Why Your Siblings Cost You Grades, Income and Savings, Especially If You're Female?

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Introduction

My interest in the topic of this lecture arose out of an investigation of links between early lifecourse variables, including the number of siblings a person had when growing up, and later lifecourse demographic outcomes, particularly childlessness. Differences in the attainment of socioeconomic status may mediate such relationships (Parr 2005). Differences in educational and labour market outcomes, and the accumulation of financial assets by the size and characteristics of the family of origin are one aspect of Australia's "demography of disadvantage", to use the title of Gavin Jones' WD Borrie lecture to the Australian Population Association's Sydney conference, and according to the theory of Nobel Prize winning US economist Gary Becker may help to explain family size limitation (Becker 1981, Jones 2004).

Perhaps the most persuasive and extensive analysis of the relationships between family size and educational achievement has been demographer Judith Blake's analysis of white Americans (Blake 1989). According to Blake, a larger number of siblings has negative effects on a person's educational achievement because of the dilution of per child parental time, attention and interaction, parental material resources per child, and the dilution of parental emotional and physical energy with the arrival of and provision of care for extra children. The more childlike intellectual level which she claims prevails in families with more children, and the reduced sense of urgency to associate and play outside of the family of those with more siblings, according to Blake may further help to explain the lower levels of educational attainment of those from larger families. Blake found that children from smaller families are more likely to have been read to by parents early in life, and more likely to engage in intellectual and cultural pursuits. This she argues may help to explain their better educational outcomes. She found the effect of the number of siblings on educational achievement was greater on the chances of completing high school than on than on the chances of completing college.

Whilst Blake's analysis focuses on explaining the educational outcomes by number of siblings, it would appear that many of the mechanisms through which, she argues, family size influences educational outcomes could also affect labour market outcomes, since, after all aren't many parents more concerned with their children's labour market outcomes than education? And educational success is just a means to the end of labour market success not an end in its own? Hence the dilution of parental time, material resources, and energy affect the communication of parental support of aspiration for labour market success, know-how and ideas on how to do so, and the provision of resources which may facilitate this end, as well as educational outcomes (Marjoribanks 2002).

As argued in a recent paper by Keister (2003), in addition to affecting wealth via its effects on education and hence income, the number of siblings a person has affects the value of the financial resources they receive as a result of inheritance and transfers from their parents whilst they are alive. The affordability of higher-quality private schools for each child may also be enhanced by having fewer children. This may enhance educational attainment, and hence income and wealth in later life (Jones 2004).

Economist Allan Kelley is skeptical about the "parental resource dilution hypothesis" (Kelley 1994). He argues that neither the material resources nor the parental time spent per child need necessarily reduce as the number of children increases, because

parents may work longer or harder to provide extra resources, finance the activities of children by drawing on saving, or sacrifice expenditure (and time) on other activities. Younger siblings in larger families, he argues, may benefit from the additional time, educational capital, experiences and materials of older siblings. Moreover with familial economies of scale, the sharing between siblings of reading materials, other educational resources and non-educational purchases, large families could plausibly be beneficial to the educational outcomes of their members.

Children and the Dilution of Parental Time, Expenditure, Income and Emotional Wellbeing: Recent Australian Evidence

Recent research by Lyn Craig and Michael Bittman from UNSW, which quantifies time use differences between parents and non-parents in contemporary Australia, shows, not surprisingly, that the time mothers spend on child care are much greater than the time spent by fathers, and the differences between parents in time spent on different types of childcare activity. Their results show that time spent on childcare is generally slightly greater for parents, especially mothers, with two children than for parents with one child. However they found the amount of time spent on childcare for those with three or more children is only greater than among those with two children when the youngest is over 5 years old (Craig 2003, Craig and Bittman 2003). It is clear from their results that hours spent on childcare divided by number of children reduces as the number of children increases. However whether this represents a dilution of the quality and impact of parental childcare cannot necessarily be inferred.

The AMP-NATSEM analysis of household expenditure data shows that, holding income constant, the total expenditure of households increases as the number of children increases. The "marginal expenditure" on an additional child reduces as the number of children increases (Percival and Harding 2002). However, as the authors point out, the extent to which this is attributable to economies of scale, such as the recycling of the books, toys and clothes of older siblings for use by younger siblings and the sharing of resources between siblings (which Henman's normatively-based "Macquarie estimates" show should mean a reduction in the marginal cost of children as their number increases), and the extent to which it reflects the needs of children having to be sacrificed due to the budgetary squeeze with increasing numbers of children is not readily determined (Percival and Harding 2002, Henman 2001). Moreover the effects of differences in earning by number of children are not factored in. Chapman et al. (2001) have shown the earnings women forego as a result of producing children are substantial, and the loss is somewhat larger for those with more children than for those with just one child. However it is the first child to which the bulk of the loss of earnings is attributable.

Shields and Wooden's analysed the effects on children on parents' subjective wellbeing. Their regression analysis of responses on a 0-10 scale to the question; "all things considered, how satisfied are you with your life?" shows that, both for women and for men, satisfaction with life reduces and the number of dependent children aged less than 15 years increases. However life satisfaction increases as the number of adult children living away from home increases (Shields and Wooden 2003). All of which appears to support the conclusion; additional children ultimately raise satisfaction with

life but only when they leave home! A dilution of parental physical and emotional energy with increases in the number of children may help to explain their findings.

Data

The data used are from Waves 1 and 2 of the Household, Income and Labour Dynamics in Australia Survey (or HILDA for short). Wave 1 of this nationwide, longitudinal survey was conducted in 2001 and Wave 2 between August 2002 and March 2003. A multi-stage cluster sample of households was used. Remote areas of the country were not sampled (Watson and Wooden 2002a, 2002b, 2002c). The analysis was restricted to 3,478 males and 3,858 females aged 25-54 (age when interviewed for Wave 2). Those aged less than 25 were excluded from the analysis because many below this age have yet to complete education and establish themselves in the labour force. The over 55s were excluded because the income and financial assets of many above this age will have been affected by retirement.

Respondents were asked whether they ever had any brothers or sisters when growing up and, if so, how many. They were instructed to include half or adopted siblings but not step or foster siblings. The main focus of this presentation is how educational attainment, income and selected financial assets differ according to this variable. The results were analysed separately for males and females because educational attainment, income, and financial assets differ between the sexes.

