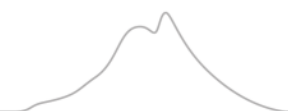


Building on strengths: Māori

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 men and women who showed an interest in and aptitude for Māori language and culture at NCEA level 2.

We find women who specialised in Māori do well in the labour market relative to other women in the specialty if they complete level 7 qualifications, and even better if they complete level 8 or higher qualifications. For less academically inclined students, industry training qualifications at level 3 or 4 are associated with strong outcomes. Many women pursue higher study in Society and Culture or Creative Arts, but these may not be worthwhile financially unless the student gains a qualification at level 7 or higher. Women also do well if they study Education at level 7 or above, regardless of whether they gain a qualification. Those who get early career work experience in the Public Administration and Safety industry tend to have strong outcomes.

We find for men level 7 qualifications may not be worthwhile financially, though level 8 qualifications lead to the strongest outcomes of any qualification level. As is the case for women, industry training qualifications at level 3 or 4 are lucrative alternative pathways for men. The many men who study Society and Culture or Creative Arts at level 4 or above tend to have comparatively weak outcomes, especially if they complete a qualification in Creative Arts or study it at level 7 or above. However, there may be strong non-labour market reasons for these courses of study. Men who study Engineering and Related Technologies, even at level 2, tend to have strong outcomes. Work experience in the Construction industry, the Public Administration and Safety industry, or the Education and Training industry is associated with strong outcomes for men.

JEL codes

I20, I30, I23, I26, J15, J24

Keywords

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

Contents

1. Introduction	7
2. Overview of the students who specialised in Māori	7
3. How do savings vary with level of qualifications?	11
3.1 Cumulative and annual savings by level of highest qualification	11
3.2 Qualification levels of top cumulative and annual savers	16
4. How do savings vary with fields of study in higher education?	19
4.1 Cumulative and annual savings by fields of study	19
4.2 Fields of higher study of top cumulative and annual savers	21
5. How do savings vary with self-employment?	25
6. How do savings vary with pathways through life outside education?	27
7. Conclusions	29

Tables and Figures

<i>Figure 1: Distribution of level of highest qualification</i>	8
<i>Figure 2: Distribution of field of highest qualification</i>	9
<i>Figure 3: Cumulative savings over time by gender</i>	10
<i>Figure 4: Annual savings over time by gender</i>	11
<i>Figure 5: Savings over time by level of highest qualification for men</i>	13
<i>Figure 6: Savings over time by level of highest qualification for women</i>	14
<i>Figure 7: Cumulative savings 12 years after NCEA level 2 by gender and level of highest qualification</i>	15
<i>Figure 8: Annual savings 12 years after NCEA level 2 by gender and level of highest qualification</i>	16
<i>Figure 9: Cumulative savings 12 years after NCEA level 2 by gender and field of highest qualification</i>	20
<i>Figure 10: Annual savings 12 years after NCEA level 2 by gender and field of highest qualification</i>	20
<i>Figure 11: Cumulative savings over time by whether ever self-employed</i>	26
<i>Appendix Table 1: Qualification levels of men who are top savers</i>	31
<i>Appendix Table 2: Qualification levels of women who are top savers</i>	32
<i>Appendix Table 3: Regressions of being a top saver on level of highest qualification for men</i>	33
<i>Appendix Table 4: Regressions of being a top saver on level of highest qualification for women</i>	34
<i>Appendix Table 5: Fields of study at school of men who are top savers</i>	35
<i>Appendix Table 6: Fields of study at school of women who are top savers</i>	36
<i>Appendix Table 7: Fields of tertiary study of men who are top savers</i>	37
<i>Appendix Table 8: Fields of tertiary study of women who are top savers</i>	38
<i>Appendix Table 9: Fields of tertiary qualification of men who are top savers</i>	39
<i>Appendix Table 10: Fields of tertiary qualification of women who are top savers</i>	40
<i>Appendix Table 11: Regressions of being a top saver on field of higher study for men</i>	41
<i>Appendix Table 12: Regressions of being a top saver on field of higher study for women</i>	43
<i>Appendix Table 13: Non-education characteristics of men who are top savers</i>	45
<i>Appendix Table 14: Non-education characteristics of women who are top savers</i>	46
<i>Appendix Table 15: Regressions of being a top saver on pathways outside education for men</i>	47
<i>Appendix Table 16: Regressions of being a top saver on pathways outside education for women</i>	48

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 studying Māori language or culture 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 Māori. 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 Māori at school.

2. Overview of the students who specialised in Māori

Māori students who specialised in Māori are defined as students who showed strong results in NCEA level 2 standards in subjects such as reo Māori, tikanga, and Māori performing arts.² Some

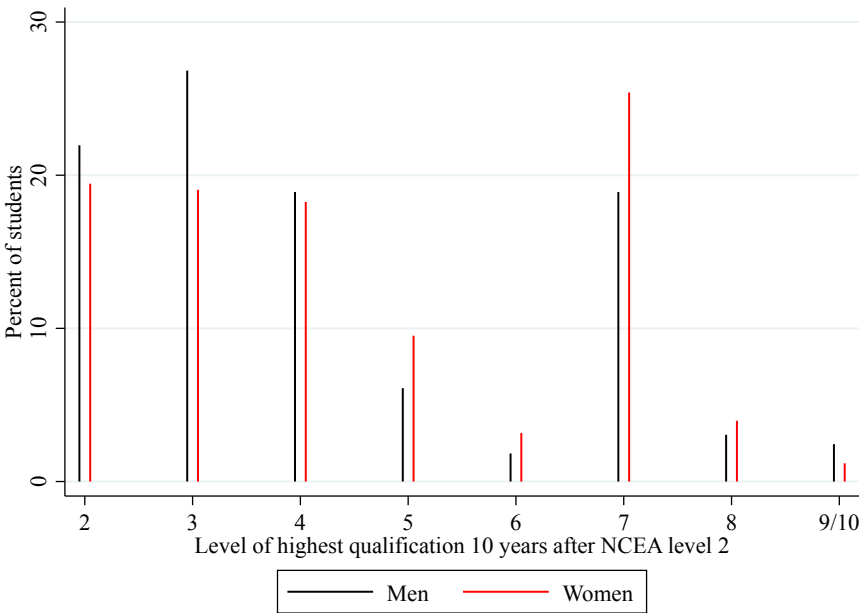
¹ The overall magnitude of savings is sensitive to the assumptions we use to calculate it, so the dollar values should not be taken too seriously. However, differences between students are relatively robust, so more weight can be put on the comparisons between students with different characteristics.

² The full list of subjects included in the specialty Māori is: whakairo; reo Māori; te mātauranga Māori me te whakangungu; ngā mahi ā te whare pora; mana wāhine; tikanga; general education Māori; hauora; Māori performing arts; ngā mahi ā te rēhia; whenua; funeral services Māori; seafood Māori; tourism Māori; reo Māori media; Māori business and management;

may have attended Māori medium primary or high schools, but data limitations prevent us knowing when this was the case. 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 1,242 students specialised in Māori, 60% of whom are female, and 19% of whom gained NCEA level 2 at a tertiary institute. Only 30% of these students report European ethnicity, compared with 71% of the students in the full study, and 58% (compared with 28%) attended a decile 1 to 3 school.

Figure 1 shows the highest level of qualification attained within 10 years of gaining NCEA level 2 by men and women who specialised in Māori. The most common highest qualification level for women is level 7 (which includes bachelor’s degrees and other qualifications at a similar level), which is attained by 25% of women but only 19% of men. The most common highest qualification level for men is level 3, which is attained by 27% of men and 19% of women. Level 2 and 4 qualifications are also common for both men and women. Well under 10% of men and women attain qualifications above level 7.

Figure 1: Distribution of level of highest qualification

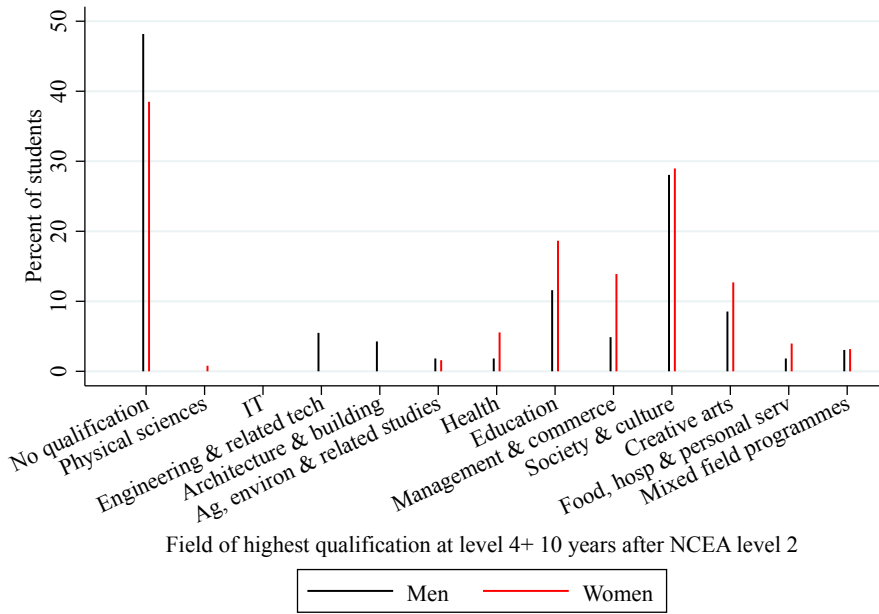


Notes: This figure shows the highest level of qualification gained by men and women who specialised in Māori. To be counted, qualifications must have been gained within 10 years of achieving NCEA level 2.

environment Māori; marae catering; te ara nunumi (bereavement pathways Māori); manaaki marae (marae hospitality); mau rākau; and te marautanga o Aotearoa. Not all of these subjects are necessarily available to study at level 2.

Figure 2 shows the distribution across fields of study of the highest qualifications of men and women who specialised in Māori at level 2. Among those who gain qualifications at level 4 or above, the most common field of study for both genders is Society and Culture (which includes subfields such as tikanga and te reo Māori), with nearly 30% of students gaining a highest qualification at level 4 or above in this field. The next most common field for women is Education (nearly 20%), followed by Management and Commerce and Creative Arts (which includes subfields such as Ngā Mahi a Rēhia—Māori Performing Arts—and Mana Whakairo—Māori Carving). Education and Creative Arts also somewhat common for men. Men are more likely than women to gain highest qualifications in Engineering and Related Technologies, and Architecture and Building, though the percentage with a highest qualification in each is low.

Figure 2: Distribution of field of highest qualification

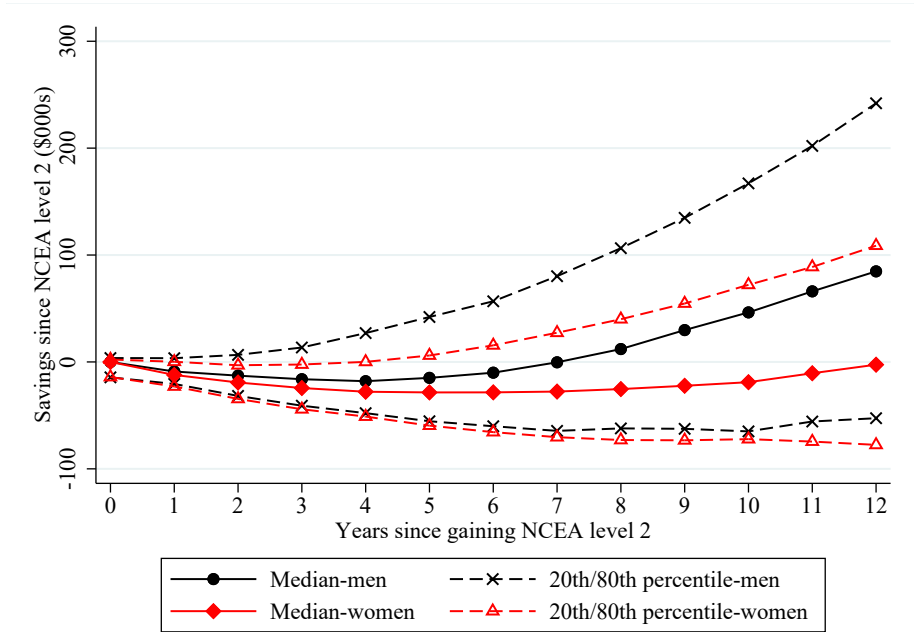


Notes: This figure shows the percentage of students whose highest qualification (at level 4 or above) is in each field among those who specialised in Māori. Students may be included in more than one field if they have multiple highest qualifications at the same level. Those whose highest qualification 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 Māori. Median cumulative savings for men and women are negative for the first seven years, indicating any earnings the median students have over these years are insufficient to cover their estimated living costs and tertiary fees. By year 8, men’s

median cumulative savings are slightly positive. By 12 years after NCEA level 2, they have risen to around \$85,000. For women, however, cumulative savings are still slightly negative in year 12. At the upper end of cumulative savings distribution, the gender gap is very large. The 80th percentile of men’s savings after 12 years is more than twice that of women’s savings; women at the 80th percentile of the earnings distribution do only slightly better than men at the median. At the 20th percentile, men’s and women’s savings are more similar.

