University internationalisation futures

Australia's universities in the world in 2050

December 2023

THE LYGON GROUP

A discussion paper commissioned by UNIVERSITIES AUSTRALIA

Executive summary

The year 2023 has seen Australia’s higher education sector conduct a great deal of soul-searching. The generational Universities Accord Process has provided a moment of pause. A moment to ask the “big questions”, and to seek the points where our tertiary sector intersects with our broader national story and ambition.

A comprehensive review of Australia’s migration system has also been undertaken this year, during a time that Australia is experiencing the onoing economic and labour market impacts of the pandemic alongside shifting global power dynamics. This forms a complex context behind the immense work undertaken during the year through these important processes.

It is in this moment of strategic reflection that Universities Australia commissioned The Lygon Group to write a discussion paper that paints a vision for the sector and its position within the global research and education landscape.

This paper looks beyond the next election cycle and even beyond the next five years. Instead, we ask what will international education in its broadest sense look like in the next 10, 20, or 30 years? How will it be different, and how do we position our university sector to take advantage of new opportunities and navigate the inevitable challenges?

Any vision for the future of Australia’s universities in the world cuts across multiple ministerial portfolios. For this reason, some of what we consider in this discussion paper relates to issues of soft power and diplomacy, trade, and others.

For The Lygon Group, any consideration of the future must contemplate the past and be grounded in the human experience. Our sector is fundamentally about the trust young people, and those who surround them, place in our ability to educate them, propel them forward, realise their dreams—be they from Bandung, Chongqing, Cần Thơ, Lagos, or Apia.

This paper focuses its attention outward—towards global dynamics and trends, rather than inwards towards Australia's own immediate domestic policy issues. We do not address vital issues that we feel have been the subject of deep debate elsewhere—migration, Australia's labour force needs and the economic contribution of the sector. These are central issues that impact the future of Australia's university internationalisation futures and should be considered in relation to the issues raised here.

We have placed focus on the internationalisation of Australia's research sector to fill a gap that we feel exists in understanding Australia's international education sector as deeply entwined with our global research strengths and capacity.

This paper challenges those within and outside of the education sector to consider the following questions:

- How do we step outside policy silos and identify shared priorities and challenges?
- Are we ready for changing demographics – bringing future opportunities and challenges for our sector?
- Do we need to be brave when we think about the future of research?
- Do we need new ways of engaging with international students?

Jeffrey Smart, Director & co-Founder
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December 2023

Why will international education be important?

In the year 2050 our universities will be deeply globally engaged. International students, international partnerships, research collaborations and the global flows of academic talent will be cornerstones of Australia's university sector.

Australia's international education and research sectors will continue to play a vital role in our nation's economic growth, social cohesion, and geopolitical security. The following are the core functions that the sector will play at the national level - beyond the essential contribution that international students and researchers will make to institutions, campuses and classrooms:

- Economic contributions across multiple industry sectors
- Building Australia's future labour force
- Soft power and regional development
- Long-term sustainable national security
- Building national knowledge assets.

Since its beginning, Australia's international education sector has played a fundamental role in these five strategic functions – albeit often silently with little public or policy discussion around these core contributions to national growth.

To achieve a better future for Australia, the points of interaction between these policy spheres and our universities needs to be proactively articulated. The future requires stepping outside policy silos and identifying shared priorities and challenges across Australia's industry, community, and foreign policy agendas.

We need to learn where we have gone wrong, and where adverse policy may have negatively impacted positive change. We also need to identify where we have done well — leading the world in knowledge-led social and economic development.

The pandemic, climate change and rapidly evolving technology capabilities has accelerated the importance of collaborative approaches to global problems. The future will require a stronger focus on harnessing the power of our universities to lead Australia's response to globally critical issues. A blueprint for Australia's universities in 2050 must include the following strategic function: Actively shaping global responses to global problems.

The future national strategic functions of Australia's university sector

Economy and industry	National security and collaborative regional development	Knowledge capacity and global leadership
Economic contributions of international students across multiple sectors	Soft-power and regional development	Building the national knowledge assets of the future
Building a fit-for-purpose future labour force	Long-term sustainable national security	Actively shaping responses to global problems

The future of Australia's growth story, our place in the world and in our region relies on the success of our university sector and its global vision. The challenge for the sector lies in reconciling national interest with competitive institutional interests to achieve a common vision.

This discussion paper takes a closer look at a selection of these strategic functions to begin and continue conversations about shaping the future of Australia's higher education sector within the global landscape.

Soft power and collaborative regional development

The positioning of the higher education sector within geopolitics, public diplomacy and nation-building agendas is not new. The history of international higher education in Australia is built on its relationship to its national strategic objectives in the region.[1]

However, over the last thirty years the role the sector plays in navigating power within the Asia-Pacific region has become less overt and increasingly reactive. The future should instead be shaped around a university sector that is not 'used' as an instrument of foreign policy by various governments but has its purpose in diplomacy and regional development clearly articulated and defined across governments, institutions and the domestic public.