The response variables analysed here are:
i) Whether the respondent obtained a Bachelor's or higher degree (i.e Bachelor's, Bachelor's honours, Master's, Postgraduate Diploma or PhD).
ii). Whether the respondent completed Year 12 or the overseas equivalent.
iii). Gross income from all sources for last financial year prior to the interview (2001-02).
iv). The total of the balances of all (i.e. own and joint) bank accounts. Informants were instructed to count negative balances and overdrafts as zero.
v). The total value of superannuation (total pre-tax amount including preserved benefit).

In an attempt to control for the selectivity of the different family size groups, I have fitted multiple regression models including the control variables relating to the socioeconomic status and intactness of the family, the ethnicity or the respondent and his or her parents, birth order (which obviously correlated with the number of siblings), and the age of the respondent. Of these, parental occupation (measured when the respondent was aged 14), particularly the mother's occupation, may conceivably have been influenced by the respondent's number of siblings, with those with more siblings being more likely to have a mother who was not working outside the home. However since parental occupations may affect both their family size and the socioeconomic and educational attainment of their children they may also act as a confounding factor for the relationship between the two. The type of schooling of the respondent may also have been influenced by their number of siblings, since a larger number of children may have meant parents were less able to afford to send children to private schools. However since it would also be affected by parental wealth, and parental wealth may also have affected both the respondent's family size and their outcomes, I have included it as a rough proxy

(albeit a far form imperfect one) for the effect of parental wealth (Weerasinghe and Parr 2002).

Results

Univariate Analyses

Figure 1 shows there is an inverse relationship between the percentage who attained a Bachelor's degree or higher and the number of siblings a person had. Moreover, the gradient is noticeably steeper for females than for males (Figure 1). The percentage completing Year 12 (or the overseas equivalent) also has a clear inverse relationship with the number of siblings a female has. However, for males the percentage who completed Year 12 is highest for those who grew up with one sibling (i.e. in a two-child family). For males with two or more siblings the percentage who completed Year 12 declines as the number of siblings increases. The gradient of the relationship between the percentage having completed Year 12 and the number of siblings is noticeably steeper for females than it is for males (Figure 2).

For females gross annual income reduces as the number of siblings increases. However for males there is little difference in income by the number of siblings (Figure 3). The highest mean gross income is for males who grew up with 3 siblings. For females it is those who grew up as only children has the highest mean gross income. In contrast, for males, those who grew up as only children have one of the lower average incomes.

Both for males and for females inverse relationships between the balance of bank accounts and the number of siblings are evident. The main difference between the patterns for males and females is the much higher average value of bank accounts for females who grew up as only children (Figure 4). The value of superannuation generally declines as the number of siblings increases, with the decline being somewhat steeper for females than for males (Figure 5).

Multivariate Analyses

Females

The multiple regression analyses (Tables 1-5) show that, even after controlling for all other variables, the number of siblings a woman had when growing up has a significant negative effect on her likelihood of having attained a Bachelor's degree or higher, on her likelihood of having completed Year 12, on her gross income, on the balance of her (and her partner's(s') if she has him, her or them) bank accounts, and on the value of her superannuation. In all models non-linearity of the relationship was tested for by including the square of the number of siblings. However the siblings squared term proved not significant in each case.

Older females were less likely to have completed Year 12 than younger females. However they earned more on average, had larger bank balances, and a higher value of superannuation than their younger counterparts did. This pattern would reflect the advancement of females in education over time and also the cumulative effects of age on the advancement of rank and tenure within the labour market. The greater percentages of

women in the younger part of the age range analysed who have withdrawn from the labour force or who are working part-time in order to raise children would also be a factor.

The information available on birth order was somewhat limited, indicating only whether or not the respondent was the oldest sibling. The results of the regression analyses show that females who were the eldest sibling when growing up were significantly more likely to have attained a Bachelor's degree or higher, significantly more likely to have completed Year 12, and had a significantly higher value of superannuation than females who were not the eldest sibling.

The occupation of the father and the occupation of the mother were strongly related to most outcomes for females. Of the various categories of father's occupation it was the daughters of men in professional occupations and of men in the advanced clerical and service occupations (the largest subgroup of which was insurance agents, but which also includes secretaries, personal assistants and bookkeepers) who had the highest likelihoods of attaining a Bachelor's degree or higher and of completing Year 12. This would in part be due to the greater educational capital of these fathers. It may also reflect more progressive and supportive attitudes towards the education of female children among fathers in these occupations. However in terms of income, the daughters of men who were in managerial or senior administrative occupations fared best followed by the children of men in professional occupations. The higher incomes of the daughters of men in managerial and administrative occupations, despite their having only a modest advantage in educational outcomes may reflect the passing on of senior positions in family businesses from father to daughter, the effects of patronage by their fathers in terms of their passage up the hierarchy of family and non-family businesses, and the transmission of know-how from their fathers on how to rise through the corporate hierarchy or how to set up their own businesses.

The daughters of working mothers were generally more likely to have completed Year 12, more likely to have attained a Bachelor's degree, and generally earned more on average than the daughters of women who were not working. However, outcomes varied by type of maternal occupation. Of the various categories of mother's occupation the best outcomes, both in terms of education and income, were for the daughters of professionals and the daughters of those with occupations in the advanced clerical and service category (80% of this group were secretaries and personal assistants). As for their fathers, this would reflect the transmission of maternal educational capital, the promotion of higher levels of achievement by their daughters, and the provision of higher levels of psychological support for their children to continue their education (Marjoribanks 2002). The daughters of women in the professional and advanced clerical and service occupations were also the significantly more likely to earn more and to have a higher value of superannuation.

The type of schooling a female respondent had had significant effects on the likelihood of attaining a Bachelor's degree, the likelihood of completing Year 12, on gross annual income, and on the value of bank balances. Females who attended a government school were significantly less likely to have attained a Bachelor's degree and significantly less likely to have completed Year 12, earned less on average, and had lower bank balances than those who attended a non-government, non-Catholic schools. The outcomes for females who attended Catholic schools were generally somewhere between

those for females from the two other schooling sectors. Differences in parental wealth would have affected these outcomes. It is also possible that the some of the school sector effects are due as much to selection of type of schooling on the basis of parents aspirations for their children as they do to the effectiveness of teaching in the different sectors. On most outcomes the various ethnicity-related variables did not have statistically significant effects.

Males

As for females, for males for each of the five outcomes considered in this paper the sign of the coefficient of the number of siblings was negative (Tables 1-5). However for all response variables except whether Year 12 had been completed the coefficient of the number of siblings was smaller and less significant for males than for females. Indeed, for males the effects of the number of siblings on the gross annual income and on the value of superannuation were not statistically significant. As was the case for females, eldest siblings were more likely to have completed Year 12, to have obtained a Bachelor's degree, and have a higher value of superannuation than those who were not the eldest sibling.

