experience for some employer. For example, when considering whether students had at least 3 years of experience working for central government, the students without the characteristic are those who have at least three years of work experience, but who do not have three years of experience working for central government.

The regression analysis is presented in Appendix Table 10. The first three columns in the table explore the correlates of being a top cumulative saver, and the last three columns look at being a top annual saver. All columns control for students' backgrounds, level of highest qualification, fields of study, the timing of their children's births, and their overseas experience. The second and third columns on each side of the table also control for years of early work experience and various characteristics of the employers where the experience was gained. The coefficients on the employer type variables should be interpreted as comparisons with students who have the same education and years of experience, but who don't have that particular type

of experience. The remainder of this section discusses the results from Appendix Tables 9 and 10.

In the regressions that control for a wide range of characteristics including education, being a top saver is not significantly correlated with having children for men. Men with overseas experience in year 11 or 12 after NCEA level 2 are much more likely to be top annual savers than similar men who were in New Zealand at the time, but this is largely driven by our assumptions about overseas wages, and should not be over-interpreted.

The regressions show that men who gained five years of work experience in the five years after NCEA level 2 are much more likely to be top cumulative savers when compared with those with the same educational, fertility, and travel history but less work experience over this period. However, they are only insignificantly more likely to be top annual savers. The regressions also show that work experience in the Agriculture, Forestry, and Fishing industry or the Public Administration and Safety industry contributes less than other work experience to being a top cumulative saver.

7. Conclusions

In this specialty profile, we focused on Māori students who specialised in Agriculture, Forestry, and Fisheries at NCEA level 2, and who achieved a level 2 NCEA certificate by age 19 even though they were not top academic performers. Due to the small number of women in the specialty, we primarily focussed on men. Where possible, we investigated separately by gender the pathways through education and life that are associated with strong labour market outcomes for these students, measuring labour market outcomes with cumulative and annual savings 12 years after NCEA level 2. In the regression analysis, conducted for men only, we controlled for several characteristics of students' backgrounds, but all the relationships we find should be considered suggestive of causality rather than necessarily causal.

Most Māori students who specialised in Agriculture, Forestry, and Fisheries at level 2 are not particularly academic and gain highest qualifications at level 2, 3 or 4. Although men who attain higher levels of qualification have stronger labour market outcomes, this seems mostly to be because they have background characteristics that mean they would do better regardless of their qualifications. In regressions that control for student background, no level of non-industry training qualification offers men a substantially or significantly higher probability of being a top saver than just a level 2 qualification. The labour market returns to industry training at level 4 or above are slightly higher than to other sorts of qualifications, but are still modest in size and statistically insignificant.

The generally very low labour market returns to qualifications for men who specialised in Agriculture, Forestry, and Fisheries could have a number of possible explanations. One possibility is that too many men are gaining qualifications in fields that offer low earnings potential. For instance, men who get a qualification in Society and Culture at level 4 and above have *lower* cumulative and annual savings than men with no qualification at level 4 or above. However, comparing the savings of men who specialised in Agriculture, Forestry, and Fisheries with those of men in other specialties suggests another explanation. Twelve years after NCEA level 2, the median man in this specialty has cumulative savings of just over \$200,000, which is higher than in most other specialties, and annual savings in the ballpark of most other specialties. Thus it is possible men in this specialty manage to do fairly well in the labour market primarily by pursuing practical types of careers and learning on the job, even though they may not have high levels of formal qualifications. Their two most common industries for early work experience, Agriculture, Forestry, and Fishing and Construction, are both very practical industries. However, we examine students' outcomes for only 12 years after NCEA level 2, and it is possible the low levels of qualifications gained by most of these men limit the long term growth potential of their earnings.

A substantial proportion of men who specialised in Agriculture, Forestry, and Fisheries go on to study Agriculture, Environmental, and Related Studies at higher levels. At levels 4 to 6, this seems to have little impact on their outcomes relative to leaving education, but the low proportion of men who study this field at level 7 or above have very weak outcomes.

Despite these overall patterns, higher study in some fields does seem to yield men labour market benefits. Level 4 to 6 qualifications in Engineering and Related Technologies are particularly associated with a greater likelihood of being a top saver, and such qualifications in Architecture and Building may also be beneficial.