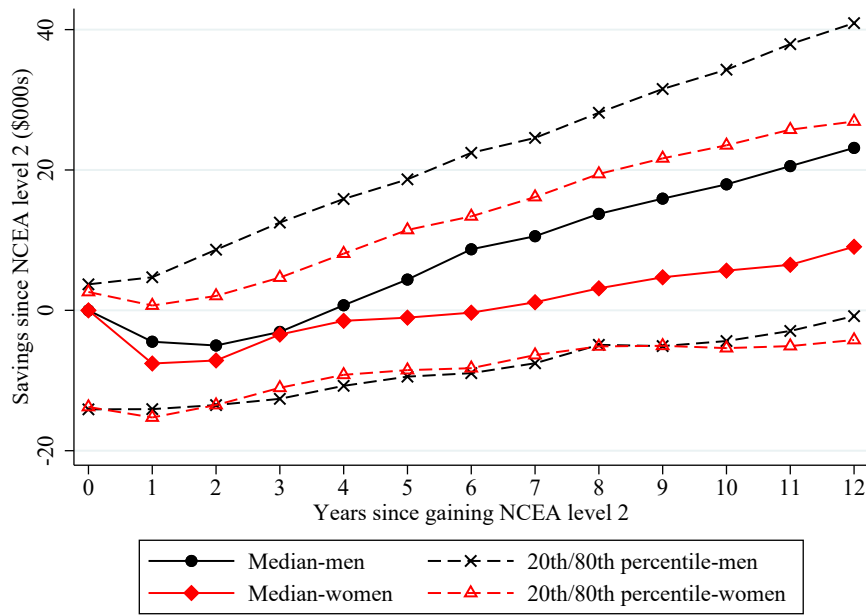
Figure 3: Cumulative savings over time by gender



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 Māori.

Figure 4 similarly shows how the distribution of annual savings changes over time for men and women who specialised in Māori. It shows the median man’s annual savings begin to pull ahead of the median woman’s straight after NCEA level 2, and in year 12 are nearly \$15,000 higher. This large annual savings gap suggests men’s cumulative savings in later years will continue to pull further ahead of women’s.

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 Māori.

3. How do savings vary with level of qualifications?

This section shows how the cumulative and annual savings of students who specialised in Māori 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 men with intermediate qualifications (at least level 4 but below bachelor's level) for several years after NCEA level 2. Over this period, the savings of men who gain high qualifications (bachelor's level or above) fall increasingly far behind those of less qualified men. However, in year 4 the savings of men with intermediate qualifications fall behind those of men with low qualifications. This gap lingers and then finally closes in year 10. Meanwhile, the cumulative savings of high-qualified men fall further behind for several years. In year 8, their annual savings catch up with and then overtake those of less qualified men, and their cumulative savings begin to gain ground. However, by this time their cumulative savings are \$30,000 to \$50,000 lower. In subsequent years, their annual savings increase and the gap in cumulative savings narrows, but at 12 years is

likely still several years away from closing. The lower early annual savings of male students who gain higher qualifications are expected because such students usually delay starting full-time work while they study. However, these figures show that from a purely financial standpoint the additional qualifications take a long time to pay off in the labour market.

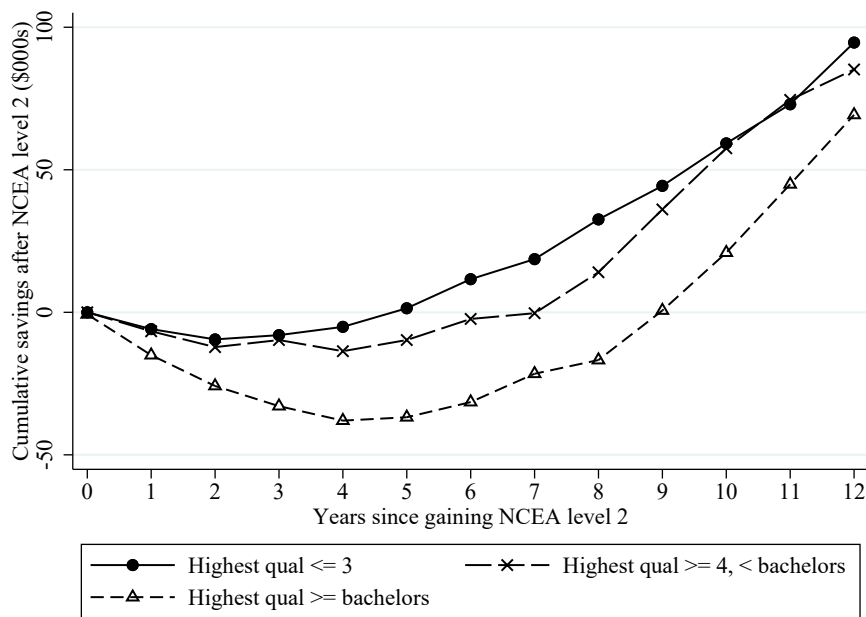
Figure 6 reveals the story for women has some similarities to the story for men, but higher qualifications appear much more advantageous. The annual and thus cumulative savings of high qualified women fall behind those of less qualified women for a number of years after NCEA level 2, but the gap is much smaller than the gap for men. By year 7, the annual savings of high-qualified women have overtaken those of less qualified women and they grow strongly for two further years. By year 10, the *cumulative* savings of high-qualified women have overtaken those of intermediate- and low-qualified women, which remain similar to each other. By year 12, the cumulative savings of high-qualified women are nearly \$35,000 higher than those of less qualified women and are growing at a substantially faster rate.

Notably, the two groups of less-qualified women have median cumulative savings that are negative for the full 12-year period considered. Although the magnitude of savings is sensitive to the assumptions we use to calculate it, the comparison with men's median cumulative savings suggests these are still very low savings. Many women without bachelor's degrees must therefore either not be working or be working low hours. Women leaving the labour force to raise children is likely to contribute, but is unlikely to be the full explanation.

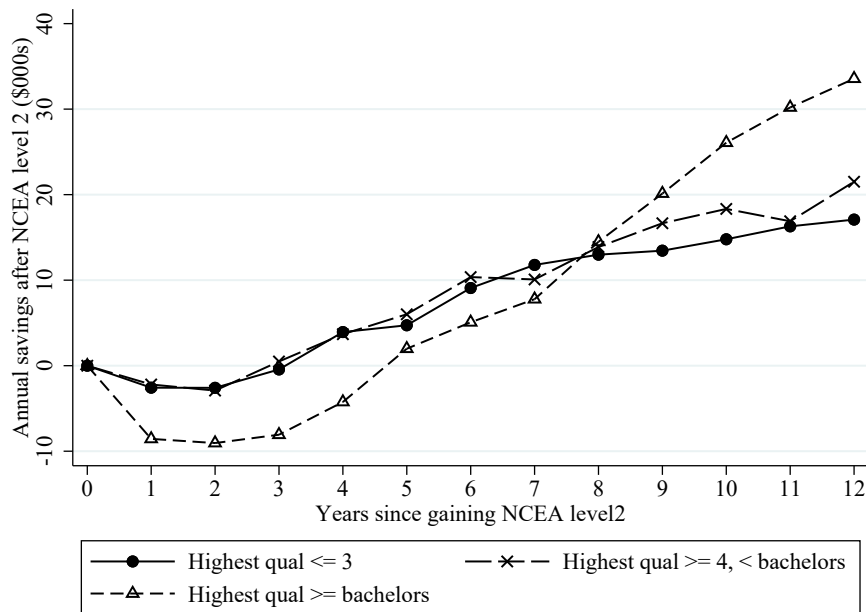
Taken together, these findings show men who specialised in Māori and achieve a bachelor's degree or higher earn enough in the labour market that their cumulative savings eventually overtake those of less qualified men, but this takes more than 12 years after NCEA level 2. Women with a bachelor's degree overtake less qualified women in just 10 years. However, the gender gap is large. After 12 years, the median cumulative savings of the most qualified women are well below those of the least qualified men.

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

Panel A: Cumulative savings



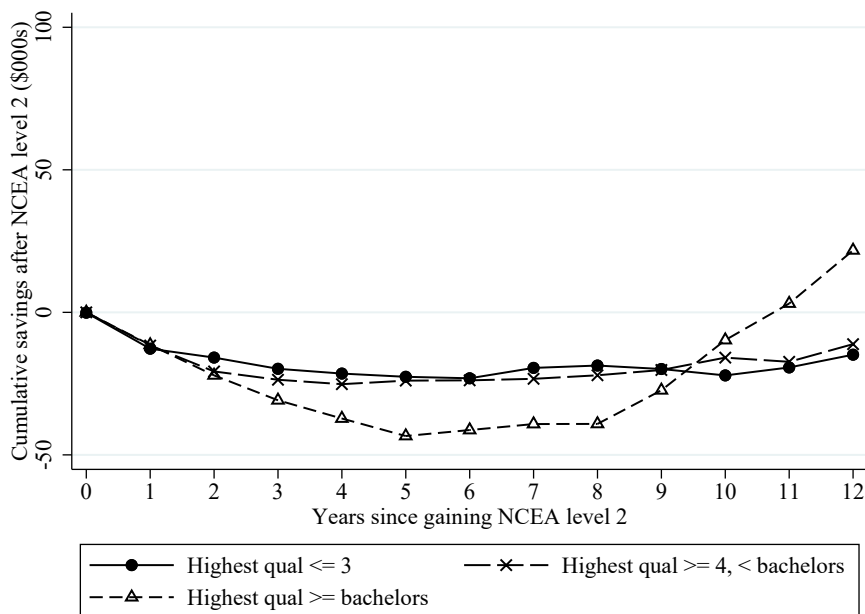
Panel B: Annual savings



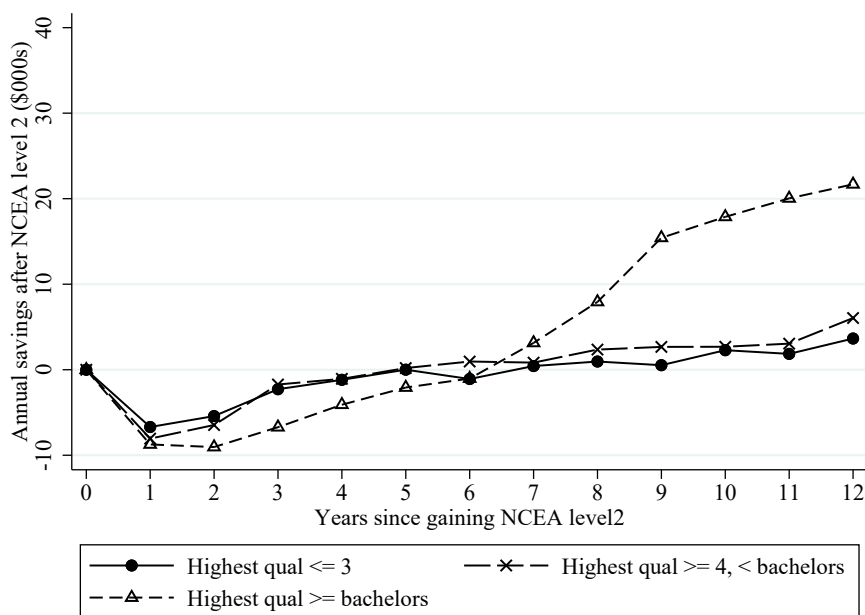
Notes: This figure shows changes over time in the median of cumulative savings since gaining NCEA level 2 (Panel A) and median of annual savings (Panel B) for men who specialised in Māori and achieved different levels of highest qualification. Qualifications are included if they were gained within 10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

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

Panel A: Cumulative savings



Panel B: Annual savings

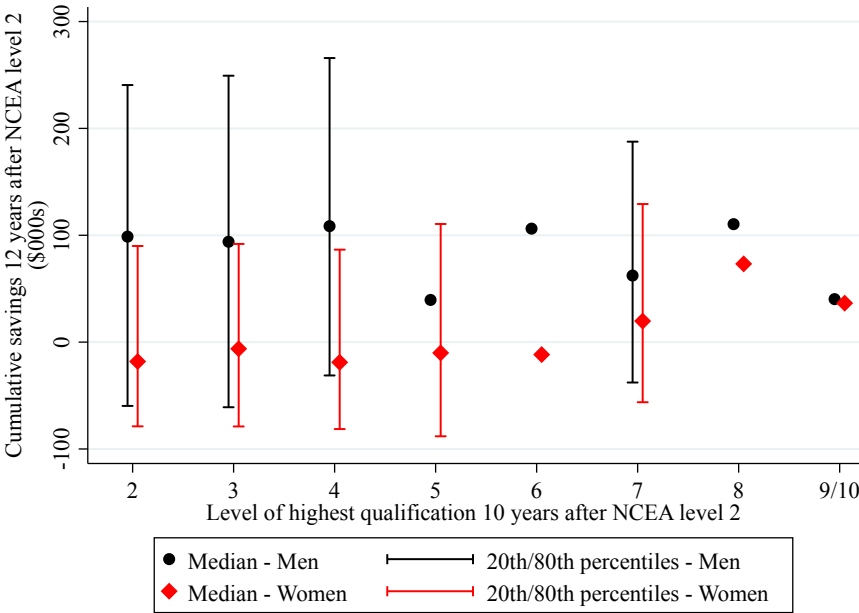


Notes: This figure shows changes over time in the median of cumulative savings since gaining NCEA level 2 (Panel A) and median of annual savings (Panel B) for women who specialised in Māori and achieved different levels of highest qualification. Qualifications are included if they were gained within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

Figures 7 and 8 explore the distribution of cumulative and annual savings after 12 years for men and women who specialised in Māori by disaggregated level of highest qualification. They show women's cumulative and annual savings are similar at all qualification levels below 7, but

