

# HECS: some missing pieces

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*The Higher Education Contribution Scheme (HECS) has been advanced as having many desirable properties. These have been discussed largely from the theoretical perspective, and with the individual rather than the family as the reference point. This paper explores whether HECS is working the way it was intended. Is it having undesirable or unanticipated consequences? The paper also canvasses the informational requirements for a more fully informed debate on the economic and social impacts of HECS.*

*Blessed are the young, for they shall inherit a HECS debt<sup>1</sup>*

## Introduction

HECS was introduced in 1989. It resulted from the recommendation of the Committee on Higher Education Funding (the Wran Committee) that Australia adopt a higher education contribution scheme where students pay a deferrable contribution towards the costs of their tertiary studies. Initially, HECS was a uniform charge of approximately 20 per cent of the average cost of university courses (\$1,800 in 1989). It applied to all domestic undergraduate students at university. Students could either pay their contribution up-front, and receive a discounted HECS liability, or defer their contribution until their income reached a particular threshold (based on the average annual earnings of Australians). Once at the threshold level, students were required to pay their HECS liability at a rate of between one and three per cent of their taxable income. While HECS was indexed to inflation, it did not attract a real rate of interest.

There have been a number of minor changes to HECS since it was introduced, to the level of student contributions, the measurement and level of income thresholds, the level of HECS repayment rates, and the discount received for up-front payments. These are reviewed in Birch and Miller (2006a) and interested readers can consult that study. Two major sets of changes were introduced in 1997 and in 2005.

The 1997 reforms to HECS saw the introduction of differential HECS contributions for students, based on the cost of their course and their earnings potential upon graduation. This is the origins of the 'three HECS bands'. There was also a substantial increase in the level of HECS contributions and the rates at which students were required to pay back their HECS debt. The income threshold levels at which the various payment

rates cut in were lowered considerably. Furthermore, there was a small shift towards the deregulation of university fees, with universities being able to set their own level of tuition fees for students who were not accepted into university under existing HECS places (there was, however, a requirement that 75 per cent of students be in HECS subsidised places).

The 2005 changes to HECS saw a substantial overhaul of the financing arrangements for tertiary education in Australia.<sup>2</sup> HECS was abolished and the Higher Education Loan Program (HELP) was established. Under the HELP system, universities are able to offer domestic students either (i) a Commonwealth supported place (previously known as a HECS subsidised place), where they pay a proportion of the cost of tertiary study, or (ii) a full-fee paying place, where the students pay the 'full' cost of their university course.

In 2005, the number of Commonwealth supported places each university must provide was equal to 65 per cent of all places. The system allows higher education providers to set the amount which students are required to contribute to the costs of their tertiary study, within ranges set by the Government. Other than for courses in the National Priorities band, the maximum student contributions that universities could charge for Commonwealth supported places were increased by 25 per cent. Payment of student contributions under the HELP system is similar to the mechanism in place under HECS (though the threshold at which repayments become mandatory is higher). Thus, students are able to pay their contribution up-front (and receive a discount on their liability) or defer their contribution using HECS-HELP loans (for students with Commonwealth supported places) or a FEE-HELP loan (for students with full-fee paying places).

HECS has been widely discussed as having many desirable properties. This discussion has largely been from a theoretic-

cal perspective, with the individual rather than the family as the reference point. In large part this theoretical discussion assumes full information and rational behaviour on the part of students. However, HECS is said to be having effects which were not anticipated, or at least not discussed widely, at the time it was introduced. The Sunday Times newspaper in Perth, for example, on 20 August 2006, carried the story under the header 'Housing gap widens' of the difficulties that a \$30K HECS debt will create for would-be homeowners compared to those graduates who received a free education following the abolition of up-front tertiary tuition fees in 1973 by the Whitlam Labor Government, or those who received scholarships prior to this reform.<sup>3</sup> This matter was the basis of conjecture in the studies by Mudd et al. (2001) and Pearse (2003). It has been linked to today's historically low rates of home ownership among young adults, although the connection has not been established empirically. The dramatic increase in house prices this decade is likely to be more of a barrier to young people purchasing their first home.