Appendix Table 1: Qualification levels of men who are top savers

Characteristic	Cumulative savings			Annual savings			Students
	% of students with characteristic among:		Odds ratio	% of students with characteristic among:		Odds ratio	
	Non-top savers	Top savers		Non-top savers	Top savers		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	
School qualifications gained:							
NCEA cert level 3 within 1 yr	18.5	8.7	0.48**	17.4	17.4	1.00	345
NCEA cert level 3 within 5 yrs	33.7	26.1	0.74	31.5	29.2	0.92	345
University Entrance within 1 yr	<5% have characteristic			<5% have characteristic			345
Level of highest qualification gained within 10 years:							
Level 2	29.3	39.1	1.41	31.5	30.4	0.96	345
Level 3	26.4	17.4	0.65	26.1	17.4	0.65	345
Level 4	31.9	39.1	1.29	31.9	39.1	1.29	345
Level 5	<5% have characteristic			<5% have characteristic			345
Level 6	<5% have characteristic			<5% have characteristic			345
Level 7	<5% have characteristic			<5% have characteristic			345
Level 8	<5% have characteristic			<5% have characteristic			345
Level 9 or 10	<5% have characteristic			<5% have characteristic			345
Industry training credits gained within 10 years:							
Any credits	56.5	78.3	2.31***	58.7	70.8	1.54*	345
Any credits at level 4+	31.5	47.8	1.72**	33.0	45.8	1.53*	345
50+ credits	37.0	60.9	2.17***	38.7	50.0	1.44*	345
50+ credits at level 4+	19.8	34.8	1.81**	19.8	33.3	1.71**	345
Level of highest industry training qualification gained within 10 years:							
Level 2+	39.1	54.5	1.65**	40.2	50.0	1.37	345
Level 3+	26.4	43.5	1.81***	26.4	40.9	1.68**	345
Level 4+	17.4	30.4	1.75***	18.3	30.4	1.68**	345
Types of tertiary institute where student enrolled within 10 years (for students who enrolled in any tertiary):							
Industry Training Organisation	67.0	82.6	2.02***	69.6	70.8	1.05	345
Institute of Technology/Polytech	90.3	87.0	0.77	92.3	87.0	0.64	345
Private Training Establishment	90.3	>91.7	>1.14	92.3	>91.7	>0.93	345
University	15.4	8.7	0.58	14.3	12.5	0.88	345
Wananga	15.2	<8.0	<0.55**	15.4	<8.3	<0.56**	345
Other Tertiary Provider	9.8	17.4	1.65*	9.9	13.0	1.27	345
Locations of education providers where student enrolled within 10 years (including schools):							
Main urban area	<5% do not have characteristic			<5% do not have characteristic			345
Secondary urban area	39.1	60.9	2.02***	41.3	47.8	1.23	345
Minor urban area	49.5	40.9	0.76	48.9	40.9	0.77	345
Rural centre or rural area	50.0	59.1	1.35	50.0	54.2	1.14	345
Different region to school	<5% do not have characteristic			<5% do not have characteristic			309

Notes: The odds ratio is calculated as (probability a student with the characteristic is a top saver)/(probability a student without the characteristic is a top saver). Population percentages are expressed as bounds where affected by confidentialisation of values under 6. Asterisks denote the odds ratio is different to one at: * p<0.10, ** p<0.05, *** p<0.01, M p is missing.

Appendix Table 2: Qualification levels of women who are top savers

Characteristic	Cumulative savings			Annual savings			Students
	% of students with characteristic among:		Odds ratio	% of students with characteristic among:		Odds ratio	
	Non-top savers	Top savers		Non-top savers	Top savers		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
School qualifications gained:							
NCEA cert level 3 within 1 yr	27.3	<28.6	<1.05	26.1	33.3	1.31	84
NCEA cert level 3 within 5 yrs	38.1	33.3	0.85	33.3	50.0	1.70	84
University Entrance within 1 yr	<12 have characteristic			<12 have characteristic			84
Level of highest qualification gained within 10 years:							
Level 2	26.1	<28.6	<1.10	26.1	<28.6	<1.10	84
Level 3	27.3	<28.6	<1.05	30.4	<28.6	<0.93	84
Level 4	23.8	<28.6	<1.20	23.8	<28.6	<1.20	84
Level 5	<12 have characteristic			<12 have characteristic			84
Level 6	<12 have characteristic			<12 have characteristic			84
Level 7	<12 have characteristic			<12 have characteristic			84
Level 8	<12 have characteristic			<12 have characteristic			84
Level 9 or 10	<12 have characteristic			<12 have characteristic			84
Industry training credits gained within 10 years:							
Any credits	27.3	>71.4	>4.09***	33.3	50.0	1.70	84
Any credits at level 4+	<12 have characteristic			<12 have characteristic			84
50+ credits	9.5	50.0	4.40***	14.3	33.3	2.20**	84
50+ credits at level 4+	<12 have characteristic			<12 have characteristic			84
Level of highest industry training qualification gained within 10 years:							
Level 2+	18.2	50.0	3.00**	22.7	33.3	1.50	84
Level 3+	<12 have characteristic			<12 have characteristic			84
Level 4+	<12 have characteristic			<12 have characteristic			84
Types of tertiary institute where student enrolled within 10 years (for students who enrolled in any tertiary):							
Industry Training Organisation	39.1	>71.4	>2.86**	42.9	50.0	1.25	84
Institute of Technology/Polytech	<12 do not have characteristic			<12 do not have characteristic			84
Private Training Establishment	<12 do not have characteristic			<12 do not have characteristic			84
University	23.8	33.3	1.43	23.8	50.0	2.38**	84
Wananga	22.7	<25.0	<1.10M	22.7	<25.0	<1.10M	84
Other Tertiary Provider	23.8	<28.6	<1.20	26.1	<25.0	<0.96	84
Locations of education providers where student enrolled within 10 years (including schools):							
Main urban area	<12 do not have characteristic			<12 do not have characteristic			84
Secondary urban area	26.1	<28.6	<1.10	23.8	<28.6	<1.20	84
Minor urban area	57.1	66.7	1.38	59.1	50.0	0.75	84
Rural centre or rural area	42.9	50.0	1.25	42.9	50.0	1.25	84
Different region to school	<12 do not have characteristic			<12 do not have characteristic			78

Notes: The odds ratio is calculated as (probability a student with the characteristic is a top saver)/(probability a student without the characteristic is a top saver). Population percentages are expressed as bounds where affected by confidentialisation of values under 6. Asterisks denote the odds ratio is different to one at: * p<0.10, ** p<0.05, *** p<0.01, M p is missing.