As for females, the effects of parental occupations were highly significant. The sons of men in professional occupations achieved the best educational outcomes, whilst those whose fathers intermediate transport and production occupations (truck drivers, plant operators etc) and labourers and related occupations did least well. The poor educational outcomes of sons of men in the latter two occupational categories may reflect not only the fathers' lack of educational capital but also less parental support for the continuation of and achievement in education, which may have been influenced by the workplace culture of these male dominated occupations. In terms of income the sons of men in the clerical, sales and service occupations, professional occupations, and managerial and administrative occupations fared best.

As was the case for their daughters, the sons of women who were working were more likely to have attained a Bachelor's degree or higher, more likely to have completed Year 12, and had higher levels of income than the sons of women who were not working. Of the various categories of mother's occupation, the best educational and income outcomes were achieved by those whose mothers were in professional occupations or advanced or intermediate clerical or service occupations (clerks, receptionists etc). However the largest bank balances were those whose mothers were in managerial or administrative occupations. The latter finding may reflect the effects of transfers from wealthy and high earning parents.

As was the case for females, males who attended government schools fared significantly worse in terms of the likelihood of attaining a Bachelor's degree or higher, the likelihood of completing Year 12, gross annual income, and the value of bank balances than those who attended non-government, non-catholic schools. On all the outcomes considered in this paper the disadvantage from having attended a government school as opposed to a non-government, non-Catholic school was noticeably greater for males than it was for females.

On most outcomes most of the ethnicity-related variables did not have significant effects. The absence of statistically significant effects for Aboriginal or Torres Strait

Islander (ATSI) status may be due to the small number of ATSI in the age range analysed (there were only 45 males and 86 females aged 25-54 in the sample), and the exclusion of very remote areas where the more demographically distinct elements of the ATSI populations are found.

Intergenerational Transmission of Fertility as An Explanatory Factor for Number of Siblings Effects, Especially for Females

Both for males and for females growing up with a larger number of siblings is positively correlated with having a larger number of children ever born. Introducing children ever born (or children ever fathered in the case of males) into the regression reduces the size and significance of the negative effects of numbers of siblings on educational outcomes both for males and for females. However the magnitude of the reduction is greater for females, because the relationship between children ever born and educational outcomes is stronger for females.

The number of children ever born has a positive effect on male income but a strong negative effect on female income. Controlling for children ever born reduces the significance of the negative effect of number of siblings on female earnings to just over the conventional 5% cut-off value. The number of children a person had had negative effects on the value of bank balances for both males and females. For males the inclusion of this variable reduced the negative effect of number of siblings to just above the 5% level. For females the number of siblings effect, whilst reduced by the inclusion of this variable in the model, remained highly significant. For females the number of children ever born has a significant negative effect on the value of their superannuation, and controlling for this variable reduced the magnitude and significance of the negative number of siblings effect.

Conclusion

The results of this study show that children from small families generally fare better than children from large families, at least in terms of educational attainment, income earned, the accumulation of savings in bank accounts, and the value of superannuation. Recently in what has become a much-publicised soundbite Australian Federal Treasurer Peter Costello told the nation; "If you can have children it's a good thing to do - you should have one for the father, one for the mother and one for the country, if you want to fix the ageing demographic," (Dodson 2004). The implication of the results in this paper is that those who have already had "one for father" or "one for father and one for mother" by lying back to have "one (or more) for the country" do to the detriment of their existing children. The evidence I have considered on the relationship between educational attainment and number of siblings is consistent with Blake's position. The advantageous effects growing up in a large family may have, according to Kelley (1994), if they exist at all appear to be more than outweighed by other negative effects. It is possible that, by weakening the extent to which a larger family size dilutes family financial resources, the new and increased child-related payments, announced in 2004 by Treasurer Costello, will lessen the extent to which growing up in a large family is disadvantageous.

On most outcomes the effect of the size of the family in which an Australian grew up is noticeably greater for females than it is for males. Part of the explanation of this may lie in "fertility running within families", that is those who grow up in larger families are more likely themselves to have had relatively large numbers of children and are less likely to be childless, and the effects of fertility on socioeconomic outcomes being stronger for women than they are for men (Figure 6) (Duncan et al. 1965, Parr 2005). These differences in fertility by number of siblings and the resultant drawing on saving to fund a larger family may also help to explain differences in saving-related variables, such as bank account balances and superannuation. Differences in values between males and females who grow up in large families and males and females who grow up in smaller families may also play a role, particularly differences in the extent to which female children exhibit home-centred (as opposed to work-centred) values and aspirations, to use Hakim's terminology (Hakim 2001, 2003). An important question for further research is whether the resource dilution effects of larger family sizes impact more on the female children than on their male counterparts.

The differences in the effects of numbers of siblings between males and females imply the relative status of females is somewhat greater among those who grow up in relatively small families. Thus the decline in fertility rates which has been evident in Australia since 1961, and which became especially rapid in the early 1970s, may have contributed to a general raising of the status of women, as measured by socioeconomic attainment, not only by facilitating the participation in education and the labour force of women of childbearing age, but also by enhancing the educational labour market success of female children.

Does the inverse relationship between child quantity and child quality demonstrated in this paper help to explain Australia's low fertility levels, as Becker's theories suggest it might (Becker 1981)? In recent research on fertility aspirations in Australia the restriction of family size in order to promote the achievement of children is noticeably absent from lists of reasons given by adults for not having (more) children (Weston et al 2004, Newman 2004). Whether this reflects a lack of awareness of Australian parents of the importance of family size as a determinant of children's later life outcomes or their indifference to it requires further investigation.

References

Becker, G. 1981. *A Treatise on the Family*. Cambridge, Massachusetts, Harvard University Press.

Chapman, B., Dunlop, Y., Gray, M. Liu, A. and Mitchell, D. 2001. The impact of children on the lifetime earnings of Australian women: evidence from the 1990s. *Australian Economic Record.* 34(4) 373-389.

Craig, L. 2003. The time cost of children: a cross-national comparison of the interaction between time use and fertility rate. Paper presented to the 25th IATUR Conference on Time Use Research "Comparing Time", 17-19 September 2003, Brussels, Belgium.

Craig, L. and Bittman, M. 2003. The time costs of children in Australia. Paper presented to Rethinking Expenditures on Children: Towards an International Research Agenda, 15-16 January 2003, ANU, Canberra.

Dodson, L. 2004. The mother of all spending sprees. *The Australian.* 12 May 2004.

