

International Students and the Australian Economy

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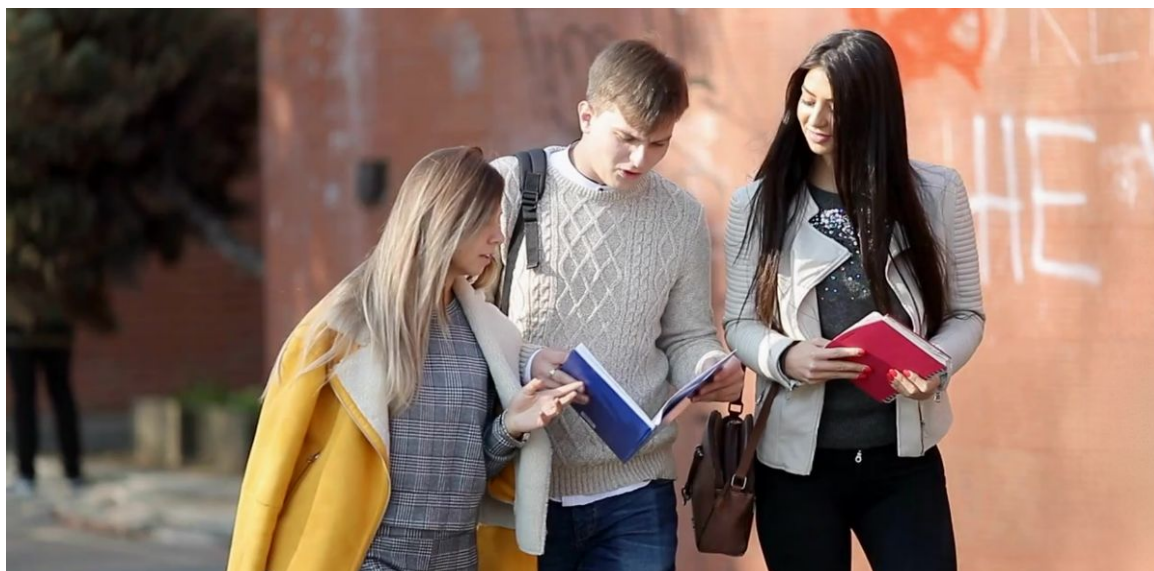


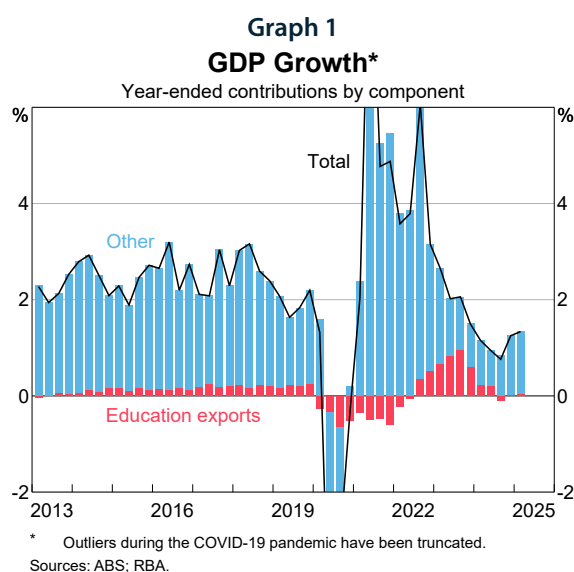
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Abstract

International students play a significant role in the Australian economy. They contribute to demand through their spending on goods and services and are an important source of labour for some Australian businesses. This article shows that international students tend to add more to demand in the economy than they do to supply in the short run, in large part reflecting their spending on tertiary education fees. In periods of large swings in international student numbers or when the economy has little spare capacity, this means that changing international student numbers can affect macroeconomic outcomes, particularly in sectors of the economy where supply cannot respond quickly. The rapid growth in international student numbers post-pandemic likely contributed to high inflation over this period, but was not a major driver.