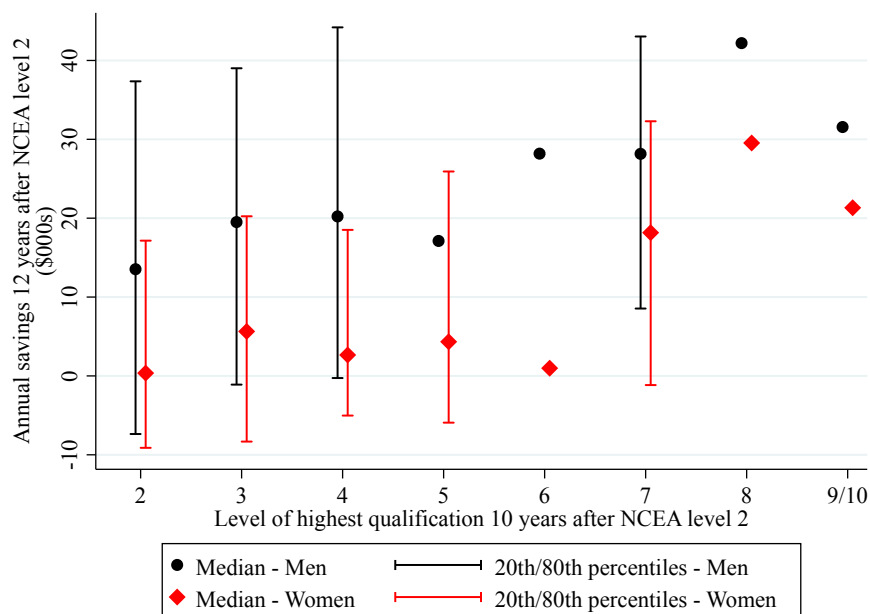
are substantially higher at level 7 and higher again at level 8. In contrast, men’s cumulative savings are relatively low at levels 5, 7, and 9 to 10. Like women, men with level 8 qualifications have higher cumulative and annual savings than those with level 7 qualifications. In fact, level 8 qualifications are associated with the strongest labour market outcomes overall for men. However, not all men who specialise in Māori at school would have the academic inclination to complete this level of study.

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 Māori 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 Māori 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 Māori 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 Māori. Note the comparisons in this section are all with other students of the same gender in the same specialty, 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 Tables 3 and 4 use regressions to explore for men and women respectively the relationship between having various characteristics and being a top saver, controlling for students' backgrounds and a selection of other characteristics. The first four columns of each of Appendix Tables 3 and 4 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 tables, 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 4.

Only 42% of men and 40% of women gain a level 3 NCEA certificate the year after their level 2 certificate, but by 5 years after it 51% of men and 45% of women have this qualification. The bivariate analysis shows women who achieve level 3 are insignificantly more likely than women who don't to be top cumulative savers, and men and women who do so are 40% and 70% more likely to be top annual savers respectively.

In regressions that control for students' backgrounds, men with any qualification up to level 6 are similarly likely to be top savers. Compared with less qualified men, those with level 7 are insignificantly less likely to be top *cumulative* savers and insignificantly more likely to be top

annual savers. Level 8 or higher is achieved by a low proportion of men, but those who gain it are substantially and significantly more likely to be top annual savers (and insignificantly more likely to be top cumulative savers). In regressions for women, those with level 7 qualifications are significantly more likely to be top cumulative and annual savers than those with lower qualifications. Women with level 8 or higher qualifications are even more likely to be top savers.

Industry training is a relatively common pathway taken by men: over a third of men complete some industry training credits and 20% gain an industry training qualification. It also appears highly beneficial for them, particularly in terms of cumulative savings but also in terms of annual savings. This is especially the case at higher levels, if they complete a qualification, or if they achieve a large number of credits. Eighteen percent of men achieve any industry training credits at level 4 or above. These men are 2.7 times as likely as men who do not achieve any industry training credits at level 4 or above to be top cumulative savers and 1.8 times as likely to be top annual savers. The regression analysis tells a similar story, with level 3 or 4 industry training qualifications strongly predicting being top cumulative and annual savers. However, the few men who gain level 5 or 6 industry training qualifications are less likely to be top savers than are men with similar backgrounds with only level 2 non-industry training qualifications. Only 16% of women gain any industry training credits, and they are substantially more likely than women who don't to be top savers. The regressions show such qualifications at level 3 and above predict being a top cumulative and annual saver for women even after controlling for students' backgrounds, and the higher the level of industry training qualification above level 3, the higher the probability of being a top annual saver.

Forty-three percent of men and 21% of women who specialised in Māori attend an industry training organisation. Conditional on student background characteristics and the highest level of qualification they achieve, this is associated with a high probability of being a top cumulative saver for men and very high probabilities of being top cumulative and annual savers for women. Men who attend a university (45%) and women who attend an institute of technology or polytechnic (76%) are less likely to be top cumulative savers than are others of their gender with the same highest level of qualification who did not attend these institutes. Forty-one percent of men and 53% of women attend a wānanga. They are less likely to be top cumulative or annual savers than others with the same level of qualifications, though the only significant relationship is annual savings for men.

In the bivariate analysis, men who attend a school or tertiary institute in a secondary urban area are less likely than other men to be top annual savers, and women who attend in a minor urban area are less likely than other women to be top cumulative savers. Finally, women

who attend a tertiary institute in a different region to their school are over 40% less likely to be top cumulative savers than other women and insignificantly less likely to be top annual savers. In contrast, men who attend a tertiary institute in a different region to their school are insignificantly more likely to be top cumulative and annual savers. One possible explanation is that women who move away from their whānau have less help caring for their children, so childcare is more likely to divert their effort away from the labour market.

In addition to controlling for students' pathways through education, the regressions in Appendix Tables 3 and 4, 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 little relationship between men's background characteristics and being a top saver, with the exception that men who are stronger academically (indicated by a high percentile score) are weakly less likely to be top cumulative savers and weakly more likely to be top annual savers. This is partly explained by the level and type of highest qualifications they gain. In contrast, women with high percentile scores or multiple specialties are significantly more likely to be top cumulative savers, partly due to the level and type of qualifications they gain. Women at higher decile schools and who attend school outside main urban areas are also more likely to be top savers.

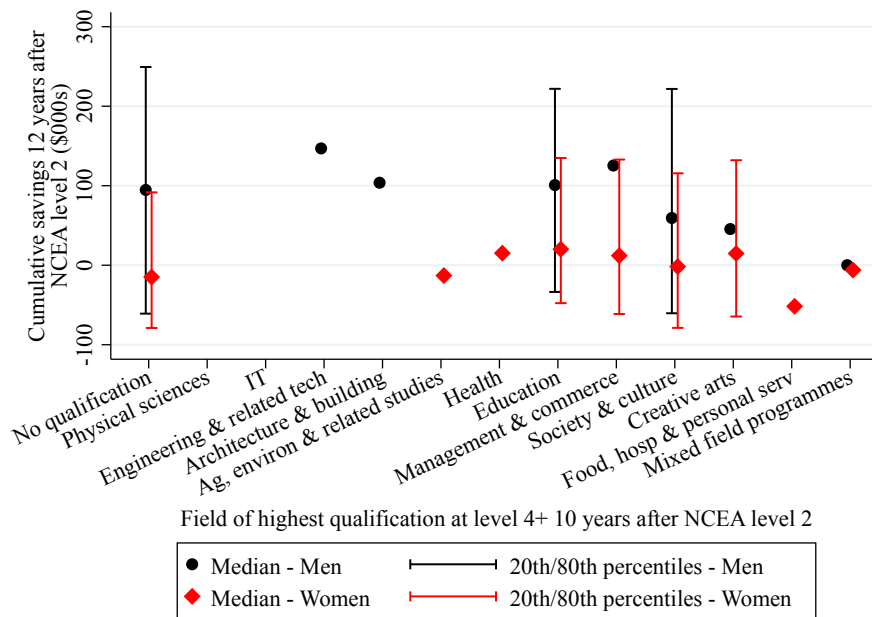
4. How do savings vary with fields of study in higher education?

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

4.1 Cumulative and annual savings by fields of study

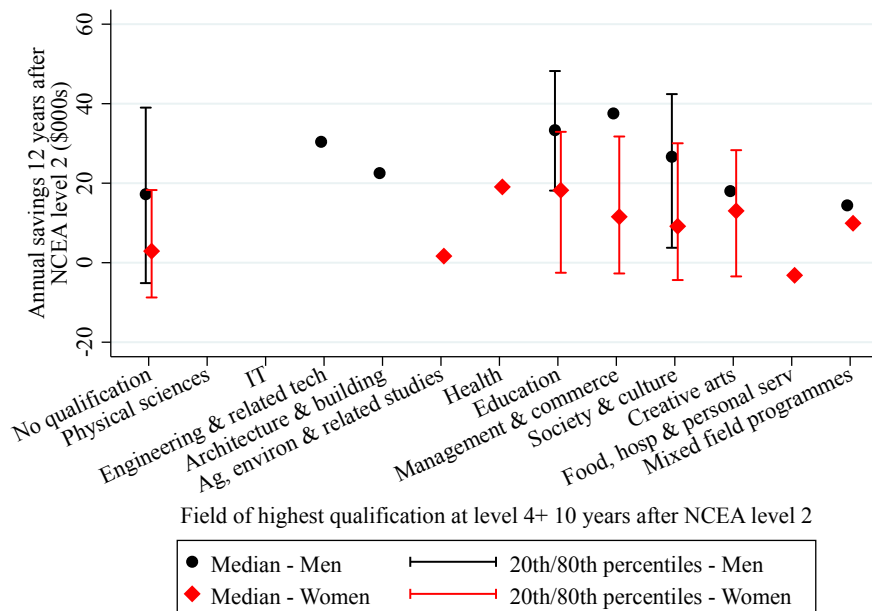
Figure 9 shows how the cumulative savings after 12 years differ for men and women whose highest qualifications at level 4 or above are in different fields. Figure 10 shows the same but for annual rather than cumulative savings. As Figure 2 showed, the highest proportion of men and women have no qualification at level 4 or above. Such men have moderate cumulative savings, around \$95,000 at the median, and low annual savings at under \$20,000. Such women have negative cumulative savings and annual savings of only a few thousand.

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 Māori 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 is Society and Culture. This offers men much lower cumulative savings than no level 4 qualifications, but annual savings nearly \$10,000 higher, suggesting their cumulative savings will increase faster after year 12. The next most common field for men, Education, offers similar cumulative savings to no qualification, but strong annual savings (nearly \$35,000). Creative Arts, which is also common for men, offers them lower cumulative savings than no qualification and similar annual savings. Engineering and Related Technologies and Management and Commerce are both uncommon choices for men who specialised in Māori, but offer very strong cumulative and annual savings.

To women, Society and Culture offers slightly higher cumulative and annual savings than no qualifications. However, both types of savings are still lower than for each of the other three common fields in which women gain qualifications, Education, Creative Arts, and Society and Culture. Of these three, Education offers the highest cumulative and annual savings (both around \$20,000).

4.2 Fields of higher study of top cumulative and annual savers

In this section we again categorise men and women who specialised in Māori 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 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, 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 5 and 6, and the regressions are in Appendix Tables 11 and 12. The first three columns in each 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.

In simple bivariate comparisons, men who pass at least 14 credits at level 2 in Maths are much more likely than men who don't to be top annual savers, though only 18% of men achieve this. Credits in other level 2 fields are associated only insignificantly with being a top annual saver for men, and their relationships with being a top *cumulative* saver are mixed. Men's level 2 *achievement* standard credits are generally more strongly associated with being a top cumulative saver (particularly credits in English and Maths), and achievement standard credits in Maths and Humanities are also associated with being a top annual saver. For women, the bivariate analysis shows level 2 credits in all fields are associated with at least weakly higher probabilities of being top annual and cumulative savers, and the relationships for English and Maths are strongly significant. Achievement standard credits at this level are even more positively associated with being a top saver for women.

For men, passing at least 14 credits at level 3 in Science, Arts and Crafts, or the Service Sector is positively associated with being a top saver in regressions that control for students' backgrounds, whereas men who pass 14 level 3 credits in Maths are less likely to be top savers than are men with similar backgrounds who do not achieve these credits. In the bivariate analysis, men who pass 14 level 3 credits in Engineering and Technology or Manufacturing, Planning, and Construction are more likely to be top cumulative savers.³

For women, passing level 3 credits in most fields is associated with a significantly higher probability of being a top annual saver in the bivariate analysis. Passing at least 14 credits in Computing and IT, which 11% of women do, is positively associated with being a top cumulative and annual saver. Once student background is controlled for in the regressions, the positive relationships from the bivariate analysis become insignificant or disappear. The only significant relationship in the regressions is that women who pass Arts and Crafts credits are less likely to be top cumulative savers.⁴

³ These subjects are not examined separately in the regressions.

⁴ Computing and IT credits may still be associated with being a top saver after controlling for student background, but they are aggregated into the "# of other fields" variable.

The difference in results for level 3 credits in different fields between the bivariate and regression analysis suggests it is students with stronger academic backgrounds who tend to pass 14 credits in most of these subjects, and their higher earnings are primarily explained by their backgrounds rather than by their success in these subjects.

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. The bivariate analysis discussed in this section is presented in Appendix Tables 7 to 10, and the regressions are in Appendix Tables 11 and 12.