Appendix Table 3: Regressions of being a top saver on level of highest qualification for men

Dependent variable:	Student is a top cumulative saver				Student is a top annual saver			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Age at NCEA level 2	-0.071** (0.031)	-0.065** (0.031)	-0.056* (0.032)	-0.057* (0.031)	-0.027 (0.031)	-0.025 (0.032)	-0.019 (0.032)	-0.020 (0.033)
Percentile score (0-1)	0.375 (0.270)	0.526* (0.272)	0.505* (0.263)	0.551** (0.271)	0.474* (0.260)	0.440 (0.272)	0.438 (0.269)	0.514* (0.276)
Multiple specialties	0.007 (0.054)	0.016 (0.054)	0.009 (0.054)	0.014 (0.053)	0.050 (0.056)	0.045 (0.055)	0.041 (0.056)	0.049 (0.055)
School decile	0.031*** (0.011)	0.033*** (0.011)	0.030*** (0.011)	0.025** (0.012)	0.010 (0.011)	0.008 (0.011)	0.006 (0.011)	0.005 (0.012)
School not in main urban area	0.127** (0.051)	0.122** (0.051)	0.118** (0.051)	0.106** (0.051)	0.064 (0.051)	0.075 (0.051)	0.073 (0.050)	0.067 (0.051)
Highest qualification gained within 10 years (omitted category: level 2):								
Level 3		-0.119** (0.057)	-0.143** (0.057)	-0.103* (0.058)		-0.068 (0.055)	-0.090 (0.056)	-0.030 (0.057)
Level 4		-0.048 (0.058)	-0.142** (0.061)	-0.046 (0.058)		0.024 (0.058)	-0.030 (0.068)	0.046 (0.059)
Level 5 or 6		-0.109 (0.093)	-0.162* (0.097)	-0.061 (0.095)		0.044 (0.106)	0.005 (0.106)	0.114 (0.104)
Level 7		-0.314*** (0.065)	-0.323*** (0.068)	-0.254*** (0.090)		0.028 (0.143)	0.011 (0.147)	0.109 (0.147)
Level 8 to 10		dropped	dropped	dropped		dropped	dropped	dropped
Highest industry training qualification gained within 10 years (omitted category: none):								
Level 2			-0.002 (0.066)				-0.037 (0.065)	
Level 3			0.110 (0.076)				0.092 (0.080)	
Level 4			0.163** (0.074)				0.083 (0.080)	
Level 5 or 6			0.191 (0.320)				0.125 (0.285)	
Any Gateway credits completed within 10 years				0.002 (0.051)				0.027 (0.051)
Enrolled in institute type within 10 years:								
Industry Training Organisation				0.076* (0.042)				0.001 (0.048)
Institute of Technology/Polytech				-0.008 (0.075)				-0.086 (0.085)
Private Training Establishment				0.081 (0.064)				0.022 (0.079)
University				-0.020 (0.069)				-0.090 (0.063)
Wānanga				-0.198*** (0.044)				-0.179*** (0.045)
Other Tertiary Provider				0.092 (0.076)				0.024 (0.072)
NCEA level 2 year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.062	0.090	0.108	0.132	0.037	0.045	0.053	0.076
Observations	345	345	345	345	345	345	345	345

Notes: This table presents the results of ordinary least squares regressions of dummy variables for being a top cumulative saver (columns 1-4) or top annual saver (columns 5-8) on educational controls. All regressions include dummies for missing school decile, missing percentile score, and missing school location. Standard errors are robust. Asterisks denote: * p<0.10, ** p<0.05, *** p<0.01.

Appendix Table 4: Fields of study at school of men who are top savers

Characteristic	Cumulative savings			Annual savings			Students
	% of students with characteristic among:		Odds ratio	% of students with characteristic among:		Odds ratio	
	Non-top savers	Top savers		Non-top savers	Top savers		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	
Passed at least 14 credits at level 2 by year of NCEA level 2 in:							
English	20.7	13.6	0.66	18.3	29.2	1.60*	345
Maths	7.6	<8.3	<1.08	6.6	<8.3	<1.22	345
Māori	7.6	<8.0	<1.04M	7.7	<7.7	<1.00M	345
Humanities	38.0	39.1	1.04	37.0	43.5	1.24	345
Social Science	6.5	<8.3	<1.23	5.4	8.7	1.47	345
Science	19.8	21.7	1.10	19.6	25.0	1.28	345
Passed at least 14 achievement standard credits at level 2 by year of NCEA level 2 in:							
English	<5% have characteristic			<5% have characteristic			345
Maths	<5% have characteristic			<5% have characteristic			345
Māori	<5% have characteristic			<5% have characteristic			345
Humanities	13.0	17.4	1.30	13.0	20.8	1.53	345
Social Science	5.4	<8.3	<1.42	4.3	8.7	1.73	345
Science	8.7	13.0	1.42	9.9	<8.3	<0.86	345
Passed at least 14 credits at level 3 within 5 years in:							
English	<5% have characteristic			<5% have characteristic			345
Maths	5.4	<8.7	<1.48	3.3	13.0	2.72***	345
Māori	6.5	<8.3	<1.23	7.6	<8.0	<1.04	345
Humanities	7.7	<8.7	<1.11	7.6	12.5	1.51	345
Social Science	<5% have characteristic			<5% have characteristic			345
Science	9.7	8.7	0.91	7.7	13.0	1.56	345
Arts & Crafts	<5% have characteristic			<5% have characteristic			345
Computing & IT	<5% have characteristic			<5% have characteristic			345
Business	<5% have characteristic			<5% have characteristic			345
Agriculture, Forestry, & Fisheries	54.8	59.1	1.15	57.1	50.0	0.80	345
Community & Social Services	7.6	<8.3	<1.08	7.7	<8.3	<1.07	345
Education	<5% have characteristic			<5% have characteristic			345
Service Sector	17.4	34.8	2.02***	17.4	37.5	2.18***	345
Engineering & Technology	7.6	17.4	1.99**	7.6	17.4	1.99***	345
Manufacturing, Planning & Constrn	13.0	13.0	1.00	13.0	13.0	1.00	345
Passed at least 14 achievement standard credits at level 3 within 5 years in:							
English	<5% have characteristic			<5% have characteristic			345
Maths	<5% have characteristic			<5% have characteristic			345
Māori	<5% have characteristic			<5% have characteristic			345
Humanities	<5% have characteristic			<5% have characteristic			345
Social Science	<5% have characteristic			<5% have characteristic			345
Science	<5% have characteristic			<5% have characteristic			345
Arts & Crafts	<5% have characteristic			<5% have characteristic			345
Computing & IT	<5% have characteristic			<5% have characteristic			345
Business	<5% have characteristic			<5% have characteristic			345
Agriculture, Forestry, & Fisheries	<5% have characteristic			<5% have characteristic			345
Community & Social Services	<5% have characteristic			<5% have characteristic			345
Education	<5% have characteristic			<5% have characteristic			345
Service Sector	<5% have characteristic			<5% have characteristic			345
Engineering & Technology	<5% have characteristic			<5% have characteristic			345
Manufacturing, Planning & Constrn	<5% have characteristic			<5% have characteristic			345