The economic drive as a rationale for building international education as an industry in Australia has taken precedence over the auxiliary role it has played — and continues to play — in maintaining and promoting Australia's interests within a rapidly changing Asia.

A reactive public diplomacy approach to international education does not allow for a comprehensive consideration of where the risks and threats are to our education-based relationships in the region. The Indian student crisis in 2009 and reports of anti-China racism during the pandemic are examples of times in the past when the higher education sector became avenues for — or the expression of — bilateral tension.

In 2050 this public diplomacy role should be actively understood and valued — allowing institutions to independently engage with partners across the region to advance the interests of relationship building and bilateral priorities.

A strategic, long-term public diplomacy strategy for international higher education in Australia would include leadership and focus on 'domestic diplomacy'. That is, ensuring the Australian public—both inside and outside of educational institutions—are aware of the wider international relations role of education and the contribution of international students outside of university coffers.

Students arrive ready to learn not only about course content, but about how other cultures think and why, and to form connections with a different perspective on the world. If these students experience exploitation, racism, isolation and exclusion, it would be likely that they would reject this new way of life. If students head home feeling negative — and even angry — at Australians and Australian communities, there is the potential for an impact outside university budgets. The reputation of the nation and its people sit behind all solid trade and security relationships, and international students are that bridge between one country and another.

In the future, Australia's education and research soft power should be actively supported as underpinning our national security and foreign policy interests. By 2050 it should be well understood that Australia's university sector's soft power functions on three levels:

- Building bilateral understanding and deep cultural affiliation with future leaders in our region
- Playing an integral role in targeted skills development and human capacity building that aligns with national priorities of states in our region
- Building everyday relationships and connections between Australians and those from other countries.

Underpinning these future soft power functions should be a perspective that aims to support those in our region and in Australia who are less likely to have access to international education due to economic or social constraints. Merit-based scholarship schemes should support inward and outward mobility to increase the diversity of long-term connections and intercultural understanding between strategic and economic regional partners.

[1] TLG article, What we have lost: International education and public diplomacy , Lowy Institute 10 August 2020

> We need to build capacity by issuing scholarships. We need a more diverse kind of student coming to Australia. For those who can't afford international education, a scholarship program facilitates a diversification of socio-economic background and lived experience. This will only serve to benefit Australia—our classrooms and our reputation and relationships in the region.
>
> *Dr Liz Allen, Demographer (ANU) and author of The Future is Us.*

We are entering an increasingly competitive global soft power landscape. Over the coming 30 years China, for example, will continue its drive to actively teach Mandarin, offer scholarships for studying in Chinese institutions and work to address skills needs across the Pacific and across Belt and Road-affiliated nations.[2] Other competitors, such as the US, the UK, and Germany will seek similar avenues to support the education and human capacity building of developing nations in our region.

Australia's history and long-standing relationships puts us at an advantage. However, this is not the time for complacency. The Indo-Pacific region should be prioritized for educational soft power and regional development reflecting Australia's strategic focus in the area in the coming thirty years. Southeast Asia and the Pacific Islands nations should take precedence in a coordinated educational soft power agenda.

Australia has identified future national interests in the Pacific Islands nations. This means being a true partner and supporting international education in the region. By 2050 Australia should be supporting the unmet demand for Australian higher education in the Pacific, creating places in Australia's tertiary sector for students from the Pacific, offering scholarships to fund students to study in our country, and providing Australian students with more learning abroad experiences in Pacific nations.[3] This would contribute a more productive and long-term means of support in the Pacific driven by tertiary education, capacity building and innovation.

Southeast Asia should form the second soft-power priority for Australia, focusing on the diversity of skills and knowledge gaps across the region and positioning Australia as a genuine partner in forecast economic and social growth and development. While the Southeast Asian region has a long history of education ties with Australia there is a need to refocus our future engagement on regional capacity building, rather than solely in terms of marketing opportunity.