Columns (2) and (5) in the regression tables 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 for 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.

Society and Culture is the field in which men are most likely to pass at least 0.5 EFTS of courses at levels 2 and above, 4 and above, and 7 and above. Thirty-seven percent of men do so at level 4 or above, and 28% 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 level 4 or above are no more likely to be top savers than are students with the same background and level 3 fields of study, but who don't study (gain qualifications) above level 3. However, the study of Society and

Culture, which follows naturally from the study of Māori language and culture at level 2, may be attractive for reasons unrelated to labour market returns.

Creative Arts is the next most popular field of study for men. The regressions show men who study Creative Arts at level 4 or above are less likely to be top savers than are men with the same background characteristics and level 3 fields of study, but who don't study above level 3. The difference is more marked for cumulative savings than for annual savings, and particularly strong when Creative Arts is studied at level 7 or above or when a qualification is gained. Education is another popular field of study; in the regressions, men who study it at level 4 or above have a similar probability of being a top saver to those who don't study above level 3. Only 7% of men pass 0.5 EFTS of courses in Engineering and Related Technologies at level 4 or above, but the bivariate analysis shows these men are much more likely than other men to be top cumulative and annual savers. The low number who study in this field suggests few men who specialised in Māori have the background for or interest in it, but even level 2 study in the field appears beneficial. Sixteen percent of men pass at least 0.5 EFTS at level 2 or above in the field, and the bivariate analysis shows they are about twice as likely as other men to be top cumulative savers and 1.8 times as likely to be top annual savers.

Like men, women are particularly likely to pass 0.5 EFTS in Society and Culture and to gain qualifications in this field. Once student background and level 3 fields of study are controlled for, women with these EFTS are not significantly more likely to be top savers than are similar women without the EFTS. However, those with qualifications at level 7 or above in Society and Culture are more likely to be top annual savers and possibly top cumulative savers. Many women also study Creative Arts. In the regression analysis, women who passed EFTS or gained qualifications in Creative Arts at levels 4 to 6 aren't significantly more likely than similar women who did not to be top cumulative or annual savers. However, women who did so at level 7 or above are more likely to be top savers, particularly top annual savers if they completed the qualification. A non-trivial 12% of women complete such a qualification. Creative Arts and Society and Culture could both extend the skills gained through specialising in Māori at level 2; of the two, Creative Arts generally seems more associated with being a top saver for women, whereas the opposite is true for men. Finally, Education at level 7 and above is a relatively common field of study for women (16% of women pass at least 0.5 EFTS at this level), and women who study it at this level are more likely to be top annual savers than are similar women who don't.

5. How do savings vary with self-employment?

This section explores the relationship between self-employment and earnings for men and women who specialised in Māori. A tiny proportion of such individuals are self-employed in the 12 years after NCEA level 2, so we do not present figures of the proportion self-employed.⁵

Figure 11 compares the cumulative savings of men and women 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.⁶ 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 11 shows that among both men and women those who are ever self-employed have higher median cumulative savings than those who are never self-employed. The savings gap emerges very early for men, and in around year 5 for women. For men, it remains similar in size for a number of years, then shrinks in year 8. Overall, this figure suggests those who become self-employed tend to be people who were doing better in the labour market beforehand, but it's not clear being self-employed increases their savings.

⁵ The proportion is nearly always under 3% for men regardless of level of highest qualification, and is always under 3% for women.

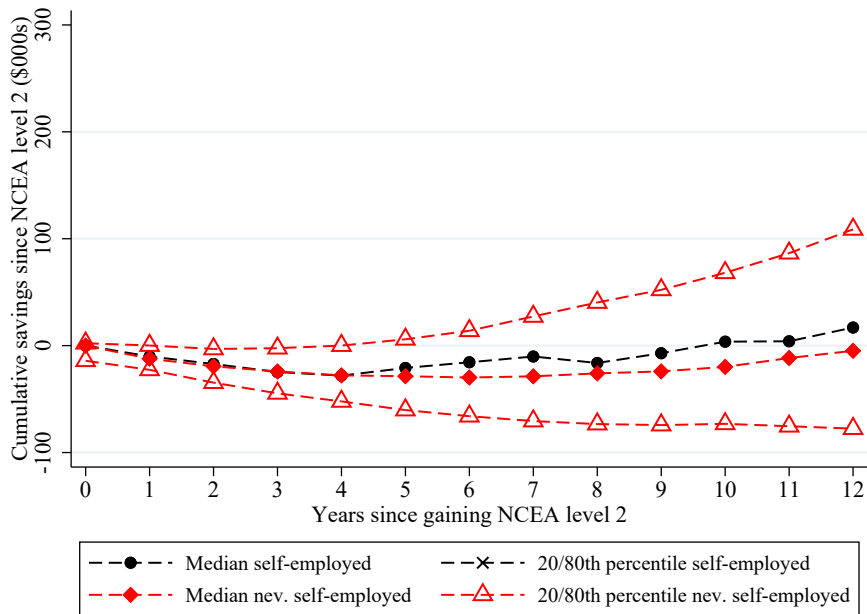
⁶ For instance, self-employment may be a way for successful employees to keep a higher proportion of the value they create (positive selection into self-employment), or it may be a last resort for individuals who can't secure employment or who place high value on objectives other than income (negative selection).

Figure 11: Cumulative savings over time by whether ever self-employed

Panel A: Men



Panel B: Women



Notes: This figure shows the median and 20th and 80th percentiles of cumulative savings of men and women who specialised in Māori by whether they were self-employed in any year from the year they gained NCEA level 2 to the 12th year after that. Note only medians are plotted for the self-employed because the total number is under 50 (though at least 10).

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 Māori vary with their fertility decisions, overseas experience, and work experience in the first five years after NCEA level 2. We again categorise men and women 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 Tables 13 and 14. 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 Tables 15 and 16. The first three columns in each 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 13 to 16.

In both the bivariate comparisons and the regressions that control for a wide range of characteristics including education, men who had a child by the fifth year after NCEA level 2 are more likely to be top cumulative and annual savers than are men who didn't. In the case of cumulative savers, half of this correlation is explained by these men working more of the years in the same period. This could be because men are more likely to have children this early if they are

already established in the labour market, or because having children this early forces men to pursue options that maximise their income. The regressions show women who had children any time in the first 12 years after NCEA level 2 are at least weakly less likely to be top savers when compared with women with the same educational history but no children. This is consistent with the large literature on the motherhood earnings penalty, which shows this penalty is partly driven by women exiting the labour market or reducing their work hours after having children.

Men who had overseas experience in year 11 or 12 are considerably more likely to be top cumulative and annual savers than are those with similar backgrounds and education, but who didn't go overseas. This is partly because we impute overseas earnings and assume overseas wages are higher than New Zealand wages. Conversely, men and women with overseas experience in years 3 to 5 are less likely than similar people who did not go overseas at this time to be top annual savers.

The regressions show that men and women who gained more work experience in the five years after NCEA level 2 are much more likely to be top cumulative savers and somewhat more likely to be top annual savers when compared with those with the same educational, fertility, and travel history but less work experience over this period. They also show that work experience for central government in this period contributes more than other work experience to being a top cumulative and annual saver for both men and women.

Manufacturing is the most common industry for men to have work experience in (28% with at least one year of experience in years 1 to 5 after NCEA level 2 have Manufacturing experience), followed by Construction (15%). The regressions compare men with the same education, timing of children, and early years of work experience, and ask whether those with work experience in a particular industry are more likely to be top cumulative or annual savers than are those who are otherwise similar but have not worked in that particular industry. They show Manufacturing experience isn't associated with a higher likelihood of being a top saver, but Construction experience is correlated with a considerably increased probability of being a top annual saver, suggesting this could be a beneficial industry to enter. Around 13% of men with work experience gain experience in each of the Public Administration and Safety industry and the Education and Training industry. Both are associated with a higher probability of being a top annual saver, comparable to that of Construction. Experience in Accommodation and Food Services (gained by between 6.9% and 7.9% of men with work experience) is associated with a lower likelihood of being a top cumulative saver for men. Men who obtain employment in almost any other industry are more likely to be a top cumulative saver if they do so rather than taking a job in this industry. The most common industry in which women get experience is

Education and Training, which is associated in the regressions with an insignificantly lower probability of being a top cumulative saver. Also common are Retail Trade and Accommodation and Food Services, both of which are negatively associated with being a top saver for women. The 9% of women with work experience who get it in the Public Administration and Safety industry have a somewhat increased probability of being top savers.

7. Conclusions

In this specialty profile, we focussed on Māori men and women who specialised in Māori language and culture at NCEA level 2, and who achieved a level 2 NCEA certificate by age 19 even though they were not top academic performers. A low proportion of these students also reported European ethnicity, and they disproportionately attended low decile schools. We speculate many of these students feel strong ties to their Māori heritage, and may pursue pathways through education and life that are driven by cultural values and are unrelated to the objective of accumulating high financial resources. Nonetheless, it is useful to ask the routes through education that are likely to lead these students to success in the labour market, and let the students decide for themselves how the various options align with their values and objectives.

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 we controlled for several characteristics of students' backgrounds, but all the relationships we find should be considered suggestive of causality rather than necessarily causal.

Students in this specialty display an enormous gender savings gap. This gap suggests a lot of women don't perform paid work, or work a low number of hours for pay. The analysis conducted here doesn't enable us to tell whether this is a genuine choice. For instance, many women may choose to pursue other objectives, such as contributing to their marae or iwi, raising children, or caring for relatives. Others may not be able to find a suitable job, or working may not be worthwhile for them given the cost (such as requiring childcare). The women who take pathways that lead to strong labour market outcomes could either be those who choose to do (more) paid work as opposed to unpaid work, or they could have stronger outcomes because their study has better prepared them for the labour market. Both may contribute. This should be borne in mind when considering the pathways that lead to strong labour market outcomes.

Over 50% of men and over 60% of women who specialised in Māori at level 2 gain qualifications at level 4 or above. Women do well if they gain level 7 qualifications, and even

better if they gain level 8 or higher qualifications. However, most students are unlikely to have the academic inclination for postgraduate study. An alternative option associated with strong outcomes for women is an industry training qualification at level 3 or 4. For men, level 7 qualifications are not so clearly beneficial, though level 8 or higher qualifications yield the highest cumulative and annual savings. As for women, a less academic option associated with very strong labour market outcomes is a level 3 or 4 industry training qualification.

Society and Culture and Creative Arts are two fields of study that could naturally build off the skills students gain studying Māori language and culture at level 2. Both are pursued by a sizeable proportion of men and women. For men, neither field is associated with strong savings, but Creative Arts in particular is associated with weak savings, especially if the man completes a qualification or studies at level 7 or above. In contrast, Creative Arts leads to stronger outcomes for women than does Society and Culture, though neither is in general beneficial. The exception is that women who gain a qualification at level 7 or above in one of these fields, especially in Creative Arts, tend to have strong outcomes. Despite the generally weak outcomes associated with these fields of study, students may pursue them for reasons unrelated to the labour market, such as enjoyment or to gain a better understanding of or connection to their culture.

Men who study Engineering and Related Technologies tend to do well in the labour market. Although few men pass a significant number of courses in this field at level 4 or higher, the field is associated with strong outcomes even at lower levels. Men who are not academically inclined but want to maximise their savings might find Engineering and Related Technologies a good field to study even at level 2 or 3. Women often do well if they study Education at level 7 or above, regardless of whether they gain a qualification.

Many men gain early work experience in the Construction industry, the Public Administration and Safety industry, or the Education and Training industry. All three tend to lead to strong outcomes. The more common industries in which women gain work experience tend to be associated with weak labour market outcomes. Experience in the Public Administration and Safety industry is less common for women than for men, but is associated with strong outcomes for those who get it.