Notes: The odds ratio is calculated as (probability a student with the characteristic is a top saver)/(probability a student without the characteristic is a top saver). Population percentages are expressed as bounds where affected by confidentialisation of values under 6. Asterisks denote the odds ratio is different to one at: * p<0.10, ** p<0.05, *** p<0.01, M p is missing.

Appendix Table 5: Fields of study at school of women who are top savers

Characteristic	Cumulative savings			Annual savings			Students
	% of students with characteristic among:		Odds ratio	% of students with characteristic among:		Odds ratio	
	Non-top savers	Top savers		Non-top savers	Top savers		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	
Passed at least 14 credits at level 2 by year of NCEA level 2 in:							
English	39.1	33.3	0.82	40.9	33.3	0.77	84
Maths	<12 have characteristic			<12 have characteristic			84
Māori	<12 have characteristic			<12 have characteristic			84
Humanities	57.1	50.0	0.80	59.1	33.3	0.43	84
Social Science	<12 have characteristic			<12 have characteristic			84
Science	40.9	50.0	1.33	40.9	50.0	1.33	84
Passed at least 14 achievement standard credits at level 2 by year of NCEA level 2 in:							
English	<12 have characteristic			<12 have characteristic			84
Maths	<12 have characteristic			<12 have characteristic			84
Māori	<12 have characteristic			<12 have characteristic			84
Humanities	26.1	33.3	1.31	26.1	33.3	1.31	84
Social Science	<12 have characteristic			<12 have characteristic			84
Science	22.7	<28.6	<1.26	18.2	<28.6	<1.53	84
Passed at least 14 credits at level 3 within 5 years in:							
English	<12 have characteristic			<12 have characteristic			84
Maths	<12 have characteristic			<12 have characteristic			84
Māori	<12 have characteristic			<12 have characteristic			84
Humanities	14.3	<28.6	<1.84	14.3	<28.6	<1.84	84
Social Science	<12 have characteristic			<12 have characteristic			84
Science	<12 have characteristic			<12 have characteristic			84
Arts & Crafts	<12 have characteristic			<12 have characteristic			84
Computing & IT	<12 have characteristic			<12 have characteristic			84
Business	<12 have characteristic			<12 have characteristic			84
Agriculture, Forestry, & Fisheries	61.9	50.0	0.69	59.1	66.7	1.29	84
Community & Social Services	<12 have characteristic			<12 have characteristic			84
Education	<12 have characteristic			<12 have characteristic			84
Service Sector	26.1	<25.0	<0.96	26.1	<25.0	<0.96	84
Engineering & Technology	<12 have characteristic			<12 have characteristic			84
Manufacturing, Planning & Constrn	<12 have characteristic			<12 have characteristic			84
Passed at least 14 achievement standard credits at level 3 within 5 years in:							
English	<12 have characteristic			<12 have characteristic			84
Maths	<12 have characteristic			<12 have characteristic			84
Māori	<12 have characteristic			<12 have characteristic			84
Humanities	<12 have characteristic			<12 have characteristic			84
Social Science	<12 have characteristic			<12 have characteristic			84
Science	<12 have characteristic			<12 have characteristic			84
Arts & Crafts	<12 have characteristic			<12 have characteristic			84
Computing & IT	<12 have characteristic			<12 have characteristic			84
Business	<12 have characteristic			<12 have characteristic			84
Agriculture, Forestry, & Fisheries	<12 have characteristic			<12 have characteristic			84
Community & Social Services	<12 have characteristic			<12 have characteristic			84
Education	<12 have characteristic			<12 have characteristic			84
Service Sector	<12 have characteristic			<12 have characteristic			84
Engineering & Technology	<12 have characteristic			<12 have characteristic			84
Manufacturing, Planning & Constrn	<12 have characteristic			<12 have characteristic			84

Notes: The odds ratio is calculated as (probability a student with the characteristic is a top saver)/(probability a student without the characteristic is a top saver). Population percentages are expressed as bounds where affected by confidentialisation of values under 6. Asterisks denote the odds ratio is different to one at: * p<0.10, ** p<0.05, *** p<0.01, M p is missing.