Introduction

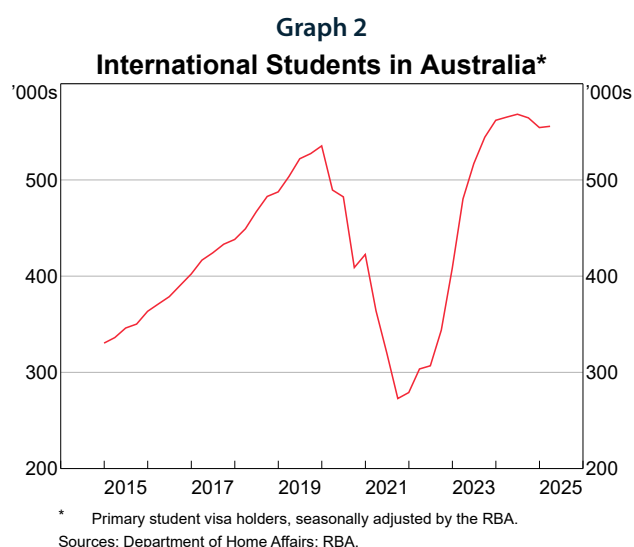
International students play a significant role in the Australian economy by spending on goods and services and providing labour for Australian businesses. The number of international students grew strongly after international borders reopened following the COVID-19 pandemic; education exports are currently Australia's fourth largest category of export, at approximately \$50 billion in 2023/24. International students have been an important driver of net overseas migration and GDP growth in recent years (Graph 1).



This article begins by stepping through developments in international student flows since the start of the pandemic in 2020. It then examines the ways in which international students interact with and contribute to the Australian economy, first by taking an economy-wide view of how international students contribute to supply and demand, and then considering their specific interactions with the market for goods and services, the labour market and the housing market. Finally, it concludes by assessing whether large changes in international student numbers have affected macroeconomic outcomes in recent years. Throughout the article, our analysis primarily considers how international students interact with and contribute to the economy from a shorter run perspective; longer run effects are outside the scope of the work.

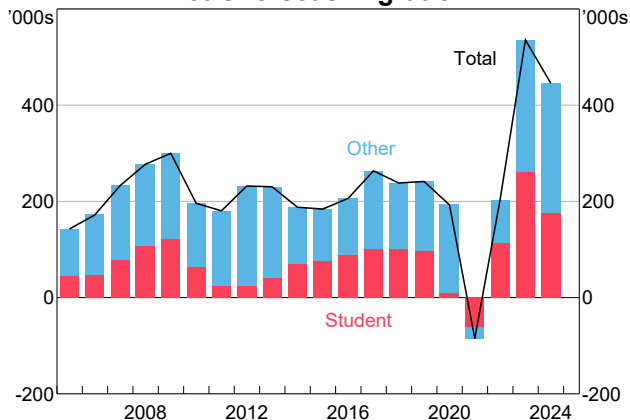
Recent developments in international student flows

Global demand for education in Australia grew solidly in the decade prior to the pandemic. This reflected a range of factors, including rising household disposable income in Asia, the active promotion of Australia as an education destination, changes to migration policies that enabled higher education students to work in Australia after their studies, global population growth, and the depreciation of the Australian dollar after the mining boom (Grozinger and Parsons 2020; Norton 2024). However, with the introduction of border restrictions in March 2020 to contain the spread of the COVID-19 virus, new students were unable to enter the country. As a result, the number of international students onshore fell sharply (Graph 2).



After Australia's international borders reopened in late 2021, the number of international students onshore rose rapidly. While student arrivals quickly returned to around pre-pandemic levels, departures were lower because there were fewer students onshore to depart. Overall, these dynamics led to the international student stock rising sharply from just under 300,000 in 2022 to 560,000 by the end of 2023. Accordingly, international students were an important driver of net overseas migration during this period, accounting for around half of Australia's total net overseas migration (Graph 3). Spending by international students was also an important contributor to growth in consumer demand in Australia following the pandemic (Graph 4).