Duncan, O.D., Freedman, R, Coble, M. and Slesinger, D.P. 1965. Marital fertility and size of family of orientation. *Demography.* 2: 508-513.

Hakim, C. 2001. Taking women seriously. *People and Place.* 9(4): 1-5.

Hakim, C. 2003. A new approach to explaining fertility patterns: preference theory. *Population and Development Review.* 29(3): 349-377.

Henman, P. 2001. *Updating Australian budget standards costs of children estimates,* Policy Research Paper No. 7, Australian Department of Family and Community Services, Canberra, January 2001.

Jones, G.W. 2004. The Demography of Disadvantage. *Journal of Population Research*. Volume 21 Number 2: pp107-126.

Keister, L. 2003. The effect of siblings on adult wealth ownership. *Demography.* 40(3)521-542

Kelley, A.C. 1994. The consequences of rapid population growth on human resource development: the case of education. in Ahlburg, D.A. (head of inquiry) Independent inquiry report into population and development. The Government, Canberra.

Marjoribanks, K. 2002. *Family and school capital: towards a context theory of school outcomes.* London, Kluwer Academic Publishers.

Newman, R. 2004. Family size and fertility gaps in Australia: the influence of men's and women's experiences of conception, pregnancy, birth and early parenthood. Paper presented to the 12th Biennial Conference of the Australian Population Association at ANU, Canberra. http://www.austpop.org/

Parr, N.J. (2005). Family Background, Schooling and Childlessness in Australia. *Journal of Biosocial Science.* Volume 37 No2: pp229-243

Percival, R. and Harding, A. 2002. All they need is love and around $450,000. The AMP_NATSEM Income and Wealth Report, No. 3. AMP
http://www.amp.com.au/au/3column/0,2338,CH5306%255FSI56,00.html

Shields, M. and Wooden, M. (2003) Marriage, Children and Subjective Well-being Paper presented at the Eighth Australian Institute of Family Conference – Step Forward for Families: Research, Practice and Policy. Melbourne Exhibition Centre, 12-14 February 2003. http://www.melbourneinstitute.com/hilda/hbiblio-cp.html

Watson, N. and Wooden, M. 2002a. The HILDA Survey and the potential to contribute to population research. Paper presented to the 11th Biennial Conference of the Australian Population Association, Sydney 2-4 October 2002.
http://www.melbourneinstitute.com/hilda/confpapern03.pdf

Watson, N. and Wooden, M. 2002b. The Household, Income and Labour Dynamics in Australia (H ILDA) Survey: wave 1 survey methodology. *Hilda Project Technical Paper Series No 1/02* http://www.melbourneinstitute.com/hilda/hdps-techn01.pdf

Watson, N. and Wooden, M. (2002c) Assessing the quality of the HILDA Survey Wave 1 data. *Hilda Project Technical Paper Series No 4/02*
http://www.melbourneinstitute.com/hilda/hdps-techn04.pdf

Weerasinghe, D.P. and Parr, N.J. 2002. The Effects of Wealth on Marital Fertility in Sri Lanka *The Journal of Health, Population and Nutrition*. Volume 20 No 2 pp112-119.

Weston, R., Qu, L., Parker, R., and Alexander, M. 2004. It's not for lack of wanting kids…: A report on the Fertility Decision Making project. Research Report No. 11, Australian Institute of Family Studies, Melbourne
http://www.aifs.gov.au/institute/pubs/resreport11/main.html

Figures

Figure 1: Percentage of 25-54 Year Olds With Bachelor's Degree or Higher by Number of Siblings