Appendix Table 6: Fields of tertiary study of men who are top savers

Characteristic	Cumulative savings			Annual savings			Students
	% of students with characteristic among:		Odds ratio	% of students with characteristic among:		Odds ratio	
	Non-top savers	Top savers		Non-top savers	Top savers		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Fields and levels in which student passed at least 0.5 EFTS within 10 years:							
Natural & Physical Sciences at level 2+	<5% have characteristic			<5% have characteristic			345
Natural & Physical Sciences at level 4+	<5% have characteristic			<5% have characteristic			345
Natural & Physical Sciences at level 7+	<5% have characteristic			<5% have characteristic			345
Natural & Physical Sciences at level 8+	<5% have characteristic			<5% have characteristic			345
Information Technology at level 2+	<5% have characteristic			<5% have characteristic			345
Information Technology at level 4+	<5% have characteristic			<5% have characteristic			345
Information Technology at level 7+	<5% have characteristic			<5% have characteristic			345
Information Technology at level 8+	<5% have characteristic			<5% have characteristic			345
Engineering & Related Technologies at level 2+	18.5	34.8	1.92***	18.5	37.5	2.08***	345
Engineering & Related Technologies at level 4+	9.7	17.4	1.67**	7.7	21.7	2.36***	345
Engineering & Related Technologies at level 7+	<5% have characteristic			<5% have characteristic			345
Engineering & Related Technologies at level 8+	<5% have characteristic			<5% have characteristic			345
Architecture & Building at level 2+	19.8	13.0	0.66	18.7	17.4	0.93	345
Architecture & Building at level 4+	15.2	13.0	0.86	14.3	17.4	1.20	345
Architecture & Building at level 7+	<5% have characteristic			<5% have characteristic			345
Architecture & Building at level 8+	<5% have characteristic			<5% have characteristic			345
Ag, Environmental & Related Studies at level 2+	81.3	73.9	0.72	80.4	77.3	0.86	345
Ag, Environmental & Related Studies at level 4+	15.2	21.7	1.40	17.6	17.4	0.99	345
Ag, Environmental & Related Studies at level 7+	<5% have characteristic			<5% have characteristic			345
Ag, Environmental & Related Studies at level 8+	<5% have characteristic			<5% have characteristic			345
Health at level 2+	<5% have characteristic			<5% have characteristic			345
Health at level 4+	<5% have characteristic			<5% have characteristic			345
Health at level 7+	<5% have characteristic			<5% have characteristic			345
Health at level 8+	<5% have characteristic			<5% have characteristic			345
Education at level 2+	<5% have characteristic			<5% have characteristic			345
Education at level 4+	<5% have characteristic			<5% have characteristic			345
Education at level 7+	<5% have characteristic			<5% have characteristic			345
Education at level 8+	<5% have characteristic			<5% have characteristic			345
Management & Commerce at level 2+	7.7	<8.3	<1.07	7.6	8.7	1.12	345
Management & Commerce at level 4+	<5% have characteristic			<5% have characteristic			345
Management & Commerce at level 7+	<5% have characteristic			<5% have characteristic			345
Management & Commerce at level 8+	<5% have characteristic			<5% have characteristic			345
Society & Culture at level 2+	26.1	13.0	0.49**	22.8	22.7	1.00	345
Society & Culture at level 4+	9.7	<8.0	<0.85M	7.6	<8.3	<1.08	345
Society & Culture at level 7+	<5% have characteristic			<5% have characteristic			345
Society & Culture at level 8+	<5% have characteristic			<5% have characteristic			345
Creative Arts at level 2+	<5% have characteristic			<5% have characteristic			345
Creative Arts at level 4+	<5% have characteristic			<5% have characteristic			345
Creative Arts at level 7+	<5% have characteristic			<5% have characteristic			345
Creative Arts at level 8+	<5% have characteristic			<5% have characteristic			345
Food, Hospitality & Personal Servs at level 2+	<5% have characteristic			<5% have characteristic			345
Food, Hospitality & Personal Servs at level 4+	<5% have characteristic			<5% have characteristic			345
Food, Hospitality & Personal Servs at level 7+	<5% have characteristic			<5% have characteristic			345
Food, Hospitality & Personal Servs at level 8+	<5% have characteristic			<5% have characteristic			345
Mixed Field Programmes at level 2+	<5% have characteristic			<5% have characteristic			345
Mixed Field Programmes at level 4+	<5% have characteristic			<5% have characteristic			345
Mixed Field Programmes at level 7+	<5% have characteristic			<5% have characteristic			345
Mixed Field Programmes at level 8+	<5% have characteristic			<5% have characteristic			345

Notes: The odds ratio is calculated as (probability a student with the characteristic is a top saver)/(probability a student without the characteristic is a top saver). Population percentages are expressed as bounds where affected by confidentialisation of values under 6. Asterisks denote the odds ratio is different to one at: * p<0.10, ** p<0.05, *** p<0.01, M p is missing.