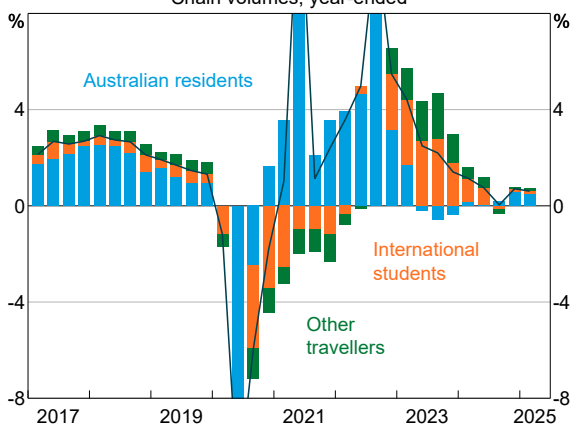
Graph 3
Net Overseas Migration



* Includes migrants on permanent visas (e.g. family, skilled), migrants on other temporary visa classes (e.g. working holiday), and New Zealand citizens.

Sources: ABS; RBA.

Graph 4
Total Consumer Demand in Australia*
Chain volumes, year-ended

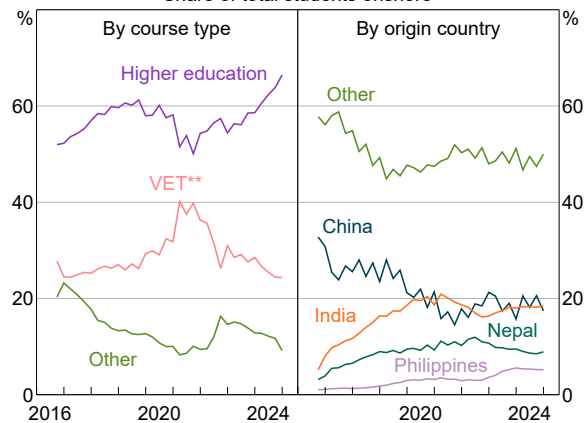


* Consumption and travel exports, less travel imports; outliers during the COVID-19 pandemic have been truncated. Seasonally adjusted by the RBA.

Sources: ABS; RBA.

As the student stock has recovered, the share of international students studying higher education courses has risen, while the share studying vocational education and training (VET) and other types of courses has declined. Most international students are from Asian countries, with Chinese and Indian students making up close to two-fifths of those studying higher education courses (Graph 5).

Graph 5
Australia's International Students*
Share of total students onshore



* Primary student visa holders.

** Vocational education and training students.

Sources: Department of Home Affairs; RBA.

More recently, growth in the number of students onshore has slowed. Student visa grants have fallen, particularly for VET students since mid-2023, and the contribution of international students to growth in total consumer demand has fallen after driving growth following the pandemic. During this time, the Australian Government has tightened processing standards and increased requirements for student visa applicants, including by increasing proof of savings and English language requirements, raising visa application fees, and introducing a Genuine Student Test, in which students must demonstrate they are entering Australia for the purpose of studying (Norton 2024).¹ The Government also reintroduced a cap on how many hours international students can work (48 hours per fortnight during teaching periods). Nevertheless, the number of international students onshore is still near record highs, and timely Australian Bureau of Statistics (ABS) data indicate that student visa arrivals have exceeded departures in recent months, suggesting the number of students onshore is growing.

How do international students interact with and contribute to the Australian economy?

Given the significant number of international students in Australia, it is important to consider how international students interact with and contribute to the Australian economy and, in particular, how they have added to both demand and supply in recent years. To do so, we begin with an aggregate perspective before turning to the market for goods and services, the labour market and the housing market. There is significant variation in the working and spending behaviour of students from different countries and in different courses of study. The analysis below mostly draws on data covering the total pool of international students, and so likely masks important compositional differences.