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	42.0	40.6	0.96	40.0	51.5	1.45**	489
NCEA cert level 3 within 5 yrs	51.5	50.0	0.95	49.2	59.4	1.39*	489
University Entrance within 1 yr	26.2	27.3	1.05	23.1	42.4	1.99***	489
Level of highest qualification gained within 10 years:							
Level 2	21.4	21.9	1.02	22.3	15.6	0.70	489
Level 3	26.2	28.1	1.08	28.2	21.9	0.76	489
Level 4	17.6	21.9	1.24	18.3	21.9	1.19	489
Level 5	6.9	<5.9	<0.88	6.9	<5.9	<0.87*	489
Level 6	<5% have characteristic			<5% have characteristic			489
Level 7	21.4	9.4	0.44**	18.5	21.9	1.18	489
Level 8	<5% have characteristic			<5% have characteristic			489
Level 9 or 10	<5% have characteristic			<5% have characteristic			489
Industry training credits gained within 10 years:							
Any credits	32.1	50.0	1.81***	35.1	40.6	1.21	489
Any credits at level 4+	13.0	36.4	2.66***	14.6	27.3	1.81***	489
50+ credits	13.7	40.6	2.91***	16.0	31.3	1.94***	489
50+ credits at level 4+	5.4	18.2	2.56***	5.4	15.2	2.25***	489
Level of highest industry training qualification gained within 10 years:							
Level 2+	14.6	39.4	2.66***	16.9	30.3	1.78***	489
Level 3+	8.4	33.3	3.23***	9.2	27.3	2.55***	489
Level 4+	4.6	15.2	2.47***	4.6	15.2	2.47***	489
Types of tertiary institute where student enrolled within 10 years (for students who enrolled in any tertiary):							
Industry Training Organisation	39.7	56.3	1.71***	42.0	48.5	1.23	486
Institute of Technology/Polytech	78.3	78.1	0.99	79.1	75.0	0.83	486
Private Training Establishment	66.9	71.9	1.21	66.9	71.9	1.21	486
University	48.8	31.3	0.55***	44.6	48.5	1.13	486
Wananga	43.8	31.3	0.64*	43.4	34.4	0.73*	486
Other Tertiary Provider	6.9	12.1	1.60*	7.0	9.4	1.28	486
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			489
Secondary urban area	35.1	33.3	0.94	37.4	27.3	0.69**	489
Minor urban area	30.8	36.4	1.22	30.5	36.4	1.23	489
Rural centre or rural area	32.3	36.4	1.15	32.8	33.3	1.02	489
Different region to school	89.1	92.9	1.48	88.1	93.3	1.70	441

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	38.8	42.9	1.14	37.0	51.0	1.58***	750
NCEA cert level 3 within 5 yrs	44.1	49.0	1.17	41.8	58.0	1.69***	750
University Entrance within 1 yr	28.2	34.7	1.27*	26.4	42.0	1.73***	750
Level of highest qualification gained within 10 years:							
Level 2	20.4	14.6	0.71	21.9	9.8	0.45***	750
Level 3	20.4	16.0	0.79	21.4	12.0	0.56**	750
Level 4	18.9	14.3	0.76	19.9	10.2	0.52**	750
Level 5	9.5	10.0	1.05	10.0	8.0	0.82	750
Level 6	<5% have characteristic			<5% have characteristic			750
Level 7	24.3	32.0	1.35*	20.9	44.0	2.30***	750
Level 8	<5% have characteristic			<5% have characteristic			750
Level 9 or 10	<5% have characteristic			<5% have characteristic			750
Industry training credits gained within 10 years:							
Any credits	12.4	28.6	2.16***	14.4	24.0	1.62***	750
Any credits at level 4+	3.5	16.0	3.00***	4.5	14.0	2.39***	750
50+ credits	5.9	18.4	2.46***	6.5	14.3	1.92***	750
50+ credits at level 4+	<5% have characteristic			<5% have characteristic			750
Level of highest industry training qualification gained within 10 years:							
Level 2+	7.0	22.4	2.61***	8.5	18.0	1.90***	750
Level 3+	3.5	18.0	3.22***	4.5	12.0	2.15***	750
Level 4+	<5% have characteristic			<5% have characteristic			750
Types of tertiary institute where student enrolled within 10 years (for students who enrolled in any tertiary):							
Industry Training Organisation	18.5	34.0	1.87***	19.0	32.0	1.71***	747
Institute of Technology/Polytech	78.1	65.3	0.61***	77.0	68.0	0.70*	747
Private Training Establishment	76.5	71.4	0.81	77.0	70.0	0.75*	747
University	49.8	51.0	1.04	47.5	61.2	1.57***	747
Wananga	54.0	48.0	0.83	53.5	49.0	0.86	747
Other Tertiary Provider	4.5	8.0	1.58	4.5	9.8	1.83*	747
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			750
Secondary urban area	35.8	34.0	0.94	34.8	36.0	1.04	750
Minor urban area	33.8	24.0	0.68**	32.8	28.0	0.83	750
Rural centre or rural area	21.9	20.4	0.93	21.4	24.0	1.13	750
Different region to school	94.5	89.1	0.58***	93.4	91.5	0.81	687

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	0.001 (0.024)	0.000 (0.024)	-0.003 (0.022)	0.004 (0.023)	0.019 (0.022)	0.016 (0.023)	0.011 (0.022)	0.018 (0.022)
Percentile score (0-1)	-0.341* (0.181)	-0.327* (0.187)	-0.232 (0.173)	-0.285 (0.187)	0.145 (0.164)	0.064 (0.166)	0.136 (0.169)	0.076 (0.169)
Multiple specialties	-0.048 (0.065)	-0.067 (0.062)	-0.074 (0.062)	-0.057 (0.064)	0.032 (0.081)	-0.013 (0.076)	-0.025 (0.077)	-0.026 (0.077)
School decile	0.008 (0.008)	0.008 (0.008)	0.001 (0.008)	0.008 (0.008)	0.004 (0.009)	0.003 (0.009)	-0.003 (0.008)	0.000 (0.009)
School not in main urban area	0.022 (0.042)	0.016 (0.042)	0.013 (0.041)	0.003 (0.042)	-0.021 (0.043)	-0.020 (0.043)	-0.025 (0.043)	-0.033 (0.044)
Highest qualification gained within 10 years (omitted category: level 2):								
Level 3		0.035 (0.056)	-0.038 (0.053)	0.067 (0.056)		0.004 (0.050)	-0.044 (0.048)	0.016 (0.049)
Level 4		0.046 (0.062)	-0.106* (0.063)	0.063 (0.061)		0.079 (0.059)	-0.066 (0.055)	0.108* (0.059)
Level 5 or 6		-0.053 (0.068)	-0.078 (0.065)	0.002 (0.069)		-0.008 (0.066)	-0.024 (0.066)	0.033 (0.068)
Level 7		-0.085 (0.054)	-0.104* (0.054)	0.018 (0.060)		0.064 (0.058)	0.050 (0.059)	0.123** (0.063)
Level 8 to 10		0.100 (0.099)	0.097 (0.100)	0.230** (0.106)		0.295*** (0.108)	0.290*** (0.108)	0.378*** (0.112)
Highest industry training qualification gained within 10 years (omitted category: none):								
Level 2			0.058 (0.071)				-0.027 (0.059)	
Level 3			0.404*** (0.096)				0.259*** (0.098)	
Level 4			0.365*** (0.101)				0.375*** (0.098)	
Level 5 or 6			-0.091 (0.068)				-0.185*** (0.071)	
Any Gateway credits completed within 10 years				0.067 (0.058)				0.062 (0.057)
Enrolled in institute type within 10 years:								
Industry Training Organisation				0.082** (0.038)				0.030 (0.037)
Institute of Technology/Polytech				-0.047 (0.045)				-0.048 (0.044)
Private Training Establishment				0.000 (0.040)				0.045 (0.040)
University				-0.110** (0.044)				-0.029 (0.043)
Wānanga				-0.051 (0.039)				-0.100** (0.041)
Other Tertiary Provider				0.092 (0.084)				0.033 (0.078)
NCEA level 2 year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.019	0.036	0.115	0.077	0.007	0.034	0.091	0.060
Observations	489	489	489	489	489	489	489	489

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: Regressions of being a top saver on level of highest qualification for women

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	0.025 (0.019)	0.028 (0.019)	0.030* (0.018)	0.023 (0.018)	0.008 (0.018)	0.018 (0.018)	0.019 (0.018)	0.015 (0.018)
Percentile score (0-1)	0.244 (0.157)	0.175 (0.159)	0.119 (0.157)	0.254 (0.159)	0.428*** (0.144)	0.265* (0.141)	0.248* (0.139)	0.318** (0.137)
Multiple specialties	0.053 (0.043)	0.035 (0.043)	0.024 (0.042)	0.011 (0.043)	0.097** (0.045)	0.049 (0.045)	0.043 (0.045)	0.030 (0.045)
School decile	0.027*** (0.007)	0.026*** (0.007)	0.025*** (0.007)	0.023*** (0.007)	0.023*** (0.007)	0.020*** (0.007)	0.020*** (0.006)	0.018*** (0.007)
School not in main urban area	0.021 (0.034)	0.016 (0.034)	0.018 (0.032)	0.002 (0.034)	0.078** (0.034)	0.066** (0.033)	0.068** (0.033)	0.057* (0.032)
Highest qualification gained within 10 years (omitted category: level 2):								
Level 3		0.017 (0.043)	-0.014 (0.042)	0.020 (0.042)		0.036 (0.037)	0.020 (0.036)	0.035 (0.037)
Level 4		0.022 (0.045)	-0.060 (0.041)	0.022 (0.044)		0.047 (0.038)	-0.000 (0.035)	0.042 (0.039)
Level 5 or 6		0.040 (0.050)	0.040 (0.050)	0.084 (0.051)		0.069 (0.044)	0.063 (0.043)	0.109** (0.046)
Level 7		0.074* (0.044)	0.071 (0.043)	0.121*** (0.044)		0.231*** (0.043)	0.227*** (0.043)	0.267*** (0.045)
Level 8 to 10		0.208** (0.086)	0.214** (0.086)	0.252*** (0.091)		0.416*** (0.085)	0.419*** (0.086)	0.451*** (0.090)
Highest industry training qualification gained within 10 years (omitted category: none):								
Level 2			0.105 (0.075)				0.100 (0.073)	
Level 3			0.352*** (0.103)				0.190** (0.095)	
Level 4			0.560*** (0.112)				0.325*** (0.121)	
Level 5 or 6			0.310 (0.397)				0.817*** (0.048)	
Any Gateway credits completed within 10 years				-0.000 (0.038)				-0.014 (0.035)
Enrolled in institute type within 10 years:								
Industry Training Organisation				0.156*** (0.039)				0.149*** (0.038)
Institute of Technology/Polytech				-0.096*** (0.037)				-0.032 (0.035)
Private Training Establishment				-0.004 (0.036)				-0.009 (0.035)
University				-0.047 (0.031)				-0.014 (0.030)
Wānanga				-0.027 (0.030)				-0.044 (0.030)
Other Tertiary Provider				0.126* (0.073)				0.165** (0.072)
NCEA level 2 year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.043	0.056	0.122	0.100	0.053	0.128	0.160	0.165
Observations	753	753	753	753	753	753	753	753

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 5: 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	29.0	27.3	0.93	26.9	36.4	1.41	489
Maths	16.9	21.9	1.28	15.4	27.3	1.73***	489
Māori	<5% do not have characteristic			<5% do not have characteristic			489
Humanities	53.1	56.3	1.11	51.9	59.4	1.28	489
Social Science	7.7	9.1	1.15	8.4	9.4	1.10	489
Science	30.8	27.3	0.87	28.5	36.4	1.33	489
Passed at least 14 achievement standard credits at level 2 by year of NCEA level 2 in:							
English	6.9	9.4	1.30	5.4	14.7	2.18**	489
Maths	5.3	12.1	1.92**	3.8	15.2	2.73***	489
Māori	75.4	72.7	0.90	73.8	78.1	1.21	489
Humanities	22.1	33.3	1.55**	22.3	30.3	1.38*	489
Social Science	6.9	6.3	0.92	6.9	6.3	0.92	489
Science	15.3	15.6	1.02	13.7	21.9	1.55**	489
Passed at least 14 credits at level 3 within 5 years in:							
English	19.1	15.2	0.80	16.8	25.0	1.48*	489
Maths	16.8	12.1	0.73	13.7	21.9	1.55*	489
Māori	68.7	63.6	0.84	67.7	69.7	1.08	489
Humanities	30.8	21.9	0.69	27.5	36.4	1.38	489
Social Science	8.4	9.4	1.10	6.9	14.7	1.86*	489
Science	19.1	15.6	0.82	16.8	27.3	1.61**	489
Arts & Crafts	9.2	12.1	1.27	8.4	15.6	1.70***	489
Computing & IT	<5% have characteristic			<5% have characteristic			489
Business	<5% have characteristic			<5% have characteristic			489
Agriculture, Forestry, & Fisheries	8.4	9.4	1.10	8.4	6.3	0.77	489
Community & Social Services	6.9	9.4	1.29	6.9	9.4	1.30	489
Education	<5% have characteristic			<5% have characteristic			489
Service Sector	13.0	15.6	1.19	10.8	21.9	1.88***	489
Engineering & Technology	4.6	9.4	1.76**	5.4	6.3	1.13	489
Manufacturing, Planning & Constrn	5.4	14.7	2.18***	5.4	12.1	1.91*	489
Passed at least 14 achievement standard credits at level 3 within 5 years in:							
English	6.9	6.3	0.92	5.4	12.1	1.91**	489
Maths	<5% have characteristic			<5% have characteristic			489
Māori	51.5	48.5	0.91	50.0	56.3	1.22	489
Humanities	18.3	15.2	0.83	16.0	21.9	1.35	489
Social Science	6.9	6.1	0.90	5.4	9.4	1.57	489
Science	6.9	9.4	1.29	5.4	15.2	2.25***	489
Arts & Crafts	7.7	9.4	1.19	6.9	15.2	1.91***	489
Computing & IT	<5% have characteristic			<5% have characteristic			489
Business	<5% have characteristic			<5% have characteristic			489
Agriculture, Forestry, & Fisheries	<5% have characteristic			<5% have characteristic			489
Community & Social Services	<5% have characteristic			<5% have characteristic			489
Education	<5% have characteristic			<5% have characteristic			489
Service Sector	<5% have characteristic			<5% have characteristic			489
Engineering & Technology	<5% have characteristic			<5% have characteristic			489
Manufacturing, Planning & Constrn	<5% have characteristic			<5% have characteristic			489