Appendix Table 7: Fields of tertiary qualification of men who are top savers

Characteristic	Cumulative savings			Annual savings			Students
	% of students with characteristic among:		Odds ratio	% of students with characteristic among:		Odds ratio	
	Non-top savers	Top savers		Non-top savers	Top savers		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Fields of highest qualification gained within 10 years:							
Natural & Physical Sciences	<5% have characteristic			<5% have characteristic			345
Information Technology	<5% have characteristic			<5% have characteristic			345
Engineering & Related Technologies	13.0	26.1	1.90**	13.0	22.7	1.68**	345
Architecture & Building	14.1	13.0	0.93	13.0	17.4	1.30	345
Ag, Environmental & Related Studies	29.3	26.1	0.88	31.5	21.7	0.66	345
Health	<5% have characteristic			<5% have characteristic			345
Education	<5% have characteristic			<5% have characteristic			345
Management & Commerce	<5% have characteristic			<5% have characteristic			345
Society & Culture	7.7	<8.3	<1.07	7.7	<8.3	<1.07	345
Creative Arts	<5% have characteristic			<5% have characteristic			345
Food, Hospitality & Personal Services	<5% have characteristic			<5% have characteristic			345
Mixed Field Programmes	45.7	47.8	1.07	48.4	39.1	0.74	345
Fields of qualifications at level 4+ gained within 10 years:							
Natural & Physical Sciences	<5% have characteristic			<5% have characteristic			345
Information Technology	<5% have characteristic			<5% have characteristic			345
Engineering & Related Technologies	7.7	13.6	1.63	7.6	21.7	2.38***	345
Architecture & Building	13.0	13.0	1.00	13.0	17.4	1.30	345
Ag, Environmental & Related Studies	13.0	17.4	1.30	13.0	13.0	1.00	345
Health	<5% have characteristic			<5% have characteristic			345
Education	<5% have characteristic			<5% have characteristic			345
Management & Commerce	<5% have characteristic			<5% have characteristic			345
Society & Culture	7.6	<8.3	<1.08	7.6	<8.3	<1.08	345
Creative Arts	<5% have characteristic			<5% have characteristic			345
Food, Hospitality & Personal Services	<5% have characteristic			<5% have characteristic			345
Mixed Field Programmes	<5% have characteristic			<5% have characteristic			345
Fields of qualifications at bachelor's level+ gained within 10 years:							
Natural & Physical Sciences	<5% have characteristic			<5% have characteristic			345
Information Technology	<5% have characteristic			<5% have characteristic			345
Engineering & Related Technologies	<5% have characteristic			<5% have characteristic			345
Architecture & Building	<5% have characteristic			<5% have characteristic			345
Ag, Environmental & Related Studies	<5% have characteristic			<5% have characteristic			345
Health	<5% have characteristic			<5% have characteristic			345
Education	<5% have characteristic			<5% have characteristic			345
Management & Commerce	<5% have characteristic			<5% have characteristic			345
Society & Culture	<5% have characteristic			<5% have characteristic			345
Creative Arts	<5% have characteristic			<5% have characteristic			345
Food, Hospitality & Personal Services	<5% have characteristic			<5% have characteristic			345
Mixed Field Programmes	<5% have characteristic			<5% have characteristic			345

Notes: The odds ratio is calculated as (probability a student with the characteristic is a top saver)/(probability a student without the characteristic is a top saver). Population percentages are expressed as bounds where affected by confidentialisation of values under 6. Asterisks denote the odds ratio is different to one at: * p<0.10, ** p<0.05, *** p<0.01, M p is missing.

Appendix Table 8: Regressions of being a top saver on field of higher study for men

Dependent variable:	Student is a top cumulative saver			Student is a top annual saver		
	(1)	(2)	(3)	(4)	(5)	(6)
Passed at least 14 credits at level 3 within 5 years in:						
Agriculture, forestry, and fisheries	0.013 (0.046)	-0.001 (0.048)	0.006 (0.047)	-0.021 (0.046)	-0.016 (0.047)	-0.014 (0.047)
Service sector	0.163*** (0.062)	0.137** (0.063)	0.151** (0.063)	0.171*** (0.064)	0.159** (0.064)	0.183*** (0.063)
Manufacturing, planning, and constrn	-0.047 (0.064)	-0.054 (0.080)	-0.088 (0.088)	-0.002 (0.072)	-0.050 (0.094)	-0.084 (0.100)
# of other fields	-0.010 (0.024)	-0.005 (0.026)	0.008 (0.026)	0.024 (0.027)	0.016 (0.025)	0.023 (0.027)
Passed at least 0.5 EFTS at level 4+ within 10 years in:						
Engineering & Related Technologies		0.085 (0.084)			0.140* (0.084)	
Architecture & Building		-0.009 (0.072)			0.072 (0.089)	
Ag, Environmental & Related Studies		0.039 (0.063)			0.006 (0.056)	
Management & Commerce		0.139 (0.130)			-0.024 (0.106)	
Society & Culture		-0.179*** (0.043)			-0.086 (0.088)	
# of other fields		-0.129** (0.054)			-0.163*** (0.052)	
Passed at least 0.5 EFTS at level 7+ within 10 years in:						
Engineering & Related Technologies		dropped			dropped	
Architecture & Building		-0.155 (0.113)			-0.296** (0.117)	
Ag, Environmental & Related Studies		-0.221* (0.131)			-0.276** (0.137)	
Management & Commerce		-0.157 (0.156)			0.962*** (0.135)	
Society & Culture		-0.005 (0.086)			-0.074 (0.121)	
# of other fields		-0.005 (0.100)			0.033 (0.084)	