Australia needs new initiatives and pathways that respond to neighbouring countries' priorities in human capacity-building, especially in areas where Australia has an advantage.[4] This capacity building approach should emphasise partnerships on matters of global importance. For example, while Indonesia's new long-term strategy emphasizes green technologies and industry, Australia's institutions will be working alongside Indonesian institutions to not only assist in the development of skills and technology to support this agenda but partnering with institutions to develop our own capacity in these core areas of global priority.[5]

[2] In recent months China has launched a series of Mandarin competitions and scholarship offerings in various countries. For example: Chinese Bridge contest for college students held in Vietnamese capital, Xinhua, 20 May 2023

[3] Want more international students in Australia? Look to the Pacific, The Guardian, 21 May 2021

[4] Crumbling cornerstone? Australia's education ties with Southeast Asia, Lowy Institute, 4 November 2022

[5] President Jokowi launches final phase of RPJPN 2025-2045, The Jakarta Post, 19 June 2023

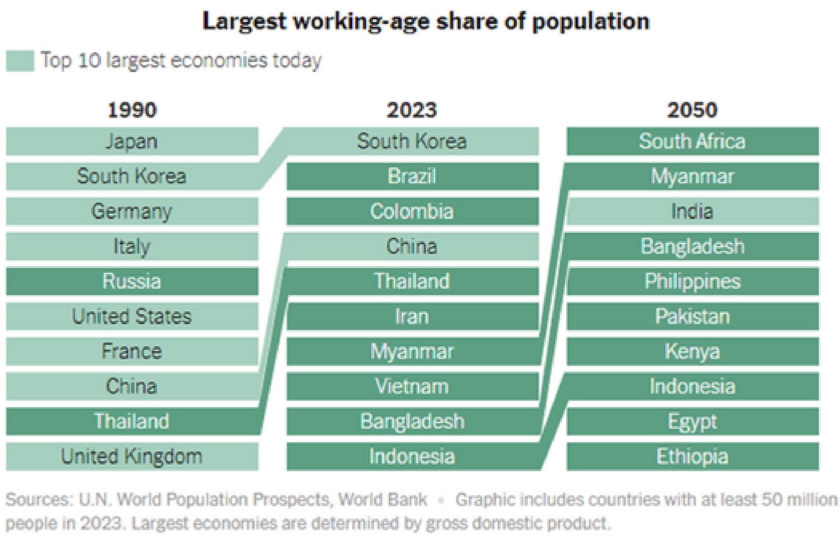
A global demographic shift

The success of Australia's international education sector has been partially due to demographic changes in key source markets. Countries such as China have had large numbers of young people and working-age populations which need education and skills to drive forward economic growth at home.

But the world's demographic sweet spots are changing, and fast.[6] Australia's international education sector needs to be on the front foot about how global demographics are rapidly shifting and what this means for the future of the sector.

Japan, South Korea, Britain, Europe and China are all rapidly aging. By 2050 people aged 65 and older will make up nearly 40 percent of the population in some parts of East Asia and Europe.

By 2050, many of today's low-income countries will have huge prime-age labour forces for the first time. To take advantage of this opportunity, they will need quality education and a skills base to avoid instability and unemployment. Soon, the best-balanced workforces will be mostly in South and Southeast Asia, Africa and the Middle East, according to UN projections. This shift could reshape economic growth and geopolitical power balances and the global education landscape.



Demographically, many countries in Africa will have a massive demand for higher education in the next 30 years. Kenya currently looks demographically like South Korea in the mid-1970s, as its economy was beginning an historic rise.[7] But without the right policies and the right access to jobs and education, this huge future workforce can backfire.

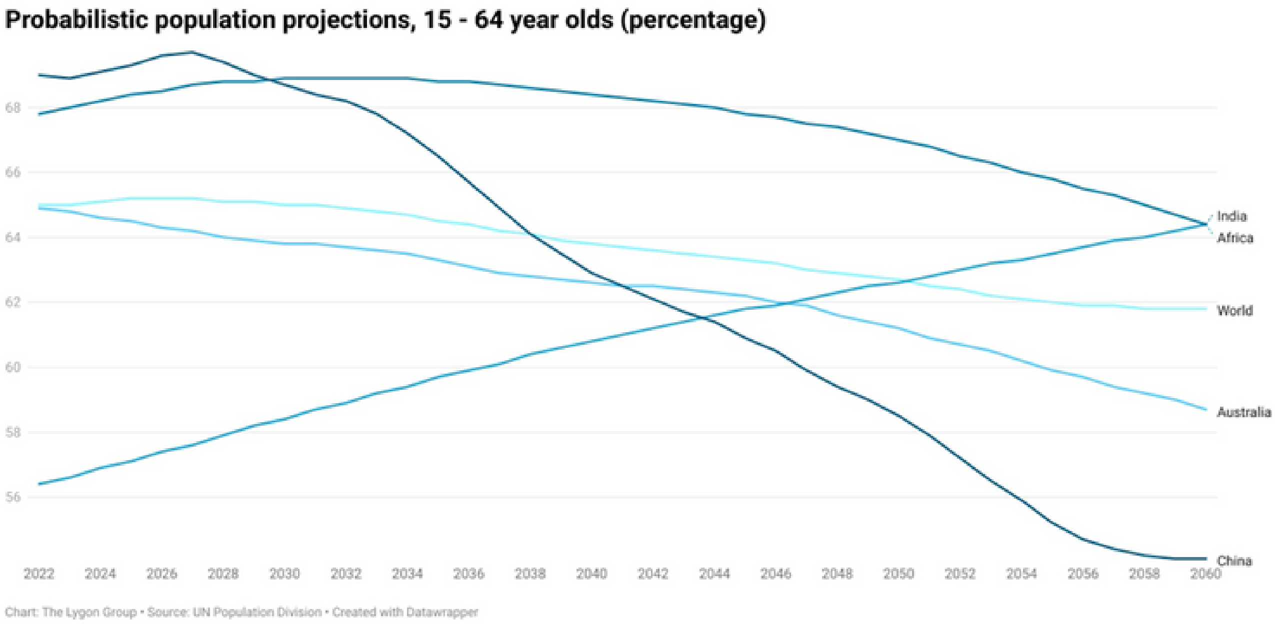
In 2022 China more than 68 percent of China's population was working age. According to UN estimates, this will peak in 2026 and sharply decline, creating a serious shortfall in the percentage of working-age people in China and a high dependency ratio — people working are caring for the elderly and for children.[8] Meanwhile, the continent of Africa is projected to change in the opposite direction with a steady growth in the percentage of working-age people. Education will be key to ensuring the continent's trajectory is to achieve the goal of 'getting rich before it gets old'. While India's working age population is projected to increase over the coming ten years, it will begin to decline as the country's birth rates fall.[9]