Figure 2: Percentage of 25-54 Year Olds Who Completed Year 12 or Overseas Equivalent by Number of Siblings
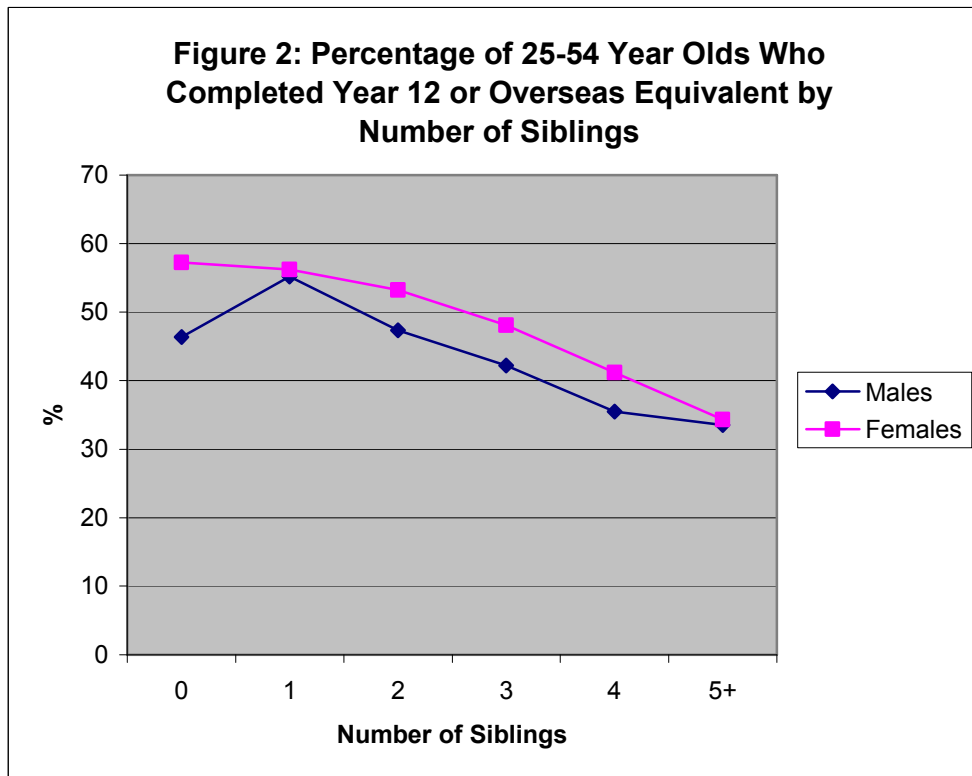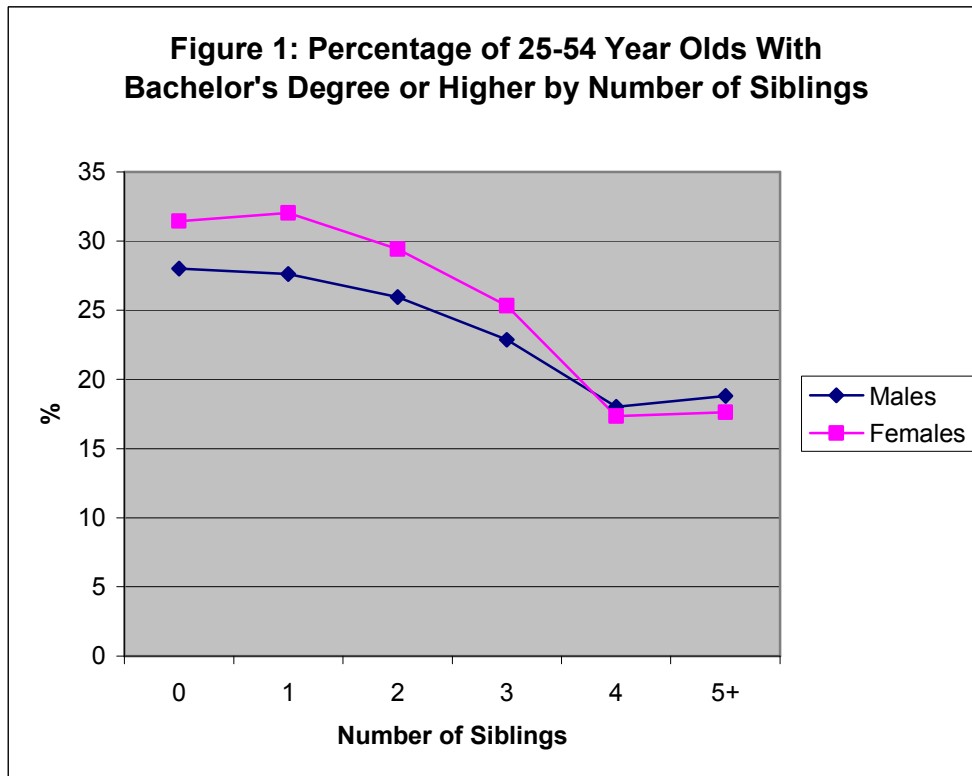
Figure 3: Total Gross Financial Year Income of 25-54 Year Olds by Number of Siblings
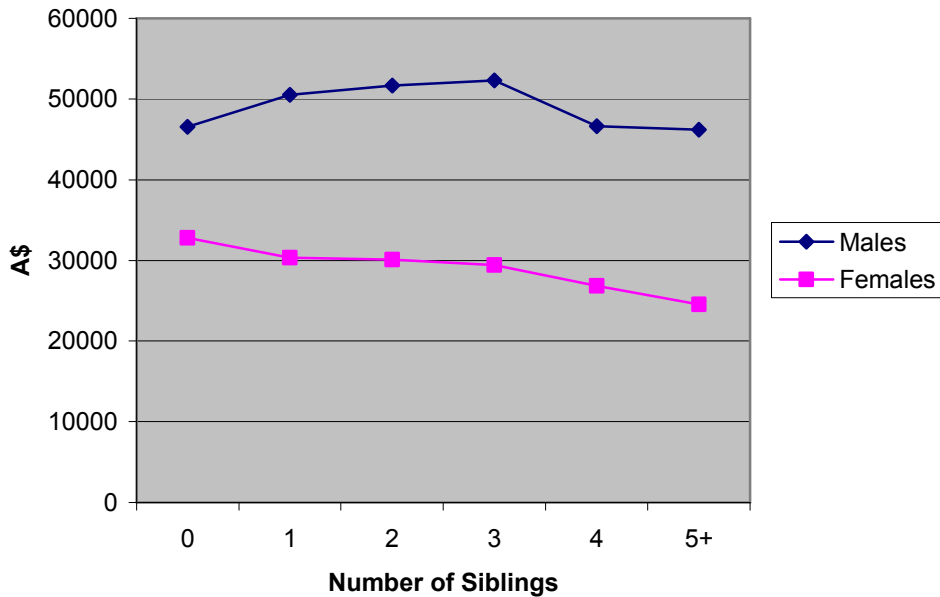
Figure 4: Total Value of Bank Accounts (Own + Joint) of 25-54 Year Olds by Number of Siblings

Figure 5: Value of Superannuation of 25-54 Year Olds by Number of Siblings

Figure 6: Mean Number of Children Ever Had by Number of Siblings When Growing Up: 25-54 Year Olds

Table 1:Logistic Regression of Whether A 25-54 Year Old Obtained a Bachelor's Degree or Higher by Family Background Variables: Living in Australia (HILDA)