Continued following page

Continued from previous page

	(1)	(2)	(3)	(4)	(5)	(6)
Gained qualification at level 4+ within 10 years in:						
Engineering & Related Technologies			0.078 (0.083)			0.227*** (0.088)
Architecture & Building			0.042 (0.090)			0.134 (0.101)
Ag, Environmental & Related Studies			0.036 (0.069)			0.046 (0.062)
Society & Culture			-0.086 (0.082)			0.005 (0.097)
# of other fields			-0.144*** (0.045)			-0.225*** (0.046)
Gained bachelor's degree+ within 10 years in:						
Engineering & Related Technologies			dropped			dropped
Architecture & Building			-0.245* (0.131)			-0.370*** (0.131)
Ag, Environmental & Related Studies			-0.276** (0.120)			-0.231* (0.119)
Society & Culture			-0.137 (0.111)			-0.147 (0.124)
# of other fields			-0.068 (0.088)			0.560*** (0.196)
NCEA level 2 year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Background characteristics	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.089	0.129	0.118	0.070	0.153	0.139
Observations	345	345	345	345	345	345

Notes: This table presents the results of ordinary least squares regressions of dummy variables for being a top cumulative saver (columns 1-3) or top annual saver (columns 4-6) on field of study controls. Background characteristics are the first five controls shown in Appendix Table 3. Fields of study controlled for are the more common fields. Standard errors are robust. Asterisks denote: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Appendix Table 9: Non-education characteristics of men who are top savers

Characteristic	Cumulative savings			Annual savings			Students
	% of students with characteristic among:		Odds ratio	% of students with characteristic among:		Odds ratio	
	Non-top savers	Top savers		Non-top savers	Top savers		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Years student had any children:							
Fifth year after NCEA level 2 or earlier	20.9	22.7	1.09	21.7	21.7	1.00	345
Years 6 to 10 after NCEA level 2	39.8	50.0	1.39	40.2	50.0	1.37	345
Years 11 to 12 after NCEA level 2	22.8	26.1	1.15	22.8	29.2	1.29	345
Years of early work experience:							
Any work experience in year of NCEA level 2 or earlier	26.1	50.0	2.22***	30.4	33.3	1.11	345
Any work experience in years 1 to 5 after NCEA level 2	90.2	>92.0	>1.19M	90.2	>92.0	>1.19*	345
Three+ years of work experience in years 1 to 5	65.2	>92.0	>4.71M	68.5	87.0	2.57***	345
Sectors of work experience in years 1 to 5 after gaining NCEA level 2:							
Central government in at least one year	8.4	<8.7	<1.03	8.4	13.0	1.44	318
Central government in at least 3 years	8.3	<8.7	<1.03	7.9	10.0	1.21	249
Other government in at least one year	4.8	<8.7	<1.59	4.8	<8.3	<1.53	318
Other government in at least 3 years	<5% have characteristic			<5% have characteristic			249
Non-profit organisation in at least one year	6.0	8.7	1.35	6.0	<8.3	<1.30	318
Non-profit organisation in at least 3 years	<5% have characteristic			<5% have characteristic			249
Firm size of work experience in years 1 to 5 after gaining NCEA level 2:							
Small employer (<10 employees) in at least one year	51.8	47.8	0.88	51.8	47.8	0.88	318
Small employer (<10 employees) in at least 3 years	30.5	30.4	1.00	31.7	23.8	0.74	249
Medium employer (10-99 employees) in at least one year	44.0	56.5	1.48*	45.8	50.0	1.14	318
Medium employer (10-99 employees) in at least 3 years	20.0	30.4	1.47**	22.6	23.8	1.05	249
Large employer (100+ employees) in at least one year	44.0	50.0	1.20	42.9	54.5	1.45	318
Large employer (100+ employees) in at least 3 years	30.0	34.8	1.17	28.6	35.0	1.25	249
Industries of work experience in years 1 to 5 after gaining NCEA level 2:							
Agriculture, Forestry, Fishing in at least one year	38.6	30.4	0.75	41.0	22.7	0.50**	318
Agriculture, Forestry, Fishing in at least 3 years	30.0	29.2	0.97	31.7	23.8	0.74	249
Manufacturing in at least one year	24.1	26.1	1.09	24.1	21.7	0.90	318
Manufacturing in at least 3 years	14.8	8.7	0.63	14.1	10.0	0.74	249
Construction in at least one year	20.5	34.8	1.73**	20.5	34.8	1.73**	318
Construction in at least 3 years	11.5	21.7	1.67	11.1	20.0	1.64	249
Wholesale Trade in at least one year	6.0	<8.3	<1.31	3.6	8.7	1.92	318
Wholesale Trade in at least 3 years	<5% have characteristic			<5% have characteristic			249
Retail Trade in at least one year	8.4	<8.7	<1.03	8.4	8.7	1.03	318
Retail Trade in at least 3 years	5.0	<8.3	<1.44	6.3	<9.5	<1.37	249
Accommodation & Food Services in at least one year	<5% have characteristic			<5% have characteristic			318
Accommodation & Food Services in at least 3 years	<5% have characteristic			<5% have characteristic			249
Transport, Post, Warehousing in at least one year	<5% have characteristic			<5% have characteristic			318
Transport, Post, Warehousing in at least 3 years	<5% have characteristic			<5% have characteristic			249
Financial & Insurance Services in at least one year	<5% have characteristic			<5% have characteristic			318
Financial & Insurance Services in at least 3 years	<5% have characteristic			<5% have characteristic			249
Professional, Scientific, Technical Services in at least 1 year	<5% have characteristic			<5% have characteristic			318
Professional, Scientific, Technical Services in at least 3 years	<5% have characteristic			<5% have characteristic			249
Administrative & Support Services in at least one year	8.4	<8.3	<0.99	8.4	8.7	1.03	318
Administrative & Support Services in at least 3 years	<5% have characteristic			<5% have characteristic			249
Public Administration & Safety in at least one year	8.4	<8.7	<1.03	8.3	13.0	1.46	318
Public Administration & Safety in at least 3 years	8.2	<8.7	<1.05	7.8	10.0	1.22	249
Education & Training in at least one year	<5% have characteristic			<5% have characteristic			318
Education & Training in at least 3 years	<5% have characteristic			<5% have characteristic			249
Health Care & Social Assistance in at least one year	<5% have characteristic			<5% have characteristic			318
Health Care & Social Assistance in at least 3 years	<5% have characteristic			<5% have characteristic			249
Arts & Recreation Services in at least one year	6.0	<8.3	<1.30	7.2	<8.3	<1.13	318
Arts & Recreation Services in at least 3 years	<5% have characteristic			<5% have characteristic			249
Other industry in at least one year	6.0	8.7	1.36	6.0	<8.3	<1.30	318
Other industry in at least 3 years	<5% have characteristic			<5% have characteristic			249