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 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	32.8	42.9	1.41**	32.8	44.0	1.46**	750
Maths	11.4	22.4	1.85***	12.0	18.4	1.47**	750
Māori	<5% do not have characteristic			<5% do not have characteristic			750
Humanities	53.2	58.0	1.17	52.2	63.3	1.44**	750
Social Science	12.9	18.0	1.35	12.4	18.4	1.43*	750
Science	26.7	33.3	1.29*	27.4	32.0	1.19	750
Passed at least 14 achievement standard credits at level 2 by year of NCEA level 2 in:							
English	11.9	20.4	1.64***	11.4	24.0	1.96***	750
Maths	5.9	10.2	1.56*	5.5	10.2	1.66**	750
Māori	81.6	82.0	1.02	79.6	90.0	2.02***	750
Humanities	24.9	34.7	1.45***	23.9	38.8	1.73***	750
Social Science	8.4	14.3	1.58**	8.0	14.3	1.64***	750
Science	12.4	18.4	1.43**	12.4	18.4	1.43**	750
Passed at least 14 credits at level 3 within 5 years in:							
English	17.4	20.4	1.17	15.9	26.5	1.65***	750
Maths	13.4	14.6	1.08	12.9	18.0	1.35	750
Māori	67.3	71.4	1.17	66.7	74.0	1.33*	750
Humanities	26.0	27.1	1.05	24.4	34.7	1.48***	750
Social Science	13.9	18.4	1.30	12.5	22.0	1.68***	750
Science	17.4	20.4	1.17	15.9	24.5	1.52**	750
Arts & Crafts	12.9	8.0	0.64*	11.9	12.0	1.00	750
Computing & IT	9.5	18.0	1.75***	9.5	18.0	1.75***	750
Business	<5% have characteristic			<5% have characteristic			750
Agriculture, Forestry, & Fisheries	<5% have characteristic			<5% have characteristic			750
Community & Social Services	<5% have characteristic			<5% have characteristic			750
Education	<5% have characteristic			<5% have characteristic			750
Service Sector	23.9	20.4	0.85	22.3	28.6	1.30	750
Engineering & Technology	<5% have characteristic			<5% have characteristic			750
Manufacturing, Planning & Constrn	<5% have characteristic			<5% have characteristic			750
Passed at least 14 achievement standard credits at level 3 within 5 years in:							
English	8.4	10.0	1.16	7.9	12.0	1.43	750
Maths	<5% have characteristic			<5% have characteristic			750
Māori	56.4	58.0	1.05	55.2	64.0	1.34*	750
Humanities	15.9	16.0	1.00	15.0	18.4	1.21	750
Social Science	8.5	14.3	1.57**	8.5	14.3	1.57**	750
Science	6.5	6.1	0.95	6.5	8.0	1.20	750
Arts & Crafts	9.5	8.0	0.86	9.0	10.0	1.10	750
Computing & IT	<5% have characteristic			<5% have characteristic			750
Business	<5% have characteristic			<5% have characteristic			750
Agriculture, Forestry, & Fisheries	<5% have characteristic			<5% have characteristic			750
Community & Social Services	<5% have characteristic			<5% have characteristic			750
Education	<5% have characteristic			<5% have characteristic			750
Service Sector	<5% have characteristic			<5% have characteristic			750
Engineering & Technology	<5% have characteristic			<5% have characteristic			750
Manufacturing, Planning & Constrn	<5% have characteristic			<5% have characteristic			750

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 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+	8.4	6.3	0.77	6.9	12.1	1.60*	489
Natural & Physical Sciences at level 4+	<5% have characteristic			<5% have characteristic			489
Natural & Physical Sciences at level 7+	<5% have characteristic			<5% have characteristic			489
Natural & Physical Sciences at level 8+	<5% have characteristic			<5% have characteristic			489
Information Technology at level 2+	<5% have characteristic			<5% have characteristic			489
Information Technology at level 4+	<5% have characteristic			<5% have characteristic			489
Information Technology at level 7+	<5% have characteristic			<5% have characteristic			489
Information Technology at level 8+	<5% have characteristic			<5% have characteristic			489
Engineering & Related Technologies at level 2+	13.0	27.3	1.99***	13.0	25.0	1.84***	489
Engineering & Related Technologies at level 4+	5.4	12.1	1.91*	5.3	15.2	2.26***	489
Engineering & Related Technologies at level 7+	<5% have characteristic			<5% have characteristic			489
Engineering & Related Technologies at level 8+	<5% have characteristic			<5% have characteristic			489
Architecture & Building at level 2+	9.2	12.1	1.28	9.2	9.4	1.01	489
Architecture & Building at level 4+	5.4	6.1	1.10	5.3	9.1	1.54	489
Architecture & Building at level 7+	<5% have characteristic			<5% have characteristic			489
Architecture & Building at level 8+	<5% have characteristic			<5% have characteristic			489
Ag, Environmental & Related Studies at level 2+	13.1	15.2	1.14	13.8	12.1	0.88	489
Ag, Environmental & Related Studies at level 4+	<5% have characteristic			<5% have characteristic			489
Ag, Environmental & Related Studies at level 7+	<5% have characteristic			<5% have characteristic			489
Ag, Environmental & Related Studies at level 8+	<5% have characteristic			<5% have characteristic			489
Health at level 2+	<5% have characteristic			<5% have characteristic			489
Health at level 4+	<5% have characteristic			<5% have characteristic			489
Health at level 7+	<5% have characteristic			<5% have characteristic			489
Health at level 8+	<5% have characteristic			<5% have characteristic			489
Education at level 2+	13.1	12.1	0.93	12.2	15.6	1.25	489
Education at level 4+	13.0	9.4	0.74	11.5	15.2	1.29	489
Education at level 7+	9.2	6.1	0.69	8.4	12.1	1.37	489
Education at level 8+	<5% have characteristic			<5% have characteristic			489
Management & Commerce at level 2+	11.5	15.2	1.29	9.2	21.9	2.11***	489
Management & Commerce at level 4+	6.9	9.1	1.27	5.3	15.2	2.28***	489
Management & Commerce at level 7+	<5% have characteristic			<5% have characteristic			489
Management & Commerce at level 8+	<5% have characteristic			<5% have characteristic			489
Society & Culture at level 2+	82.4	72.7	0.65**	80.0	81.8	1.10	489
Society & Culture at level 4+	39.7	27.3	0.63**	36.9	40.6	1.13	489
Society & Culture at level 7+	16.8	9.1	0.56**	14.5	15.6	1.07	489
Society & Culture at level 8+	<5% have characteristic			<5% have characteristic			489
Creative Arts at level 2+	40.9	27.3	0.61**	39.7	31.3	0.74	489
Creative Arts at level 4+	23.7	9.4	0.39***	22.3	15.2	0.68	489
Creative Arts at level 7+	<5% have characteristic			<5% have characteristic			489
Creative Arts at level 8+	<5% have characteristic			<5% have characteristic			489
Food, Hospitality & Personal Servs at level 2+	<5% have characteristic			<5% have characteristic			489
Food, Hospitality & Personal Servs at level 4+	<5% have characteristic			<5% have characteristic			489
Food, Hospitality & Personal Servs at level 7+	<5% have characteristic			<5% have characteristic			489
Food, Hospitality & Personal Servs at level 8+	<5% have characteristic			<5% have characteristic			489
Mixed Field Programmes at level 2+	<5% have characteristic			<5% have characteristic			489
Mixed Field Programmes at level 4+	<5% have characteristic			<5% have characteristic			489
Mixed Field Programmes at level 7+	<5% have characteristic			<5% have characteristic			489
Mixed Field Programmes at level 8+	<5% have characteristic			<5% have characteristic			489

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: Fields of tertiary study 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)
Fields and levels in which student passed at least 0.5 EFTS within 10 years:							
Natural & Physical Sciences at level 2+	7.9	10.0	1.22	7.0	10.2	1.38*	750
Natural & Physical Sciences at level 4+	<5% have characteristic			<5% have characteristic			750
Natural & Physical Sciences at level 7+	<5% have characteristic			<5% have characteristic			750
Natural & Physical Sciences at level 8+	<5% have characteristic			<5% have characteristic			750
Information Technology at level 2+	5.0	6.1	1.19	4.5	8.0	1.59	750
Information Technology at level 4+	<5% have characteristic			<5% have characteristic			750
Information Technology at level 7+	<5% have characteristic			<5% have characteristic			750
Information Technology at level 8+	<5% have characteristic			<5% have characteristic			750
Engineering & Related Technologies at level 2+	7.9	8.0	1.01	7.0	10.0	1.36	750
Engineering & Related Technologies at level 4+	<5% have characteristic			<5% have characteristic			750
Engineering & Related Technologies at level 7+	<5% have characteristic			<5% have characteristic			750
Engineering & Related Technologies at level 8+	<5% have characteristic			<5% have characteristic			750
Architecture & Building at level 2+	<5% have characteristic			<5% have characteristic			750
Architecture & Building at level 4+	<5% have characteristic			<5% have characteristic			750
Architecture & Building at level 7+	<5% have characteristic			<5% have characteristic			750
Architecture & Building at level 8+	<5% have characteristic			<5% have characteristic			750
Ag, Environmental & Related Studies at level 2+	6.4	<3.9	<0.65**	6.0	<3.9	<0.69*	750
Ag, Environmental & Related Studies at level 4+	<5% have characteristic			<5% have characteristic			750
Ag, Environmental & Related Studies at level 7+	<5% have characteristic			<5% have characteristic			750
Ag, Environmental & Related Studies at level 8+	<5% have characteristic			<5% have characteristic			750
Health at level 2+	11.4	10.2	0.91	10.9	14.0	1.25	750
Health at level 4+	10.0	10.0	1.00	9.5	10.2	1.07	750
Health at level 7+	<5% have characteristic			<5% have characteristic			750
Health at level 8+	<5% have characteristic			<5% have characteristic			750
Education at level 2+	23.9	22.4	0.94	20.5	34.7	1.75***	750
Education at level 4+	22.3	20.4	0.91	19.4	32.7	1.72***	750
Education at level 7+	16.3	16.0	0.98	12.9	30.0	2.20***	750
Education at level 8+	<5% have characteristic			<5% have characteristic			750
Management & Commerce at level 2+	29.4	34.7	1.22	29.4	34.7	1.22	750
Management & Commerce at level 4+	18.3	18.4	1.00	17.9	18.4	1.03	750
Management & Commerce at level 7+	<5% have characteristic			<5% have characteristic			750
Management & Commerce at level 8+	<5% have characteristic			<5% have characteristic			750
Society & Culture at level 2+	84.1	86.0	1.13	82.6	90.0	1.71**	750
Society & Culture at level 4+	48.8	49.0	1.01	47.3	52.0	1.16	750
Society & Culture at level 7+	18.9	22.4	1.19	17.8	28.6	1.61***	750
Society & Culture at level 8+	<5% have characteristic			<5% have characteristic			750
Creative Arts at level 2+	44.3	40.8	0.89	42.5	48.0	1.19	750
Creative Arts at level 4+	25.2	24.5	0.97	22.9	33.3	1.50**	750
Creative Arts at level 7+	<5% have characteristic			<5% have characteristic			750
Creative Arts at level 8+	<5% have characteristic			<5% have characteristic			750
Food, Hospitality & Personal Servs at level 2+	10.4	<4.0	<0.41***	10.4	4.0	0.41**	750
Food, Hospitality & Personal Servs at level 4+	<5% have characteristic			<5% have characteristic			750
Food, Hospitality & Personal Servs at level 7+	<5% have characteristic			<5% have characteristic			750
Food, Hospitality & Personal Servs at level 8+	<5% have characteristic			<5% have characteristic			750
Mixed Field Programmes at level 2+	6.5	6.1	0.95	7.0	4.1	0.62	750
Mixed Field Programmes at level 4+	<5% have characteristic			<5% have characteristic			750
Mixed Field Programmes at level 7+	<5% have characteristic			<5% have characteristic			750
Mixed Field Programmes at level 8+	<5% have characteristic			<5% have characteristic			750

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 9: 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			489
Information Technology	<5% have characteristic			<5% have characteristic			489
Engineering & Related Technologies	7.7	15.6	1.81***	9.2	15.2	1.54*	489
Architecture & Building	<5% have characteristic			<5% have characteristic			489
Ag, Environmental & Related Studies	<5% have characteristic			<5% have characteristic			489
Health	<5% have characteristic			<5% have characteristic			489
Education	10.7	12.1	1.12	9.2	15.2	1.54*	489
Management & Commerce	5.4	<6.1	<1.10	4.6	9.1	1.71	489
Society & Culture	28.2	25.0	0.87	27.5	27.3	0.99	489
Creative Arts	10.7	<5.9	<0.58**	10.0	<6.1	<0.64	489
Food, Hospitality & Personal Services	<5% have characteristic			<5% have characteristic			489
Mixed Field Programmes	42.7	46.9	1.14	45.0	36.4	0.75*	489
Fields of qualifications at level 4+ gained within 10 years:							
Natural & Physical Sciences	<5% have characteristic			<5% have characteristic			489
Information Technology	<5% have characteristic			<5% have characteristic			489
Engineering & Related Technologies	5.3	9.1	1.55	3.8	9.4	1.99**	489
Architecture & Building	<5% have characteristic			<5% have characteristic			489
Ag, Environmental & Related Studies	<5% have characteristic			<5% have characteristic			489
Health	<5% have characteristic			<5% have characteristic			489
Education	11.5	12.1	1.05	10.7	15.6	1.40*	489
Management & Commerce	4.6	6.3	1.28	3.8	12.1	2.38***	489
Society & Culture	29.0	21.9	0.73	27.5	28.1	1.03	489
Creative Arts	10.7	<5.9	<0.58M	10.0	<5.9	<0.62**	489
Food, Hospitality & Personal Services	<5% have characteristic			<5% have characteristic			489
Mixed Field Programmes	<5% have characteristic			<5% have characteristic			489
Fields of qualifications at bachelor's level+ gained within 10 years:							
Natural & Physical Sciences	<5% have characteristic			<5% have characteristic			489
Information Technology	<5% have characteristic			<5% have characteristic			489
Engineering & Related Technologies	<5% have characteristic			<5% have characteristic			489
Architecture & Building	<5% have characteristic			<5% have characteristic			489
Ag, Environmental & Related Studies	<5% have characteristic			<5% have characteristic			489
Health	<5% have characteristic			<5% have characteristic			489
Education	5.3	6.1	1.12	3.8	9.1	1.94	489
Management & Commerce	<5% have characteristic			<5% have characteristic			489
Society & Culture	14.5	9.1	0.65*	12.3	18.2	1.42	489
Creative Arts	<5% have characteristic			<5% have characteristic			489
Food, Hospitality & Personal Services	<5% have characteristic			<5% have characteristic			489
Mixed Field Programmes	<5% have characteristic			<5% have characteristic			489