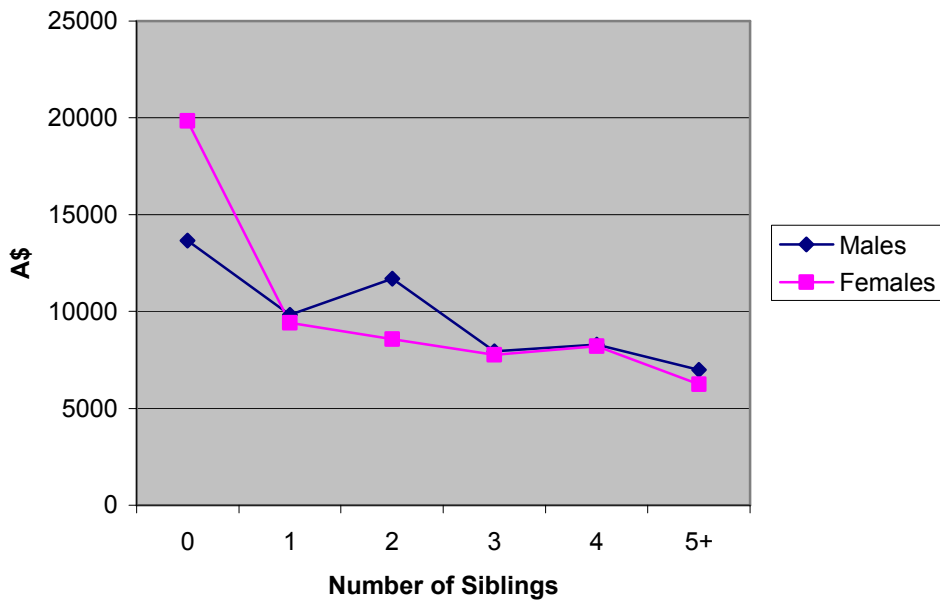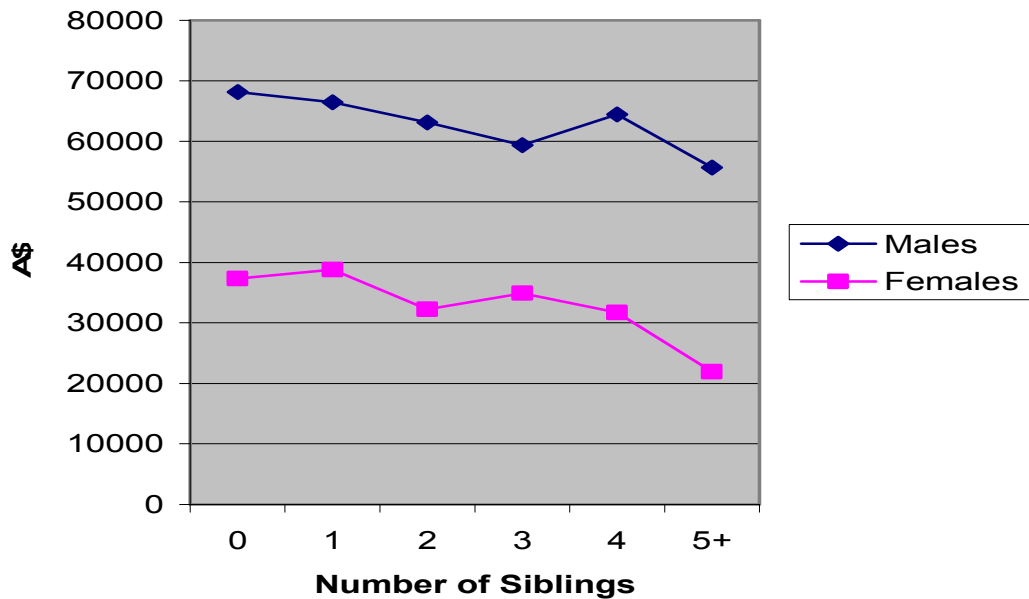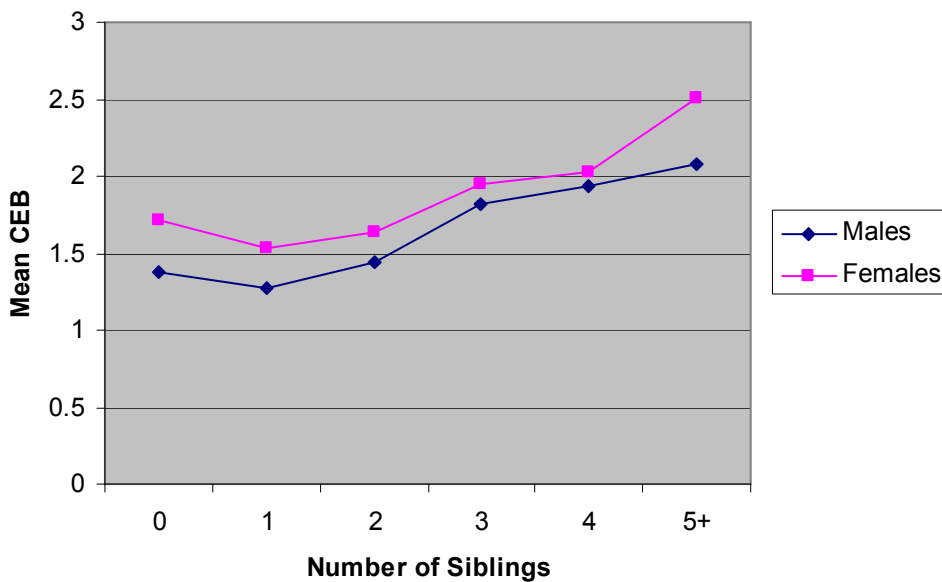| Variable	Females		Males	
	β	SE(β)	β	SE(β)
Number of Siblings	-0.130***	0.025	-0.102***	0.026
Is Eldest Sibling	0.304***	0.089	0.304***	0.096
Type of Schooling	(p =0.000)		(p=0.000)	
Government	-0.691***	0.127	-0.714***	0.139
Catholic	-0.043	0.152	0.150	0.166
Other	0.000		0.000	
Father's Occupation	(p= 0.000)		(p=0.000)	
Managerial or Administrative	0.578**	0.255	-0.333	0.318
Professional	1.063***	0.256	0.484	0.318
Associate Professional	0.397	0.260	-0.061	0.323
Tradespersons and Related	-0.125	0.256	-0.686**	0.318
Advanced Clerical and Service	0.930**	0.443	-0.070	0.531
Intermediate Clerical and Service	0.138	0.282	-0.064	0.342
Intermediate Transport and Production	-0.317	0.274	-1.132***	0.348
Elementary Clerical, Sales and Service	-0.093	0.367	-0.549	0.420
Labourers and Related	-0.593*	0.324	-1.121***	0.366
Absent or Deceased	-0.074	0.313	-0.578	0.366
Not Working	0.000		0.000	
Mother's Occupation	(p=0.000)		(p=0.000)	
Managerial or Administrative	0.044	0.2453	0.277	0.277
Professional	0.832***	0.145	0.908***	0.163
Associate Professional	0.326*	0.180	0.216	0.208
Tradespersons and Related	0.300	0.197	-0.144	0.240
Advanced Clerical and Service	0.516***	0.167	0.555***	0.186
Intermediate Clerical and Service	0.269*	0.151	0.657***	0.168
Intermediate Transport and Production	-0.573*	0.302	-0.005	0.284
Elementary Clerical, Sales and Service	0.007	0.166	0.216	0.183
Labourers and Related	-0.434**	0.179	0.019	0.186
Absent or Deceased	-0.76	0.782	-19.447	7344
Not Working	0.000		0.000	
Country of Birth	(p=0.668)		(p=0.406)	
Australia	0.293	0.403	0.364	0.402
New Zealand, USA or Canada	-0.064	0.564	0.977*	0.584
UK or Ireland	0.339	0.431	0.345	0.442
Europe	-0.239	0.450	-0.241	0.516
East or South-East Asia	0.302	0.821	-0.420	0.721
Other	0.000		0.000	
Father's Country of Birth	(p= 0.846)		(p=0.229)	
Australia	0.295	0.363	-0.885**	0.360
New Zealand, USA or Canada	0.509	0.512	-0.569	0.525
UK or Ireland	0.260	0.381	-0.690*	0.380