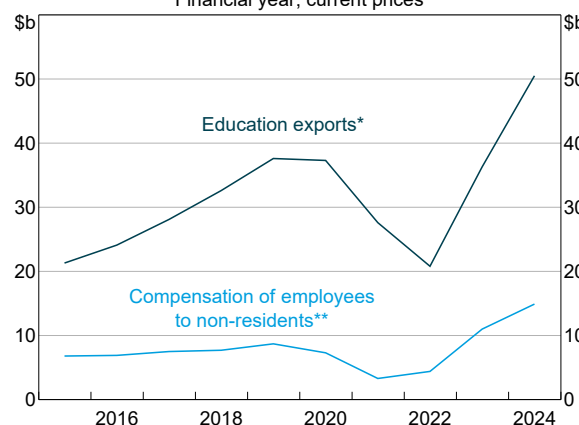
The aggregate impact of international students

The value of education exports is an indication of the demand that international students add to the economy. All spending by international students in Australia on tuition fees and all other goods and services is recorded as an education export in Australia's Balance of Payments (ABS 2024).²

However, international students also contribute to the economy's supply potential because many will work while they are in Australia. The Balance of Payments (BOP) provides an estimate of the value of this labour supply contribution.³ If an international student is employed in Australia while studying, payments from their employer are recorded in the primary income account as Compensation of Employees (COE) to non-residents.⁴ International students comprised around 90 per cent of COE to non-residents in 2023/2024. Note that this estimate of student earnings will not capture funds a student may receive from or send overseas (transactions between non-residents are not captured in the BOP). It will also not include any 'cash-in-hand' earnings. (This could mean student earnings are underestimated in the BOP: Coates, Wiltshire and Reysenbach (2023a) provide survey evidence that temporary migrants are much more likely to be paid below-minimum wages, meaning cash-in-hand work may be prevalent.)

The value of education exports has been consistently higher than measured COE to non-residents, suggesting that in aggregate international students spend more than they earn in Australia (Graph 6).⁵ In 2023/24, education exports were worth \$50 billion – more than three times higher than the estimated \$13.4 billion of COE earned by international students.

Graph 6
International Students in the Balance of Payments
Financial year, current prices



* Includes tuition fees as well as the value of international student spending on food, accommodation and other goods and services.

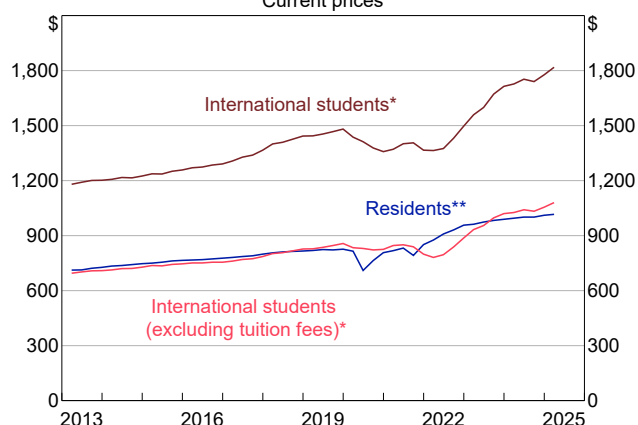
** Approximately 90 per cent of non-residents in this series were international students in 2023/24.

Sources: ABS; RBA.

Spending on goods and services

While living and studying in Australia, international students consume goods and services. Our estimates of the average weekly spend of international students using BOP data suggest that international students spend twice as much as residents (as measured by consumption per capita in the Australian National Accounts: National Income, Expenditure, and Product) (Graph 7).⁶ A large proportion of this is due to tuition fees, which account for 40 per cent of international student spending. Excluding fees, international students spend roughly the same as residents on average.⁷ The BOP figures on international students' average spending on goods and services are based on a survey of visitors who have travelled to Australia for education purposes by Tourism Research Australia, and course fee spending data from the Department of Education, Skills and Employment.

Graph 7
Average Weekly Expenditure Per Person
Current prices



* Four quarter moving average; Balance of Payments estimate.