Moreover, the University of Western Australia Student Guild (2004, p.8), in a submission to the Senate Employment, Workplace Relations and Education References Committee Inquiry into Student Income Support wrote:

People coming from certain backgrounds, particularly low socioeconomic backgrounds, are more likely to be unwilling to take on HECS debts. For this reason, many students for whom the HECS scheme was supposed to be an equitable mechanism whereby they could undertake university degrees choose to pay their HECS upfront rather than defer payments.<sup>4</sup>

What then do we know about HECS? Who pays up-front? Who defers? Does a HECS debt impact on other aspects of the university experience? What would we like to know about HECS that could inform policy making? The aim of this paper is to provide discussion on these important issues.

## HECS as a price

The introduction of HECS in 1989 meant that students paid an explicit price for their education. While the HECS charge was uniform across degree types, the price students effectively faced varied according to the circumstances under which the deferred loan was repaid. This carries over to payments within each of the bands of fees that currently exist. Of particular importance is that because there is a zero real rate of interest attached to HECS, the price or net present value of the repayments is higher the more quickly the individual is required to pay off their deferred contribution. For individuals who might

be working full-time while studying part-time, and hence earning a high salary while at university and in the immediate post-graduation period, the price of education will be higher than for students who have no salary while at university, and whose immediate post-graduation salary is low. As mature-age and part-time students are more likely than direct-entry students to have these characteristics, it would be expected that they would have a greater response to HECS.<sup>5</sup>

As places at university in Australia are supply-constrained, analyses of the impact of HECS have concentrated on student interest in attending university, usually through examination of variations in applications in response to either the intro-

duction of HECS or to changes in the parameters of the scheme (e.g., Andrews, 1999; Aungles et al., 2002). This has presented many difficulties for modelling, as it has proven difficult to separate the effects of HECS from other changes that occurred simultaneously, such as changes in year 12 enrolments and business cycle effects. The evidence varies from study to study, and across groups (e.g., school

leavers and mature-age students). Where HECS (as a price) has been associated with an impact on demand, the impact has been modest, and consistent with economic theory. For example, Aungles et al. (2002, p.26) report that 'older persons new to higher education or studying part-time or externally appear more responsive to HECS changes', though they note that the evidence is indicative rather than conclusive. In light of the modelling problems encountered in this area, it seems unlikely that, in the absence of superior data, further research along these lines will be fruitful.

As well as this discussion of the possible negative impact of HECS on the interest in attending university, there has been analysis of whether HECS has been associated with changes in the socioeconomic background of those who actually attend university. HECS was, after all, meant to be an equitable mechanism through which university places could be expanded, and expansion of the higher education system was seen as a vehicle through which the sector could cater for a broader spectrum of the population.<sup>6</sup> In this respect the evidence is reasonably clear: HECS has facilitated an expansion of the higher education sector, but the new enrolments have not come disproportionately from lower socioeconomic status (SES) groups. In other words, as reported by Aungles et al. (2002, p.3), '... opportunities for higher education among persons from a low SES background have increased in line with the overall expansion of the higher education system, though the share of low SES has been remarkably unchanged over time'. While some cast this in a favourable light, to show that HECS has not had

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a disproportionately negative effect on low SES groups, others argue ‘No progress has been made over the past decade in improving equity of access to higher education for young people from low socio-economic backgrounds’ (Birrell et al., 2000, p.50).

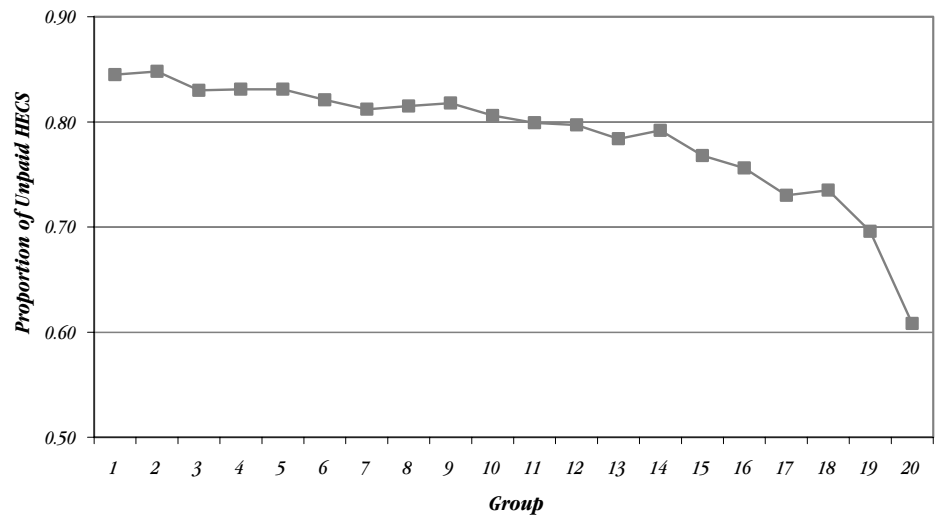
Unfortunately, much of the evidence on the socioeconomic mix of university students has been drawn from data on school leavers. This is reminiscent of the story about the person who lost a ring in the bedroom and looked for it in the kitchen because the light was better there. There is an urgent need to investigate the impact of HECS on mature-age groups from different socioeconomic status backgrounds, as these groups may have been more responsive to the HECS reforms. At present this is one of the missing pieces in the HECS debate.