Notes: Employment counts as work experience if it is by the highest-paying employer in the year and wages are at least \$10,000. Work experience in at least one year characteristics are defined only for those with at least a year of work experience. Work experience in at least three years characteristics are defined only for those with at least three years of work experience. The odds ratio is calculated as (probability a student with the characteristic is a top saver)/(probability a student without the characteristic is a top saver). Population percentages are expressed as bounds where affected by confidentialisation of values under 6. Asterisks denote the odds ratio is different to one at: * p<0.10, ** p<0.05, *** p<0.01, M p is missing.

Appendix Table 10: Regressions of being a top saver on pathways outside education for men

Dependent variable:	Student is a top cumulative saver			Student is a top annual saver		
	(1)	(2)	(3)	(4)	(5)	(6)
Any children born in year relative to NCEA level 2:						
Year 5 or earlier	0.050 (0.055)	0.005 (0.054)	0.022 (0.054)	0.027 (0.051)	-0.005 (0.052)	0.010 (0.052)
Years 6 to 10	0.070 (0.050)	0.050 (0.046)	0.056 (0.047)	0.085* (0.046)	0.074 (0.046)	0.072 (0.047)
Years 11 and 12	-0.007 (0.057)	-0.047 (0.053)	-0.046 (0.053)	0.068 (0.057)	0.062 (0.057)	0.062 (0.057)
Overseas at least 6 months in year relative to NCEA level 2:						
Any year 3 to 5	0.044 (0.097)	0.177* (0.091)	0.167* (0.088)	0.117 (0.103)	0.182* (0.098)	0.178* (0.097)
Any year 6 to 10	-0.007 (0.076)	-0.059 (0.067)	-0.068 (0.070)	-0.061 (0.066)	-0.085 (0.065)	-0.095 (0.067)
Year 11 or 12	0.130 (0.098)	0.135 (0.087)	0.142 (0.090)	0.463*** (0.094)	0.464*** (0.093)	0.472*** (0.093)
Years of work experience in years 1 to 5 after NCEA level 1 (omitted category: 0):						
1		-0.000 (0.046)	0.090* (0.052)		0.090 (0.074)	0.135* (0.080)
2		-0.091* (0.054)	0.002 (0.053)		-0.066 (0.078)	-0.012 (0.077)
3		-0.048 (0.063)	0.102 (0.067)		-0.082 (0.073)	0.014 (0.087)
4		0.062 (0.056)	0.189*** (0.066)		0.071 (0.074)	0.140* (0.079)
5		0.317*** (0.070)	0.451*** (0.073)		0.104 (0.069)	0.175** (0.078)
Any work experience in years 1 to 5 in:						
Central government		-0.141* (0.084)			-0.069 (0.087)	
Medium-sized firm (10-99 employees)		0.070 (0.047)			0.033 (0.046)	
Large firm (100+ employees)		0.053 (0.052)			0.063 (0.050)	
Ag, Forestry, and Fishing			-0.112** (0.053)			-0.067 (0.050)
Manufacturing			-0.085 (0.058)			-0.026 (0.057)
Construction			0.041 (0.065)			0.047 (0.065)
Retail Trade			-0.071 (0.082)			-0.068 (0.102)
Accommodation & Food Services			-0.074 (0.081)			-0.109 (0.077)
Administrative & Support Services			-0.030 (0.075)			0.015 (0.083)
Public Administration & Safety			-0.158* (0.087)			-0.012 (0.093)
NCEA level 2 year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Background characteristics	Yes	Yes	Yes	Yes	Yes	Yes
Level of highest qualification fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Fields of study controls	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.163	0.315	0.325	0.272	0.306	0.310
Observations	345	345	345	345	345	345

Notes: This table presents the results of ordinary least squares regressions of dummy variables for being a top cumulative saver (columns 1-3) or top annual saver (columns 4-6) on pathways outside education. Fields of study controls are those presented in column 2 of Appendix Table 8. Employment counts as work experience if it was for the highest paying employer in the year and at least \$10,000 of wages were paid. Standard errors are robust. Asterisks denote: * p<0.10, ** p<0.05, *** p<0.01.

Motu



economic & public policy research

for other Motu working papers: www.motu.nz