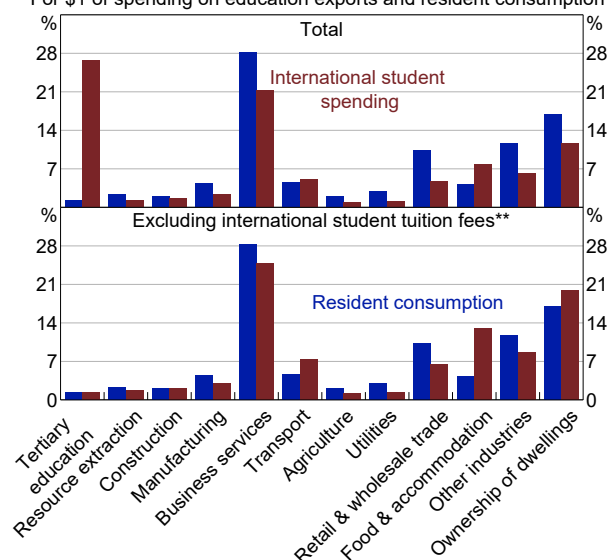
** Estimate based on National Accounts household final consumption expenditure (seasonally adjusted) divided by an estimate of the population excluding students.

Sources: ABS; RBA.

Graph 8

Economic Contribution by Industry*

For \$1 of spending on education exports and resident consumption*



* 2017/18 data.

** Contributions to spending if international student spend on tuition fees is set at the same share as that in resident consumption.

Sources: ABS; RBA.

Certain industries face relatively more demand from international students.⁸ Unsurprisingly, international student spending is more concentrated in the tertiary education sector than that of other residents, given their higher spending on tuition fees (Graph 8). When we exclude tuition fee spending, international student spending patterns are quite similar to that of residents – it is broadly based across industries and as such disperses widely through the economy. There are, however, some slight sectoral differences. Accommodation and food, transport, and housing make up a slightly higher share of the gross value added associated with education export spending, while business services, and retail and wholesale trade, make up a lower share.

As mentioned above, international student spending plays a significant role in the tertiary education sector. International student tuition fees make up a material share of revenues for universities, and this share has risen over time (Norton 2023). For the major universities, this share ranges from 15 per cent to over 40 per cent of total revenue (including grants) (Sato, Higgins-Devine and Austin 2024). As such, the fees paid by international students have important spillover benefits to university research, employment and capital expenditure. International students have also come to account for a substantial share of enrolments in the VET sector, with enrolments from this group having risen sharply over the last 10 or so years (NCVER 2024; Norton 2024).

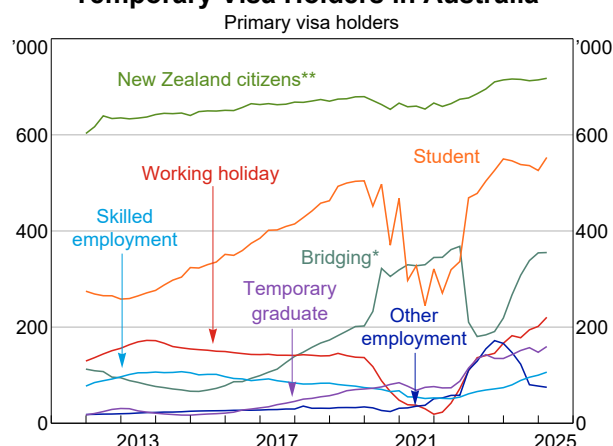
A unique feature of international student spending relates to the savings that international students bring to set up and finance their life in Australia. Currently, international students need to provide proof of nearly A\$30,000 of savings to receive a student visa; up from around A\$25,000 in 2023, which is higher than the cash savings most Australian residents have in their bank accounts. This could mean there is a temporal dimension in international student consumption, whereby consumption is strong upon arrival in Australia as individuals use these savings to set up their lives (i.e. purchasing furniture and other goods) but then slows afterwards; this same dynamic may hold for domestic residents moving out of home to attend university.⁹ In periods of strong inflows of students, such as just after borders reopened after the pandemic, this likely had an important effect on aggregate demand in the economy.