**Who defers HECS and why might this be important?**

HECS has been advanced in theoretical discussions as being neutral across university students on the basis of their socioeconomic background. This is because students are not required to pay up-front at the time they enrol in university. However, the incidence of HECS has typically been discussed from the perspective of the individual, whereas equity issues in the education field are generally discussed from the perspective of the family. What do we know about the family and individual characteristics of students who defer HECS?

Some information on this matter can be obtained from the Department of Education, Science and Training’s (DEST) Higher Education Statistics database. The following discussion uses data for 2002 on 488,971 students who were studying towards a bachelor degree, had Australian citizenship and who had incurred a HECS liability during the year.

Overall, in 2002, the mean proportion of HECS deferred was 78 per cent. However, this proportion varies considerably by students’ socioeconomic status, as measured by the socioeconomic status of their home neighbourhood.<sup>7</sup> As shown in Figure 1, students from lower socioeconomic status neighbourhoods defer a larger proportion of their HECS liability than students who are from higher socioeconomic status neighbourhoods. Thus, the mean proportion of HECS deferred by students in the bottom two groups of the socioeconomic status index is more than 84 per cent. In comparison, the mean proportion of HECS deferred by students who were in the top two groups of the index is under 70 per cent, and it is close



**Figure 1: Mean Proportion of Unpaid HECS: Students by Socioeconomic Status**

to 60 per cent for the top group. In other words, students are able to access an income-contingent, interest free, loan to pay their contribution towards the cost of their higher education, and poorer students tend to do this in greater proportions than richer students. This evidence appears to be consistent with the ethos of the scheme.

Figure 1 is based on information about the students’ home neighbourhood rather than on details about the socioeconomic status of the individual student or of their family: Universities do not collect the latter information, and this is a major limitation of the data. However, there have been several surveys that have collected superior background information on students. These also show that socioeconomic status has a strong influence on HECS payments (see, for example, Long and Hayden, 2001). Both sets of data suggest that at least some low socioeconomic status students (but far fewer than those from higher socioeconomic status background) are paying HECS up-front even though they could have deferred the payment—and deferring will usually (though it is acknowledged that this depends on the exact set of individual circumstances) have been economically rational. Understanding aversion to debt among some groups of the student (and even non-student) population is an interesting topic for future research.

If deferred HECS debts cause problems, as conjectured in some studies (e.g., Baum and Wulff, 2003; Mudd et al., 2001; Kelly et al., 2003; Jackson, 2002), then these effects will be felt more intensely by students from poor neighbourhoods than by students from rich neighbourhoods. Moreover, students of a lower socioeconomic status will have lower after tax earnings (until their debt is repaid) than graduates who paid their HECS up-front, predominately higher socioeconomic status students. Thus, there will be an increase, albeit temporarily, in measured income inequality in later life between students who pay their HECS up-front and those who defer.

From this perspective, knowing who defers HECS, and why, is obviously an important issue. The need to use area-level data in Birch and Miller (2006a) means that this study was not as informative as it could have been: Some poor people live in the rich neighbourhoods that Birch and Miller analyse, and, likewise, some rich people live in the poor neighbourhoods examined in that analysis. This means that the true, individual-level relationship between HECS repayment status and socioeconomic status will tend to be attenuated in diagrams such as Figure 1, which have the neighbourhood as the unit of analysis. A priority should be placed on the collection of detailed information on the family background of all applicants so that this limitation can be avoided. This is the second missing piece of information that could inform the HECS debate.