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 10: Fields of tertiary qualification 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)
Fields of highest qualification gained within 10 years:							
Natural & Physical Sciences	<5% have characteristic			<5% have characteristic			750
Information Technology	<5% have characteristic			<5% have characteristic			750
Engineering & Related Technologies	<5% have characteristic			<5% have characteristic			750
Architecture & Building	<5% have characteristic			<5% have characteristic			750
Ag, Environmental & Related Studies	<5% have characteristic			<5% have characteristic			750
Health	<5% have characteristic			<5% have characteristic			750
Education	16.9	20.4	1.20	14.4	32.0	2.15***	750
Management & Commerce	12.4	18.4	1.43*	13.9	14.0	1.00	750
Society & Culture	25.7	24.5	0.95	25.2	26.0	1.03	750
Creative Arts	10.9	10.0	0.92	10.0	12.0	1.17	750
Food, Hospitality & Personal Services	7.0	<4.0	<0.61	7.0	<4.0	<0.61	750
Mixed Field Programmes	35.3	28.6	0.78	37.8	18.4	0.44***	750
Fields of qualifications at level 4+ gained within 10 years:							
Natural & Physical Sciences	<5% have characteristic			<5% have characteristic			750
Information Technology	<5% have characteristic			<5% have characteristic			750
Engineering & Related Technologies	<5% have characteristic			<5% have characteristic			750
Architecture & Building	<5% have characteristic			<5% have characteristic			750
Ag, Environmental & Related Studies	<5% have characteristic			<5% have characteristic			750
Health	5.4	6.1	1.10	4.5	9.8	1.84*	750
Education	17.4	24.0	1.37	15.0	32.7	2.14***	750
Management & Commerce	12.4	18.4	1.43*	12.5	18.0	1.39	750
Society & Culture	28.9	30.6	1.07	26.9	38.8	1.54***	750
Creative Arts	12.4	14.3	1.14	11.9	17.6	1.42	750
Food, Hospitality & Personal Services	<5% have characteristic			<5% have characteristic			750
Mixed Field Programmes	<5% have characteristic			<5% have characteristic			750
Fields of qualifications at bachelor's level+ gained within 10 years:							
Natural & Physical Sciences	<5% have characteristic			<5% have characteristic			750
Information Technology	<5% have characteristic			<5% have characteristic			750
Engineering & Related Technologies	<5% have characteristic			<5% have characteristic			750
Architecture & Building	<5% have characteristic			<5% have characteristic			750
Ag, Environmental & Related Studies	<5% have characteristic			<5% have characteristic			750
Health	<5% have characteristic			<5% have characteristic			750
Education	9.0	14.0	1.47	6.5	24.0	2.84***	750
Management & Commerce	<5% have characteristic			<5% have characteristic			750
Society & Culture	10.9	16.0	1.40*	9.5	22.0	2.07***	750
Creative Arts	<5% have characteristic			<5% have characteristic			750
Food, Hospitality & Personal Services	<5% have characteristic			<5% have characteristic			750
Mixed Field Programmes	<5% have characteristic			<5% have characteristic			750

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 11: 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:						
English	0.010 (0.064)	0.019 (0.065)	0.011 (0.066)	0.040 (0.071)	0.035 (0.072)	0.026 (0.071)
Maths	-0.193* (0.117)	-0.237** (0.115)	-0.235** (0.115)	-0.088 (0.137)	-0.137 (0.127)	-0.146 (0.128)
Māori	0.007 (0.043)	0.007 (0.044)	0.009 (0.043)	-0.004 (0.043)	-0.011 (0.043)	-0.004 (0.044)
Humanities	-0.068 (0.055)	-0.080 (0.057)	-0.074 (0.057)	-0.001 (0.059)	0.005 (0.062)	0.010 (0.059)
Social science	0.077 (0.073)	0.109 (0.078)	0.086 (0.077)	0.070 (0.079)	0.052 (0.085)	0.045 (0.083)
Science	0.174 (0.113)	0.227** (0.109)	0.205* (0.107)	0.176 (0.126)	0.186 (0.117)	0.190 (0.118)
Arts & crafts	0.057 (0.066)	0.115 (0.070)	0.109 (0.070)	0.169** (0.073)	0.184** (0.075)	0.180** (0.075)
Service sector	0.058 (0.058)	0.054 (0.058)	0.049 (0.058)	0.156** (0.062)	0.142** (0.063)	0.143** (0.063)
# of other fields	0.078** (0.034)	0.067* (0.035)	0.066* (0.034)	0.054 (0.034)	0.032 (0.035)	0.044 (0.035)
Passed at least 0.5 EFTS at level 4+ within 10 years in:						
Health		-0.004 (0.127)			0.144 (0.151)	
Education		0.058 (0.102)			0.037 (0.109)	
Management & Commerce		-0.050 (0.078)			0.102 (0.100)	
Society & Culture		-0.047 (0.047)			-0.035 (0.046)	
Creative Arts		-0.086* (0.045)			-0.058 (0.050)	
# of other fields		-0.028 (0.039)			0.051 (0.048)	
Passed at least 0.5 EFTS at level 7+ within 10 years in:						
Health		-0.077 (0.136)			-0.193 (0.238)	
Education		-0.059 (0.117)			0.067 (0.131)	
Management & Commerce		0.212 (0.148)			0.218 (0.173)	
Society & Culture		-0.053 (0.052)			0.002 (0.064)	
Creative Arts		-0.127* (0.071)			-0.128* (0.071)	
# of other fields		-0.078 (0.117)			0.094 (0.157)	

Continued following page

Continued from previous page

	(1)	(2)	(3)	(4)	(5)	(6)
Gained qualification at level 4+ within 10 years in:						
Education			0.044 (0.077)			0.077 (0.089)
Management & Commerce			-0.028 (0.135)			0.091 (0.133)
Society & Culture			0.010 (0.053)			-0.008 (0.051)
Creative Arts			-0.226*** (0.034)			-0.170*** (0.052)
# of other fields			-0.005 (0.042)			0.041 (0.048)
Gained bachelor's degree+ within 10 years in:						
Education			0.007 (0.118)			0.065 (0.129)
Management & Commerce			0.150 (0.193)			0.200 (0.201)
Society & Culture			-0.089 (0.066)			0.006 (0.074)
Creative Arts			-0.064 (0.056)			0.023 (0.087)
# of other fields			-0.089 (0.112)			0.107 (0.152)
NCEA level 2 year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Background characteristics	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.050	0.086	0.087	0.064	0.103	0.100
Observations	489	489	489	489	489	489

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 12: Regressions of being a top saver on field of higher study for women

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:						
English	0.073 (0.056)	0.060 (0.058)	0.057 (0.056)	0.083 (0.062)	0.044 (0.061)	0.071 (0.060)
Maths	0.000 (0.077)	-0.038 (0.077)	0.012 (0.077)	-0.091 (0.087)	-0.094 (0.083)	-0.066 (0.081)
Māori	0.021 (0.035)	0.017 (0.036)	0.015 (0.035)	0.021 (0.034)	0.010 (0.034)	-0.003 (0.033)
Humanities	-0.053 (0.048)	-0.043 (0.050)	-0.059 (0.048)	0.001 (0.053)	0.001 (0.051)	-0.029 (0.051)
Social science	0.039 (0.045)	0.038 (0.045)	0.032 (0.045)	0.071 (0.048)	0.084* (0.046)	0.058 (0.045)
Science	0.012 (0.069)	0.030 (0.069)	-0.009 (0.068)	0.104 (0.081)	0.094 (0.077)	0.043 (0.075)
Arts & crafts	-0.099** (0.039)	-0.092** (0.041)	-0.106** (0.042)	-0.067 (0.044)	-0.071 (0.045)	-0.075* (0.045)
Service sector	-0.034 (0.034)	-0.025 (0.035)	-0.030 (0.035)	0.046 (0.036)	0.053 (0.036)	0.058 (0.035)
# of other fields	0.067** (0.033)	0.079** (0.033)	0.063* (0.033)	0.031 (0.032)	0.040 (0.032)	0.030 (0.031)
Passed at least 0.5 EFTS at level 4+ within 10 years in:						
Health		-0.023 (0.057)			-0.062 (0.050)	
Education		0.039 (0.063)			-0.003 (0.052)	
Management & Commerce		-0.073** (0.036)			-0.054 (0.039)	
Society & Culture		-0.017 (0.033)			-0.044 (0.031)	
Creative Arts		-0.016 (0.038)			0.035 (0.038)	
# of other fields		-0.001 (0.037)			0.020 (0.038)	
Passed at least 0.5 EFTS at level 7+ within 10 years in:						
Health		-0.012 (0.091)			0.189* (0.109)	
Education		-0.046 (0.072)			0.171** (0.069)	
Management & Commerce		0.319*** (0.108)			0.237** (0.115)	
Society & Culture		0.033 (0.045)			0.041 (0.047)	
Creative Arts		0.083 (0.082)			0.155* (0.088)	
# of other fields		-0.198** (0.079)			0.036 (0.159)	

Continued following page

Continued from previous page

	(1)	(2)	(3)	(4)	(5)	(6)
Gained qualification at level 4+ within 10 years in:						
Education			0.052 (0.056)			0.083 (0.056)
Management & Commerce			0.042 (0.051)			0.024 (0.049)
Society & Culture			-0.028 (0.036)			0.005 (0.035)
Creative Arts			-0.009 (0.053)			-0.041 (0.053)
# of other fields			-0.014 (0.040)			-0.010 (0.039)
Gained bachelor's degree+ within 10 years in:						
Education			0.021 (0.074)			0.202*** (0.078)
Management & Commerce			0.080 (0.129)			0.185 (0.131)
Society & Culture			0.084 (0.058)			0.134** (0.059)
Creative Arts			0.140 (0.099)			0.254*** (0.097)
# of other fields			-0.001 (0.085)			0.277** (0.111)
NCEA level 2 year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Background characteristics	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.061	0.082	0.075	0.075	0.135	0.156
Observations	753	753	753	753	753	753