The labour market

International students make an important contribution to the labour market. While they only made up around 2 to 3 per cent of the labour force prior to the pandemic, they constitute the second largest group of temporary visa holders with work rights in Australia after New Zealand citizens, making them a large source of potential labour supply for the Australian economy (Graph 9). There is also a sizeable cohort of individuals on

temporary graduate visas, which allow international students to live and work in Australia for between one and five years after they have finished their studies.

Graph 9
Temporary Visa Holders in Australia*



Prior to the pandemic, the average international student appeared to contribute less to labour supply than an average member of the working age population and an average member of the entire resident population (i.e. including those aged 15 years and under and those aged over 64 years). International students had lower labour force participation rates than working age

residents and were limited to working 40 hours per fortnight. Using experimental estimates derived from the ABS Longitudinal Labour Force Survey (LLFS), we estimate that the average international student worked around half of the weekly hours of an average member of the working age population prior to the pandemic, and around two-thirds of the hours of an average member of the total resident population (Table 1).¹⁰

In the years immediately following the pandemic, the contribution of international students to labour supply has risen, reflecting both a rise in their participation rates and a lift in the limit on how many hours they can work (from 40 hours to 48 hours per fortnight). In 2024, we estimate that the average international student worked around three-quarters of the hours of an average member of the working age population, and around the same hours as an average member of the total resident population. Note that these are likely upper bound estimates since we assume all international students who participate in the labour force work up to the legal limit. Although these estimates apply to the entire student population, the propensity of international students to work varies by country of origin, with students from India and Nepal typically having higher rates of labour force participation (Grozinger and Parsons 2020; Norton 2023) and those from China having lower rates of participation.

Table 1: Labour Force Participation and Average Hours Per Capita^(a)

	Pre-pandemic				2024		
	International students (2015-2019 average, LLFS estimate)	International students (2016 Census estimate)	Working age population	Entire resident population	International students (LLFS estimate)	Working age population	Entire Resident population
Participation rate (%)	44	51	65	53	61	67	55
Average weekly hours per capita	9	10	20	16	15	20	16

(a) Average hours per capita is calculated as total hours worked divided by either the international student population, the working age population, or the estimated resident population. Total hours worked for international students is estimated by assuming all international students in the country work up to the legal limit of 40 hours per fortnight (pre-pandemic) and 48 hours per fortnight in 2024, and then multiplying this by their participation rate.

Sources: ABS; RBA.

Looking forward, while rules around the number of hours that international students can work are higher than pre-pandemic, average participation may decline from the levels seen in 2024. This is because the recent tightening in visa policy has targeted groups of students who were more likely to be seeking to work; that is, those international students who *do* receive visas going forward are less likely to be focused on employment opportunities in Australia on average (Norton 2024).

International students nevertheless make a notable contribution to labour supply in certain sectors. A greater share of international students work in accommodation and food, as well as retail, compared with the share of the total labour force (Table 2). Further, an increasing share of students are now working in health care, consistent with strong labour demand in this sector. This contribution was important in helping businesses in these sectors facing labour shortages in the tight labour market that emerged post-pandemic.

Many international students will also add to labour supply beyond their ‘direct’ contributions during their studies. Over time, many international students transition to temporary graduate visas or permanent residency. About 30 per cent of international students went on to apply for temporary graduate visas in the five years to 2022, with this share having risen over time, and international students making up around one-third of Australia’s permanent resident intake (Department of Education 2022).¹¹ Coates, Wiltshire and Reysenbach (2023b) discuss the longer term benefits of having the ‘best students’ stay permanently in Australia, including in terms of taxes paid over their lifetimes and spillovers to

innovation and productivity growth (the authors note, however, that many international students may remain in ‘visa limbo’ on temporary graduate visas, working in low-skilled jobs and earning lower incomes than domestic students).

The housing market

An important area in which international students contribute to demand and, potentially over time, supply is in the housing market.