The DEST database does contain rich information on a number of characteristics that are collected at the level of the student (as opposed to area-level data). Investigation shows that the proportion of HECS deferred varies with many of these characteristics. Consider, for example, the links between age and the proportion of HECS deferred. For students aged under 30 years, the likelihood of deferring HECS rises with age. Thus, the mean proportion of unpaid HECS for students aged under 18 years is 75 per cent. It is 81 per cent for students aged 22 to 30 years. Why does age influence whether a student defers their HECS charge? Does this influence derive from an increased awareness of the income-contingent nature of the HECS system among older students? Or maybe it is associated with younger students being more likely to live with their parents, with parental contributions providing the source of funds for the up-front payment. Unfortunately, while the empirical relationship between age and the propensity to defer HECS has been documented in several studies, the underlying factors that give rise to the relationship are not understood at the present time.

Students aged over 30 years are less likely to defer their HECS (mean proportion of HECS unpaid of 69 per cent) than younger students. This finding could be a result of a greater likelihood of these students participating in paid work due to family considerations, and hence having incomes that push them over the threshold for HECS repayments. These students may thus opt to pay their HECS up-front to receive the associated discount.

The proportion of HECS deferred also varies according to students' birthplace. Students who were born in Australia defer a smaller proportion of their HECS than their overseas-born counterparts, with the mean proportion of HECS deferred for

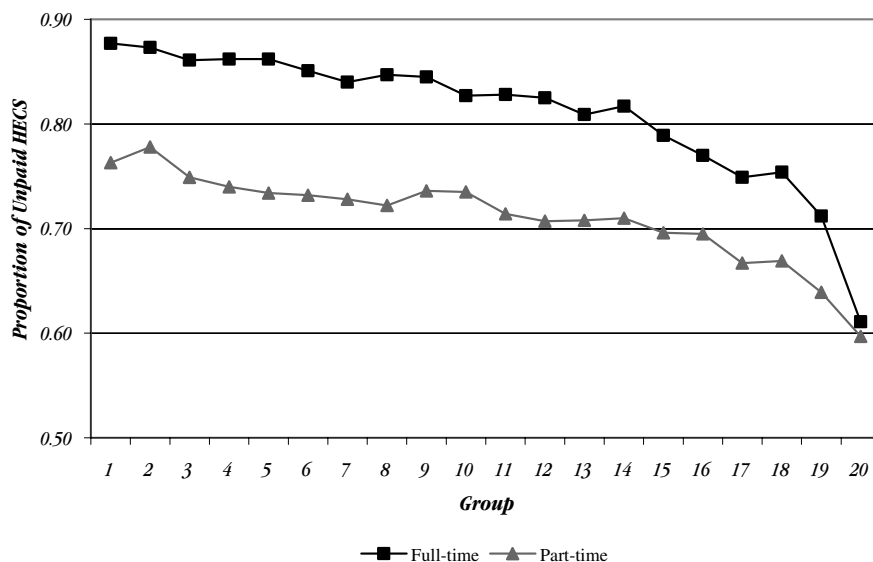


Figure 2: Mean Proportion of Unpaid HECS by Type of Attendance: Students by Socioeconomic Status

Australian-born students being 3 per centage points less than that for students born overseas. Again, it is not clear why there is this difference. It could be speculated that it comes about because immigrant families have a lower capacity to pay up-front for the tertiary education of their children due to the difficulties of accumulating wealth following their move to Australia. Having additional information on the family may assist this type of investigation.

Students who study full-time have a slightly larger mean proportion of HECS deferred (81 per cent) compared to the mean for students who study part-time (77 per cent). This finding could be a result of part-time students having earnings that push them over the threshold at which HECS repayments need to be made, and this may create an incentive to pay up-front and receive a discount. It may also be easier for part-time students to pay up-front in manageable portions, as they are studying fewer units per semester than full-time students.

As shown in Figure 2, the proportion of HECS deferred is also negatively associated with the socioeconomic status of both full-time and part-time students. The negative correlation of HECS deferment and socioeconomic status is more pronounced for full-time students than for part-time students. This relationship is consistent with patterns established in Long and Hayden (2001). Analysis of the links between HECS repayment patterns and individual characteristics will therefore need to be cognisant of the influence of family background.