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 13: 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	26.9	42.4	1.71***	26.9	42.4	1.71***	489
Years 6 to 10 after NCEA level 2	38.2	43.8	1.20	40.0	36.4	0.88	489
Years 11 to 12 after NCEA level 2	22.1	27.3	1.24	22.3	21.9	0.98	489
Years of early work experience:							
Any work experience in year of NCEA level 2 or earlier	10.7	25.0	2.14***	12.2	18.2	1.43	489
Any work experience in years 1 to 5 after NCEA level 2	81.5	>94.1	>3.01***	82.4	93.8	2.72**	489
Three+ years of work experience in years 1 to 5	43.5	81.8	4.29***	48.9	59.4	1.41**	489
Sectors of work experience in years 1 to 5 after gaining NCEA level 2:							
Central government in at least one year	17.0	27.3	1.56**	15.0	30.0	1.92***	417
Central government in at least 3 years	12.3	14.8	1.15	12.5	15.8	1.23	252
Other government in at least one year	6.5	6.3	0.96	5.6	6.7	1.16	417
Other government in at least 3 years	<5% have characteristic			<5% have characteristic			252
Non-profit organisation in at least one year	15.0	9.4	0.65	14.8	6.7	0.48*	417
Non-profit organisation in at least 3 years	<5% have characteristic			<5% have characteristic			252
Firm size of work experience in years 1 to 5 after gaining NCEA level 2:							
Small employer (<10 employees) in at least one year	25.2	16.1	0.64	25.0	19.4	0.77	417
Small employer (<10 employees) in at least 3 years	12.1	11.1	0.94	11.1	10.5	0.95	252
Medium employer (10-99 employees) in at least one year	40.6	51.5	1.40*	41.7	46.7	1.17	417
Medium employer (10-99 employees) in at least 3 years	16.1	26.9	1.52*	18.8	23.8	1.25	252
Large employer (100+ employees) in at least one year	65.1	67.7	1.10	64.2	70.0	1.23	417
Large employer (100+ employees) in at least 3 years	47.4	50.0	1.07	46.9	52.6	1.19	252
Industries of work experience in years 1 to 5 after gaining NCEA level 2:							
Agriculture, Forestry, Fishing in at least one year	11.2	<6.1	<0.58*	11.1	<6.5	<0.62**	417
Agriculture, Forestry, Fishing in at least 3 years	<5% have characteristic			<5% have characteristic			252
Manufacturing in at least one year	27.4	29.0	1.07	29.4	26.7	0.90	417
Manufacturing in at least 3 years	21.1	25.9	1.20	20.0	31.6	1.58*	252
Construction in at least one year	13.2	21.9	1.56*	14.7	20.0	1.33	417
Construction in at least 3 years	6.9	18.5	1.92***	7.8	20.0	2.08**	252
Wholesale Trade in at least one year	6.6	9.4	1.32	8.3	<6.5	<0.80	417
Wholesale Trade in at least 3 years	<5% have characteristic			<5% have characteristic			252
Retail Trade in at least one year	11.2	9.4	0.86	11.1	6.7	0.63	417
Retail Trade in at least 3 years	5.3	<7.4	<1.26	6.3	<10.0	<1.44	252
Accommodation & Food Services in at least one year	8.6	<5.9	<0.73**	8.3	<6.5	<0.81	417
Accommodation & Food Services in at least 3 years	<5% have characteristic			<5% have characteristic			252
Transport, Post, Warehousing in at least one year	6.6	9.4	1.32	8.3	<6.5	<0.80	417
Transport, Post, Warehousing in at least 3 years	<5% have characteristic			<5% have characteristic			252
Financial & Insurance Services in at least one year	<5% have characteristic			<5% have characteristic			417
Financial & Insurance Services in at least 3 years	<5% have characteristic			<5% have characteristic			252
Professional, Scientific, Technical Services in at least 1 year	<5% have characteristic			<5% have characteristic			417
Professional, Scientific, Technical Services in at least 3 years	<5% have characteristic			<5% have characteristic			252
Administrative & Support Services in at least one year	9.4	9.4	0.99	9.3	6.5	0.72	417
Administrative & Support Services in at least 3 years	<5% have characteristic			<5% have characteristic			252
Public Administration & Safety in at least one year	11.3	18.2	1.49	11.1	17.2	1.47*	417
Public Administration & Safety in at least 3 years	10.5	14.8	1.29	10.9	15.8	1.37	252
Education & Training in at least one year	13.2	12.5	0.95	11.1	17.2	1.47*	417
Education & Training in at least 3 years	8.8	<6.9	<0.84M	7.7	<9.5	<1.19M	252
Health Care & Social Assistance in at least one year	<5% have characteristic			<5% have characteristic			417
Health Care & Social Assistance in at least 3 years	<5% have characteristic			<5% have characteristic			252
Arts & Recreation Services in at least one year	5.6	<6.1	<1.06	5.5	6.5	1.14	417
Arts & Recreation Services in at least 3 years	<5% have characteristic			<5% have characteristic			252
Other industry in at least one year	8.6	<6.1	<0.74	8.4	<6.5	<0.80	417
Other industry in at least 3 years	<5% have characteristic			<5% have characteristic			252

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 14: Non-education characteristics 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)
Years student had any children:							
Fifth year after NCEA level 2 or earlier	43.8	33.3	0.70**	45.3	28.6	0.55***	750
Years 6 to 10 after NCEA level 2	45.8	34.7	0.69**	47.3	30.0	0.55***	750
Years 11 to 12 after NCEA level 2	21.9	18.4	0.84	22.9	14.0	0.61**	750
Years of early work experience:							
Any work experience in year of NCEA level 2 or earlier	10.4	18.4	1.66***	11.9	12.0	1.00	750
Any work experience in years 1 to 5 after NCEA level 2	68.2	93.9	5.61***	70.8	82.0	1.68***	750
Three+ years of work experience in years 1 to 5	28.0	66.7	3.64***	33.3	46.0	1.52***	750
Sectors of work experience in years 1 to 5 after gaining NCEA level 2:							
Central government in at least one year	14.6	30.4	1.92***	16.1	29.3	1.76***	552
Central government in at least 3 yrs	7.0	21.9	1.99***	7.6	22.7	2.29***	267
Other government in at least one year	<5% have characteristic			<5% have characteristic			552
Other government in at least 3 yrs	<5% have characteristic			<5% have characteristic			267
Non-profit organisation in at least one year	29.9	25.5	0.85	29.6	24.4	0.81	552
Non-profit organisation in at least 3 yrs	24.6	15.6	0.68	23.9	13.6	0.58	267
Firm size of work experience in years 1 to 5 after gaining NCEA level 2:							
Small employer (<10 employees) in at least one year	30.4	15.2	0.49***	26.8	25.0	0.93	552
Small employer (<10 employees) in at least 3 yrs	14.0	<5.9	<0.51**	13.4	<8.3	<0.66*	267
Medium employer (10-99 employees) in at least 1 yr	41.6	39.1	0.93	41.3	41.5	1.01	552
Medium employer (10-99 employees) in at least 3 yrs	22.8	18.2	0.83	21.2	18.2	0.86	267
Large employer (100+ employees) in at least one year	56.6	70.2	1.56***	60.1	58.5	0.95	552
Large employer (100+ employees) in at least 3 yrs	35.1	66.7	2.29***	43.3	60.9	1.70***	267
Industries of work experience in years 1 to 5 after gaining NCEA level 2:							
Agriculture, Forestry, Fishing in at least one year	<5% have characteristic			<5% have characteristic			552
Agriculture, Forestry, Fishing in at least 3 yrs	<5% have characteristic			<5% have characteristic			267
Manufacturing in at least one year	11.8	8.7	0.77	12.7	4.9	0.42**	552
Manufacturing in at least 3 yrs	5.3	6.3	1.12	6.0	<8.7	<1.33	267
Construction in at least one year	<5% have characteristic			<5% have characteristic			552
Construction in at least 3 yrs	<5% have characteristic			<5% have characteristic			267
Wholesale Trade in at least one year	<5% have characteristic			<5% have characteristic			552
Wholesale Trade in at least 3 yrs	<5% have characteristic			<5% have characteristic			267
Retail Trade in at least one year	18.2	17.4	0.96	17.6	17.1	0.97	552
Retail Trade in at least 3 yrs	8.8	9.4	1.05	7.6	9.1	1.16	267
Accommodation & Food Services in at least one year	18.2	10.9	0.62*	18.9	11.9	0.65**	552
Accommodation & Food Services in at least 3 yrs	12.3	6.3	0.59	13.4	<8.3	<0.66*	267
Transport, Post, Warehousing in at least one year	<5% have characteristic			<5% have characteristic			552
Transport, Post, Warehousing in at least 3 yrs	<5% have characteristic			<5% have characteristic			267
Financial & Insurance Services in at least one year	<5% have characteristic			<5% have characteristic			552
Financial & Insurance Services in at least 3 yrs	<5% have characteristic			<5% have characteristic			267
Professional, Scientific, Technical Services in at least 1 yr	<5% have characteristic			<5% have characteristic			552
Professional, Scientific, Technical Services in at least 3 yrs	<5% have characteristic			<5% have characteristic			267
Administrative & Support Services in at least one year	10.3	14.9	1.35	11.2	14.6	1.26	552
Administrative & Support Services in at least 3 yrs	<5% have characteristic			<5% have characteristic			267
Public Administration & Safety in at least one year	6.6	19.6	2.23***	8.5	12.2	1.36*	552
Public Administration & Safety in at least 3 yrs	3.5	18.2	2.28***	7.5	13.6	1.60	267
Education & Training in at least one year	27.7	25.5	0.92	24.6	34.1	1.42**	552
Education & Training in at least 3 yrs	20.7	15.2	0.78	17.9	21.7	1.19	267
Health Care & Social Assistance in at least one year	11.7	10.9	0.94	12.0	11.9	1.00	552
Health Care & Social Assistance in at least 3 yrs	<5% have characteristic			<5% have characteristic			267
Arts & Recreation Services in at least one year	<5% have characteristic			<5% have characteristic			552
Arts & Recreation Services in at least 3 yrs	<5% have characteristic			<5% have characteristic			267
Other industry in at least one year	9.4	10.6	1.10	9.2	9.8	1.06	552
Other industry in at least 3 yrs	5.3	<6.1	<1.10	4.5	<8.7	<1.62	267

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 15: 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	0.126*** (0.042)	0.065 (0.041)	0.057 (0.041)	0.152*** (0.042)	0.117*** (0.044)	0.105** (0.044)
Years 6 to 10	0.045 (0.040)	0.034 (0.037)	0.046 (0.038)	-0.023 (0.038)	-0.035 (0.037)	-0.026 (0.037)
Years 11 and 12	0.010 (0.046)	0.019 (0.043)	0.021 (0.043)	0.017 (0.044)	0.028 (0.042)	0.027 (0.043)
Overseas at least 6 months in year relative to NCEA level 2:						
Any year 3 to 5	-0.084 (0.090)	-0.016 (0.083)	-0.030 (0.086)	-0.192*** (0.063)	-0.152** (0.066)	-0.161** (0.066)
Any year 6 to 10	0.060 (0.072)	0.045 (0.064)	0.054 (0.064)	0.019 (0.064)	0.012 (0.062)	0.011 (0.065)
Year 11 or 12	0.250*** (0.084)	0.249*** (0.075)	0.243*** (0.075)	0.266*** (0.079)	0.270*** (0.077)	0.268*** (0.079)
Years of work experience in years 1 to 5 after NCEA level 1 (omitted category: 0):						
1		-0.040 (0.049)	0.011 (0.042)		-0.018 (0.061)	0.024 (0.056)
2		0.047 (0.060)	0.128** (0.056)		-0.024 (0.058)	0.034 (0.055)
3		0.089 (0.065)	0.180*** (0.059)		-0.034 (0.063)	0.032 (0.060)
4		0.161** (0.070)	0.252*** (0.063)		-0.038 (0.066)	0.031 (0.058)
5		0.410*** (0.079)	0.492*** (0.076)		0.144** (0.072)	0.194*** (0.068)
Any work experience in years 1 to 5 in:						
Central government		0.136** (0.056)			0.161*** (0.061)	
Medium-sized firm (10-99 employees)		0.065 (0.045)			0.079* (0.043)	
Large firm (100+ employees)		0.013 (0.047)			0.046 (0.045)	
Manufacturing			-0.047 (0.051)			0.026 (0.044)
Construction			0.042 (0.060)			0.112* (0.058)
Retail Trade			-0.082 (0.068)			-0.034 (0.063)
Accommodation & Food Services			-0.141** (0.056)			-0.078 (0.077)
Administrative & Support Services			-0.034 (0.073)			-0.053 (0.064)
Public Administration & Safety			0.050 (0.065)			0.123* (0.072)
Education & Training			0.054 (0.064)			0.107* (0.064)
Health Care & Social Assistance			-0.088 (0.086)			-0.053 (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	0.164	0.302	0.305	0.200	0.250	0.250
Observations	489	489	489	489	489	489

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 11. 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.

Appendix Table 16: Regressions of being a top saver on pathways outside education for women

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	-0.041 (0.030)	0.039 (0.028)	0.034 (0.029)	-0.067** (0.028)	-0.035 (0.029)	-0.039 (0.030)
Years 6 to 10	-0.053* (0.028)	-0.068*** (0.026)	-0.065** (0.026)	-0.072*** (0.027)	-0.081*** (0.026)	-0.086*** (0.026)
Years 11 and 12	-0.016 (0.035)	-0.028 (0.032)	-0.027 (0.032)	-0.058* (0.030)	-0.068** (0.030)	-0.056* (0.031)
Overseas at least 6 months in year relative to NCEA level 2:						
Any year 3 to 5	-0.097 (0.083)	-0.053 (0.066)	-0.062 (0.064)	-0.145** (0.063)	-0.123** (0.059)	-0.117** (0.056)
Any year 6 to 10	0.022 (0.056)	0.060 (0.052)	0.038 (0.053)	-0.019 (0.057)	-0.003 (0.057)	-0.031 (0.059)
Year 11 or 12	0.100 (0.072)	0.036 (0.062)	0.047 (0.062)	0.130* (0.077)	0.103 (0.077)	0.121 (0.076)
Years of work experience in years 1 to 5 after NCEA level 1 (omitted category: 0):						
1		0.056 (0.042)	0.133*** (0.040)		0.052 (0.046)	0.089** (0.044)
2		0.082* (0.049)	0.187*** (0.045)		0.058 (0.054)	0.110** (0.048)
3		0.202*** (0.063)	0.298*** (0.060)		0.125** (0.059)	0.172*** (0.059)
4		0.261*** (0.068)	0.375*** (0.065)		0.083 (0.064)	0.149** (0.064)
5		0.519*** (0.075)	0.647*** (0.067)		0.216*** (0.075)	0.282*** (0.070)
Any work experience in years 1 to 5 in:						
Central government		0.162*** (0.051)			0.143*** (0.049)	
Medium-sized firm (10-99 employees)		-0.026 (0.042)			-0.017 (0.041)	
Large firm (100+ employees)		0.026 (0.042)			-0.024 (0.041)	
Manufacturing			-0.066 (0.055)			-0.093** (0.045)
Construction			0.019 (0.123)			0.158 (0.133)
Retail Trade			-0.104** (0.049)			-0.073 (0.049)
Accommodation & Food Services			-0.163*** (0.048)			-0.149*** (0.046)
Administrative & Support Services			-0.000 (0.059)			0.020 (0.057)
Public Administration & Safety			0.120* (0.070)			0.031 (0.068)
Education & Training			-0.056 (0.044)			0.017 (0.046)
Health Care & Social Assistance			-0.065 (0.058)			-0.065 (0.057)
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	0.113	0.285	0.294	0.199	0.234	0.244
Observations	753	753	753	753	753	753

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 11. 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