International students are more likely to rent than Australian residents. About 50 per cent of over 70,000 international students surveyed in the 2023 Student Experience Survey reported that they rent in the private rental market (either in a private rented house, flat or room) (QILT 2023);¹² by contrast, around one-third of the rest of the population are renters (Agarwal, Gao and Garner 2023). In the Student Experience Survey, around 24 per cent of international students reported living with family or friends, 15 per cent in student accommodation, 3 per cent in a homestay and 2 per cent in ‘other’ accommodation. Housing demand from international students also tends to be geographically concentrated around areas where educational institutions are based, notably inner-city locations. According to the 2016 Census, international students were twice as likely to live in inner-city areas than domestic students (Evans, Rosewall and Wong 2020).

Table 2: Sectoral Composition of Employment – International Students vs Labour Force^(a)
Per cent

		Retail	Accommodation and food	Transport	Administrative	Education	Health care	Other
2016–2019	International students	13.1	37.4	5.7	8.4	6.9	11.5	18.4
	Total labour force	10.2	7.0	5.1	3.4	8.1	13.2	52.9
2023	International students	13.7	23.4	8.7	6.7	5.6	17.0	24.8
	Total labour force	9.5	6.6	5.1	2.9	8.3	15.4	52.2

(a) This table shows experimental LLFS estimates of the sectoral composition of international student (and labour force) employment; note that the ABS recommends that the Labour Account should typically be used for analysis of employment and jobs by industry division.

Sources: ABS; RBA.

Housing market outcomes are determined by the interaction of housing supply and demand. In theory, in the face of a relatively fixed supply of housing in the short term, we would expect an increase in international students to put upward pressure on rental demand and rents (all else equal), in the same way that any kind of increase in the renting population would impact demand.

As a back-of-the-envelope exercise, if we assume that 50 per cent of international students rent, an additional 100,000 students would increase private rental demand by 50,000 individuals. Models of the housing market used by the RBA suggest that a 50,000 increase in population would raise private rents by around 0.5 per cent compared with a baseline projection. The marginal effect of an additional renter may be greater in periods where the rental market is tight and vacancy rates are low, such as occurred post-pandemic.¹³ Nonetheless, the rise in international student numbers is likely to have accounted for only a small share of the rise in rents since the onset of the pandemic, with much of the rise in advertised rents occurring before borders were reopened.

With time, higher demand for housing due to a greater number of international students in Australia could spur more dwelling investment, in the way it would for an expansion of the population more broadly. However, capacity constraints, high costs in the construction sector and low levels of building approvals relative to the population may mean the housing supply response could be slower to materialise compared with in the past (Hunter 2024). One area where higher international student numbers have generated a supply response has been in purpose-built student accommodation, with rapid growth in building approvals for such projects in recent years (ABS 2025). Industry projections are for continued rapid growth in this area in the years ahead (CBRE 2024).

Assessment and conclusion

Australia's BOP suggests that, overall, international students spend more than they earn.¹⁴ In line with this aggregate finding from the BOP, analysis of how international students interact with and contribute to key sectors in the economy suggest that international students likely contribute more to demand than they do to supply, although this gap appears to have narrowed following the pandemic. In the market for goods and services, the 'average' international student spends more than other Australians, driven by high average spend on tuition fees. On the other hand, lower average hours worked and labour force participation rates mean that, at least prior to the pandemic, their labour supply contribution was less than that of an average member of the working age population and the average Australian resident. In the housing market, supply is constrained in the near term, so changes in the number of international students in Australia could impact market outcomes, in the same way changes in the population more broadly could.

If and how the short-term demand-supply imbalance of international students affects macroeconomic outcomes will depend on several factors. This could include the degree of spare capacity in the economy and labour market, the pace of change in student numbers (in addition to the overall level) and developments in the economy's supply side. For example, rapid growth in the international student stock post-pandemic likely contributed to some of the upward pressure on inflation from 2022 to early 2023, especially as arriving students frontloaded their spending as they set up in Australia and took time to join the labour market. However, the increase in international students was just one of many other forces at play in this time that drove demand above supply in the economy, and hence higher inflation. For instance, supply-side factors were the biggest driver of the increase in inflation in 2022 and 2023 (RBA 2023; Beckers, Hambur and Williams 2023) while strong domestic demand arising from supportive fiscal and monetary policy also played an important role.