Europe	0.365	0.400	-0.698*	0.403
East or South-East Asia	1.037	0.883	-0.538	0.592
Other	0.000		0.000	
Mother's Country of Birth	(p= 0.395)		(p=0.216)	
Australia	-0.670	0.409	-0.447	0.412
New Zealand, USA or Canada	-0.378	0.571	-1.219**	0.614
UK or Ireland	-0.354	0.421	-0.248	0.432
Europe	-0.596	0.445	-0.231	0.448
East or South-East Asia	-0.944	0.973	0.401	0.668
Other	0.000		0.000	
English First Language Learned to Speak	-0.538*	0.277	-0.659**	0.305
Aboriginal or TSI	-0.254	0.389	-0.955	0.644
Age	-0.009	0.089	0.020***	0.006
Constant	0.089	0.394	0.115	0.442

*** $p < 0.01$

** $0.01 \leq p < 0.05$

* $0.05 \leq p < 0.10$

Table 2: Logistic Regression of Whether A 25-54 Year Old Was Educated to Year 12 or Above by Family Background Variables: Living in Australia (HILDA)

Variable	Females		Males	
	β	SE(β)	β	SE(β)
Number of Siblings	-0.116***	0.021	-0.124***	0.022
Is Eldest Sibling	0.263***	0.082	0.281***	0.086
Type of Schooling	(p =0.000)		(p=0.000)	
Government	-0.814***	0.140	-1.018**	0.150
Catholic	-0.327**	0.164	-0.273	0.176
Other	0.000		0.000	
Father's Occupation	(p= 0.000)		(p=0.000)	
Managerial or Administrative	0.723***	0.217	-0.112	0.285
Professional	1.172***	0.226	1.015***	0.294
Associate Professional	0.437**	0.221	0.205	0.293
Tradespersons and Related	0.192	0.211	-0.214	0.282
Advanced Clerical and Service	1.344***	0.481	0.078	0.491
Intermediate Clerical and Service	0.405*	0.239	0.365	0.309
Intermediate Transport and Production	-0.187	0.223	-0.577*	0.296
Elementary Clerical, Sales and Service	-0.018	0.302	-0.407	0.364
Labourers and Related	-0.307	0.249	-0.569*	0.309
Absent or Deceased	-0.073	0.263	-0.368	0.324
Not Working	0.000		0.000	
Mother's Occupation	(p=0.000)		(p=0.000)	
Managerial or Administrative	-0.125	0.223	0.294	0.240
Professional	0.793***	0.141	0.903***	0.152
Associate Professional	0.250	0.165	0.349*	0.208
Tradespersons and Related	0.043	0.175	0.254	0.188
Advanced Clerical and Service	0.595***	0.160	0.777***	0.170
Intermediate Clerical and Service	0.362***	0.134	0.555***	0.147
Intermediate Transport and Production	-0.147	0.213	0.074	0.230
Elementary Clerical, Sales and Service	-0.028	0.142	0.279*	0.153
Labourers and Related	-0.430***	0.139	0.020	0.151
Absent or Deceased	-0.855	0.565	-0.015	0.457
Not Working	0.000		0.000	
Country of Birth	(p=0.689)		(p=0.647)	
Australia	-0.393	0.392	-0.277	0.433
New Zealand, USA or Canada	-0.076	0.571	0.500	0.587
UK or Ireland	-0.146	0.420	0.185	0.468
Europe	-0.162	0.429	-0.794	0.519
East or South-East Asia	-0.955	0.925	-0.134	0.701
Other	0.000		0.000	
Father's Country of Birth	(p= 0.483)		(p=0.161)	
Australia	0.234	0.346	-0.742**	0.367
New Zealand, USA or Canada	0.636	0.497	-0.237	0.509
UK or Ireland	0.369	0.365	-0.476	0.384

Europe	-0.090	0.380	-0.491	0.394
East or South-East Asia	-1.471	1.040	-0.075	0.619
Other	0.000		0.000	
Mother's Country of Birth	(p= 0.395)		(p=0.356)	
Australia	-0.387	0.410	-0.164	0.421
New Zealand, USA or Canada	0.201	0.585	0.409	0.580
UK or Ireland	0.545	0.420	-0.190	0.436
Europe	-0.116	0.440	-0.247	0.452
East or South-East Asia	2.598**	1.144	-0.205	0.666
Other	0.000		0.000	
English First Language Learned to Speak	-0.183	0.268	-0.425	0.307
Aboriginal or TSI	-0.254	0.389	-1.181**	0.505
Age	-0.052***	0.005	-0.024	0.005
Constant	3.431***	0.372	2.807	0.420

*** $p < 0.01$

** $0.01 \leq p < 0.05$

* $0.05 \leq p < 0.10$

Table 3 :Linear Regression of Gross Income (all sources) on Family Background Variables: Living in Australia (HILDA)

Variable	Females		Males	
	B	SE(β)	B	SE(β)
Number of Siblings	-779***	206	-381	438
Is Eldest Sibling	424	879	984	1839
Type of Schooling				
Government	-3825***	1399	-6221**	2994
Catholic	-704	1664	-2140	3584
Other	0.00		0.00	
Father's Occupation				
Managerial or Administrative	4688**	2342	6712	6131
Professional	4344*	2398	8096	6255
Associate Professional	888	2400	11325*	6310
Tradespersons and Related	-50	2277	1042	6053
Advanced Clerical and Service	508	4756	15646	10816
Intermediate Clerical and Service	3050	2601	12216*	6699
Intermediate Transport and Production	-2133	2383	-33	6263
Elementary Clerical, Sales and Service	-545	3234	6016	7691
Labourers and Related	1242	2588	-2545	6493
Absent or Deceased	-375	2799	-5641	6881
Not Working	0.00		0.00	
Mother's Occupation				
Managerial or Administrative	1564	2471	460	5145
Professional	6317***	1490	10302***	3162
Associate Professional	2079	1818	959	3865
Tradespersons and Related	3689*	1904	3026	3120
Advanced Clerical and Service	9461***	1730	14571***	3611
Intermediate Clerical and Service	2648*	1469	3042	3120
Intermediate Transport and Production	739	2291	-2103	4814
Elementary Clerical, Sales and Service	594	1548	5797*	3220
Labourers and Related	-832	1445	-337	3052
Absent or Deceased	-1226	5634	-9662	9343
Not Working	0.00		0.00	
Country of Birth				
Australia	203	4120	7323	8372
New Zealand, USA or Canada	5279	5908	4498	11616
UK or Ireland	3342	4427	13071	9114
Europe	-905	4509	5306	10404
East or South-East Asia	-13119	8702	-4540	14585
Other	0.00		0.00	
Father's Country of Birth				
Australia	2681	3664	-1962	7570
New Zealand, USA or Canada	5515	5209	-1990	10505
UK or Ireland	479	3842	-174	7930