It could be argued that the inter-generational transfers that might explain many of the patterns described above may have occurred anyway, and hence one should not worry. However, if the decision-making of youth is affected by HECS debts, there is a need to take stock, and ascertain whether the flow-on effects being raised in the discussion are real, and if real, whether they are acceptable to society. If this is the case, there

is also a need to ask how HECS has affected students' decision-making: Are, for example, the effects conjectured in the literature best seen as portfolio adjustments (e.g., reallocation of wealth between human capital and housing equity)? The distribution of HECS debt and its consequences require understanding and accommodation of the data collection requirements noted above.

## HECS debt and university outcomes

As well as affecting post-graduation decision-making, it is possible that HECS debt impacts on activities and outcomes while students are at university. With this in mind, this section examines the impact of students' HECS liabilities on their academic performance at university.

Why should HECS be related to academic performance? It is possible that the decision to pay HECS up-front makes students more appreciative of the value of their education. Therefore it could induce greater effort at university and result in superior academic performance. Indeed Freebairn et al. (1987) suggest that charging fees for tertiary study in Australia would result in a better motivated student body. However, it is also possible that in order to pay HECS liabilities up-front, students may engage in market work. Recall that it was noted above that students averse to debt, even of an income-contingent nature, may try to pay up-front even though it would otherwise make sense to defer the HECS liability. Depending on the way the student re-allocates their time to enable this work to be undertaken, and on the nature of the work, the market work may be disadvantageous to their studies. Several recent Australian studies have reported that market work can have an adverse impact on students' performance at university (see McInnis and Hartley, 2002; Applegate and Daly, 2005).

Finally, HECS may influence academic outcomes at university in indirect ways. In particular, deferring HECS may be associated with sets of circumstances (e.g., general financial needs) and social background factors (e.g., limited home education resources, lower goal commitment) that impact negatively on tertiary outcomes. In this situation, a HECS debt and the student reaction to it could simply compound the effects of an existing set of circumstances. Tinto (1975) suggests that students' socioeconomic status has an important effect on their goal and institutional commitment and academic outcomes.

Research on the impact of deferring HECS liabilities on academic performance is very limited, with the main study being that of Birch and Miller (2006b) for domestic students at the University of Western Australia. This study examines the influence of deferring HECS on students' academic performance in the first, second and third years of university as well as the influence of HECS on the decision to continue studying at university beyond the first and second years of study. It found

that students who deferred their HECS liabilities had slightly lower first-year marks at university (around one per cent) than students who paid their entire HECS up-front. Birch and Miller (2006b) attribute this result to the less favourable socioeconomic status of students who defer their HECS. They argue that if this is the case, then under Tinto's (1975) longitudinal process of interactions, the apparent 'HECS' effect would be expected to dissipate over time, as students integrate into the academic and social environment of the institution. The strength of this interaction effect is explored in the Birch and Miller (2006b) study through examination of the change in the relationship between a HECS debt and academic performance among second- and third-year students. They report that deferring HECS liabilities does not have an impact on the academic performance of these students, and this finding is attributed to an 'immersion effect', where second- and third-year students take on similar values in terms of their study habits and motivation.

The Birch and Miller (2006b) study found that deferring HECS had an impact on students' decisions to continue with their university study beyond the first year. Students who deferred their entire HECS liability were found to be 3 percentage points less likely to continue study beyond the first year of university than students who paid HECS up-front. The main conclusion in Birch and Miller (2006b) is that the most likely explanation for the links between HECS payment status and academic performance is that the HECS debts act as a proxy for socioeconomic background and the related circumstances that impact on study habits and commitment of students in the first year of university.

An implication of the findings in Birch and Miller (2006b) is that if HECS acts as a proxy for low socioeconomic status then it is students of a low socioeconomic status with HECS debts who are less likely to continue with their university studies. As such, if these students never complete their university studies and enter the workforce then they could end up paying off a HECS debt despite not completing their investment in education. This could further widen the gap between the income levels of individuals who deferred their HECS liability and those who paid their liability up-front.

The interesting feature of these analyses is that HECS payment status appears to be associated with a wider range of circumstances that are not fully understood. This is the third missing piece of information relevant to the HECS debate to which attention can be drawn. In terms of quantifying these empirical relationships precisely, and understanding them, there remains much to be done.