Endnotes

- * Madeleine McCowage and Harry Stinson are from Economic Analysis Department and Matthew Fink is from Economic Research Department. The authors would like to thank Phil Grozinger, Tom Williams, Natasha Cassidy, Tania Blessing, Maddy Terrell and Mick Plumb for their comments and contribution to the analysis.
- 1 There has also been a large increase in the number of bridging visa holders onshore since mid-2023. Some of this increase may reflect that some students who arrived after the pandemic no longer satisfy student visa requirements under the tighter requirements.
 - 2 Education exports are measured as the number of primary student visa holders onshore multiplied by average expenditure per student. The number of student visa holders onshore depends on students arriving and departing from Australia, as well as people transitioning to and from student visas while in the country. Average spend includes a survey-based estimate of all expenditure by international students while studying in Australia – for example, tuition fees, food, accommodation and local transport.
 - 3 There are reasons why COE may not reflect the full value of international student labour supply, such as if there is imperfect competition or market frictions that mean the value of students' output is greater than what they are paid, or if cash-in-hand work is prevalent among international students.
 - 4 For BOP purposes, the ABS classifies international students as non-residents for the entire duration of their studies, with the move to a different country considered a temporary motivation rather than a change in their centre of predominant economic interest. By contrast, for the Labour Force Survey, an international student would be captured in the labour force if they have been (or expect to be) residing in Australia for at least 12 months in a given 16-month period.
 - 5 Some of the difference between international student spending and earnings is likely made up with transfers from home. Norton (2023) found that over 50 per cent of international students reported receiving a regular allowance from family overseas.
 - 6 A note of caution on these data. While the rough magnitudes at play are informative, the series are compiled on different bases. The BOP measure is based on the International Visitors Survey data supplemented with fee data from the Department of Education, while National Accounts HFCE is compiled using data from a wide range of sources (and includes imputed categories).
 - 7 This conclusion does not materially change when we exclude residents' spending offshore from resident consumption per capita.
 - 8 Estimates in Graph 8 utilise ABS input-output table data from 2017/18 and involve assumptions around how international student spending is dispersed across industries based on Tourism Research Australia's 2019 International Visitor Survey.
 - 9 The Bank of Canada (2024) found that the boost to migrants' consumption on arrival in Canada from home country savings had a relatively small effect on aggregate consumption, but minimum required funds to enter Canada are lower at around C\$13,000.
 - 10 These estimates are based on Labour Force Survey (LFS) microdata, where survey respondents are identified as international students by proxy if they were born overseas, were currently enrolled in full-time tertiary education and had lived in Australia for five years or less.
 - 11 In 2023, post-study work rights for international students were temporarily extended by two years for graduates of degrees in select skill shortage areas; this was ended in mid-2024 (Department of Education 2024).
 - 12 Note that, depending on the data source and scope, estimates of the share of international students that rent vary. Using 2016 Census data, Hurley (2020) estimated that 65 per cent of international students live in a rented dwelling.
 - 13 Moreover, model averages based on national data may understate the effect on rental demand in geographic areas where international students are highly concentrated (such as inner-city locations), while overstating the effect in areas with low concentrations of students.
 - 14 The Bank of Canada (2024) found a similar conclusion in their analysis for the effect of 'newcomers' on the Canadian economy, noting the timing dimensions of when migrants contribute to demand and supply: 'The effects on overall supply and demand from increased population growth are expected to largely offset each other over the medium term. However, because newcomers affect demand sooner than supply, this unevenness contributes to inflationary pressures in some sectors. In particular, there are additional upward pressures on house prices and rents.' See also Champagne *et al* (2023).

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