Europe	2429	4030	2135	8243
East or South-East Asia	4591	9325	1908	12484
Other	0.00		0.00	
Mother's Country of Birth				
Australia	1464	4320	-5916	8581
New Zealand, USA or Canada	-689	6017	1278	11914
UK or Ireland	906	4436	-6770	8934
Europe	2529	4649	-549	9232
East or South-East Asia	8653	10019	4344	13527
Other	0.00		0.00	
English First Language Learned to Speak	-731	2746	6661	6083
Aboriginal or TSI	-441	2865	-8643	7537
Age	199***	52	520***	108
Constant	19134**	3818	20707**	8673

*** $p < 0.01$

** $0.01 \leq p < 0.05$

* $0.05 \leq p < 0.10$

Table 4: Linear Regressions of Balance of Bank Accounts on Family Background Variables: Living in Australia (HILDA)

Variable	Females		Males	
	B	SE(β)	B	SE(β)
Number of Siblings	-869***	233	-788**	319
Is Eldest Sibling	801	995	504	1341
Type of Schooling				
Government	-3899**	1583	-10691***	2184
Catholic	-3574*	1883	-9209***	2613
Other	0.00		0.00	
Father's Occupation				
Managerial or Administrative	-1953	2651	4343	4471
Professional	-2265	2714	1266	4562
Associate Professional	-1809	2715	4607	4603
Tradespersons and Related	-5305**	2577	2743	4415
Advanced Clerical and Service	2414	5383	5519	7889
Intermediate Clerical and Service	-3966	2943	5048	4886
Intermediate Transport and Production	-4255	2696	1561	4568
Elementary Clerical, Sales and Service	-6802*	3660	2570	5610
Labourers and Related	-4141	2929	62	4735
Absent or Deceased	-6165*	3168	6930	5019
Not Working	0.00		0.00	
Mother's Occupation				
Managerial or Administrative	620	2796	13664***	3753
Professional	764	1687	762	2306
Associate Professional	-1085	2057	2152	2819
Tradespersons and Related	516	2155	1702	2890
Advanced Clerical and Service	-1346	1958	2295	2633
Intermediate Clerical and Service	3146*	1663	3241	2275
Intermediate Transport and Production	-211	2593	-1852	3511
Elementary Clerical, Sales and Service	-1325	1751	-2570	2349
Labourers and Related	-882	1636	-970	2226
Absent or Deceased	-1573	6377	-3500	6814
Not Working	0.00		0.00	
Country of Birth				
Australia	-3529	4663	-1269	6107
New Zealand, USA or Canada	-5758	6686	5342	8472
UK or Ireland	-3160	5010	-3369	6648
Europe	-1080	5102	466	7588
East or South-East Asia	-8607	9847	5409	10638
Other	0.00		0.00	
Father's Country of Birth				
Australia	2842	4147	1873	5521
New Zealand, USA or Canada	423	5894	-947	7662
UK or Ireland	4204	4347	-1416	5784

Europe	3118	4560	-6747	6012
East or South-East Asia	2431	10553	4384	9105
Other	0.00		0.00	
Mother's Country of Birth				
Australia	-4534	4889	-609	6259
New Zealand, USA or Canada	-3175	6809	-5276	8690
UK or Ireland	-5905	5020	1575	6517
Europe	-2168	5261	10009	6734
East or South-East Asia	6174	11339	-10454	9866
Other	0.00		0.00	
English First Language Learned to Speak	4882	3107	1993	4437
Aboriginal or TSI	-1269	3242	-341	5497
Age	492***	58	393***	79
Constant	-1634	4320	-73	6326

*** $p < 0.01$

** $0.01 \leq p < 0.05$

* $0.05 \leq p < 0.10$

Table 5: Linear Regression of Superannuation on Family Background Variables: Living in Australia (HILDA)

Variable	Females		Males	
	B	SE(β)	B	SE(β)
Number of Siblings	-2695***	674	-1412	956
Is Eldest Sibling	5582*	2878	12627***	4016
Type of Schooling				
Government	-2666	4579	-9426	6540
Catholic	2946	5446	8180	7827
Other	0.00		0.00	
Father's Occupation				
Managerial or Administrative	8465	7669	-345	13391
Professional	11554	7851	16316	13661
Associate Professional	8235	7855	12154	13783
Tradespersons and Related	5284	7453	1200	13220
Advanced Clerical and Service	5611	15571	-11240	23623
Intermediate Clerical and Service	11396	8516	4472	14631
Intermediate Transport and Production	3536	7799	-5083	13679
Elementary Clerical, Sales and Service	21585**	10588	9757	16798
Labourers and Related	2635	8473	2525	14180
Absent or Deceased	2471	9164	-7719	15028
Not Working	0.00			
Mother's Occupation				
Managerial or Administrative	11257	8089	-13245	11238
Professional	12636**	4878	1868	6906
Associate Professional	2578	5950	-452	8441
Tradespersons and Related	9311	6233	15910*	8655
Advanced Clerical and Service	9992*	5664	21961***	7886
Intermediate Clerical and Service	8832*	4810	4029	6814
Intermediate Transport and Production	7580	7500	-9547	10513
Elementary Clerical, Sales and Service	1102	5066	11338	7034
Labourers and Related	659	4731	3283	6667
Absent or Deceased	5621	18448	-24244	20406
Not Working	0.00			
Country of Birth				
Australia	4085	13489	28064	18286
New Zealand, USA or Canada	27708	19340	-2887	25371
UK or Ireland	3342	14493	25654	19907
Europe	-8525	14759	6377	22724
East or South-East Asia	-3005	28485	15828	31855
Other			0.00	
Father's Country of Birth				
Australia	17352	11997	-1164	16534
New Zealand, USA or Canada	31902*	17051	-2834	22944
UK or Ireland	6548	12575	-1703	17319

Europe	7873	13191	-7777	18005
East or South-East Asia	18167	30525	53152*	27266
Other			0.00	
Mother's Country of Birth				
Australia	-7762	14141	-1696	18743
New Zealand, USA or Canada	-28833	19697	3485	26021
UK or Ireland	-11027	14522	-1404	19514
Europe	-7429	15217	-4030	20164
East or South-East Asia	-17171	32799	-63286**	29545
Other	0.00		0.00	
English First Language Learned to Speak	-592	8999	14206	13286
Aboriginal or TSI	-6258	9378	-25464	16461
Age	2094***	169	4139***	237
Constant	-63279***	12497	-136523***	18943

*** $p < 0.01$

** $0.01 \leq p < 0.05$

* $0.05 \leq p < 0.10$