## Conclusion

This paper has examined whether the Higher Education Contribution Scheme (HECS) is having undesirable or unan-

anticipated consequences on university students. Because it did not require any immediate payments, HECS was seen to be an equitable financing mechanism for those seeking to pursue tertiary qualifications. As discussed in this paper, the various studies that have examined whether the scheme impacted adversely on university application rates have encountered empirical problems separating any HECS effect from that of other coincident changes (such as changes in labour market conditions, year 12 enrolments). Perhaps there is some modest effect, particularly among mature-age and part-time students, though in the words of Aungles et al. (2002), the evidence is indicative rather than conclusive. Furthermore, it has been suggested that the scheme has done little to improve the proportion of students from low socioeconomic backgrounds actually attending university.

The paper has reported that students of a low socioeconomic status are considerably more likely to defer their HECS contribution than students of a higher socioeconomic status. Deferring HECS is associated with lower academic achievements during the first year of university. Moreover, students who defer their HECS liability have a lower likelihood of continuing their university study beyond the first year of university. Birch and Miller (2006b) argue that these effects may reflect the socioeconomic status of students. Finally, HECS debts have been linked to changes in a range of post-graduation outcomes, including housing choice and earnings inequality, as it is typically measured.

All these findings suggest that HECS could be affecting students whilst they are at university and after they graduate. From the research presented above, it appears that these consequences will be more intense for students from a low socioeconomic background, though whether the effects are more correctly termed HECS effects or socioeconomic status effects remains to be determined.

However, there needs to be further research into the consequences of HECS on students. In particular, there needs to be a greater understanding of the relationship between deferring HECS and family background. Most research to date looks at HECS decisions and the socioeconomic status of students' home neighbourhoods. The relationship between students' decisions on HECS and their income or their parents' income has yet to be quantified precisely. There is also a need for more research into whether HECS affects students' decisions to attend university and whether it affects their motivation at university. This is of great importance given the 2005 changes to HECS which saw a substantial increase in the cost of attending university. Understanding whether there are debt averse groups who are paying HECS up-front when they could (and possibly should) defer their liability is also required.

Finally, there is a need for longitudinal studies to provide a complete picture of the social and economic impact of HECS. As the system has been in place for almost 20 years, it would

be of value to quantify how HECS debt actually impacts on individuals' levels of wealth and their wealth accumulation, including the portfolio mix of their wealth, upon graduation.

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Helpful comments have been provided on an earlier draft by James Fogarty and Derby Voon.

## Endnotes

1. The original quotation that this statement is based on, by Herbert Hoover, was 'Blessed are the young, for they shall inherit the national debt'.
2. Under the new system students enrolled in nursing and education courses form a new band, known as National Priorities.
3. *The Sunday Times*, 20 August 2006, p.55, 'Housing gap widens'. Note that prior to the major change by the Whitlam Labor Government, about three-quarters of tertiary students had their fees paid for them via State Government Teachers' College Scholarships or Commonwealth Government Scholarships (see Birch and Miller, 2006a).
4. Andrews (1999) reviews the formal evidence on the correlation between debt aversion and socioeconomic background and concludes (p.17) that there is no 'strong or consistent effect'.
5. Much of the discussion on HECS is from a human capital perspective, which sees education as an investment in (primarily) future earnings potential. Students will undertake the investment only where it is profitable. This perspective should be kept in mind when considering the conditions under which a student might enrol at university yet not expect to repay their HECS debt.
6. 'The reasons for expanding the higher education system are not confined to economic and labour market considerations alone: there are significant social and cultural gains from a better educated community. For example, expansion of the system is a prerequisite to substantially improving the access of all members of the community to the benefits of education enjoyed by graduates' (Dawkins, 1987, p.2).
7. Socioeconomic status is measured here using the Australian Bureau of Statistics' (ABS) 'Index of Economic Resources' applied to students' home postcodes. A high score on the 'Index of Economic Resources' means that the neighbourhood has a higher proportion of high income families, a lower proportion of low income families, a larger number of households living in homes with four or more bedrooms, and higher rent and mortgage payments (ABS, 2001). The index of socioeconomic status is categorised into twenty equal sized groups for the presentations in Figures 1 and 2.

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