[6] How a vast demographic shift will reshape the world, The New York Times, 16 July 2023

[7] China's Demographic Peak: Lessons and Prospects for Africa, South Africa Institute of International Affairs, March 2023

[8] Population | United Nations, United Nations

[9] World Population Prospects 2022: Summary of Results, United Nations



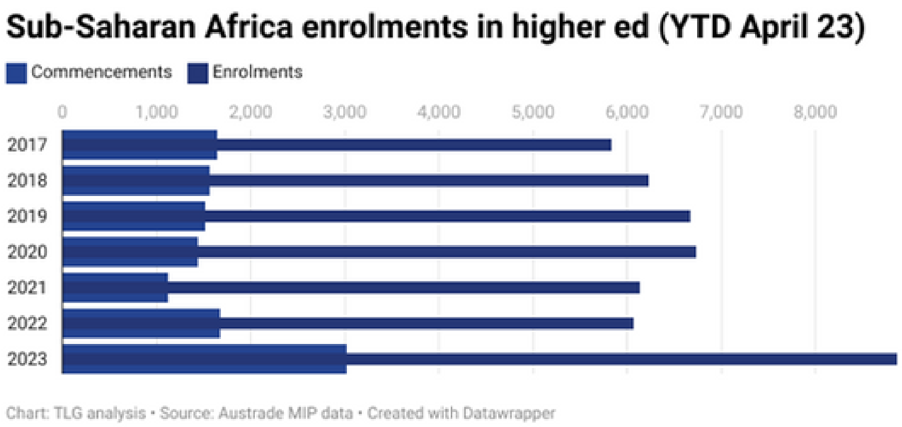
By 2050 Australia's international education sector should be working together with countries and regions that are projected to achieve this working-age population growth. This means building relationships and strategies now to ensure that Australia is a part of the success story of countries such as Bangladesh, Kenya, Egypt and Ghana.

Our sector needs to become more Africa literate, and quickly

By 2050, the nations of Africa will be major source markets for Australia's universities, and sites for various modes of transnational education. While many universities are reporting growing enrolments from a range of countries, to realise the potential presented by many of the sub-Saharan nations, engagement needs to start now.

TLG's analysis of April YTD (2023) Austrade MIP data reveals the scale of the opportunity. Higher education commencements and enrolments from (some) of the nations of sub-Saharan Africa are surging. Some source markets are growing more rapidly than others, emerging markets are showing extraordinary growth.

TLG excludes some nations from this analysis of a basket of sub-Saharan nations, but includes nations realising their future potential as source markets for our higher education sector.



The Lygon Group

We can expect countries like Kenya, Nigeria, Ghana and others to drive this growth. Sanjeev Sanyal, of the Indian Prime Minister's Economic Advisory Council, told a conference in Delhi in April this year:
"...the next 30 years is the "sweet spot", with predictions forecasting Nigeria will replace India as the most populous sometime in the 2050s." [10]

A 2021 World Bank Report pointed towards Kenya's "potential...incipient demographic dividend" with 39% of the population younger than 15 years of age:

> "Kenya's population is young and growing, creating the potential for an incipient demographic dividend – if jobs can keep up. In 2019, Kenya had a population of 47.6 million, with an annual population growth rate of 2.2 percent. About 39 percent of the population is younger than 15 years of age and 4 percent of the population is over 65. The largest age cohort is between 10 and 14 and will be joining the labor force over the next decade." [11]

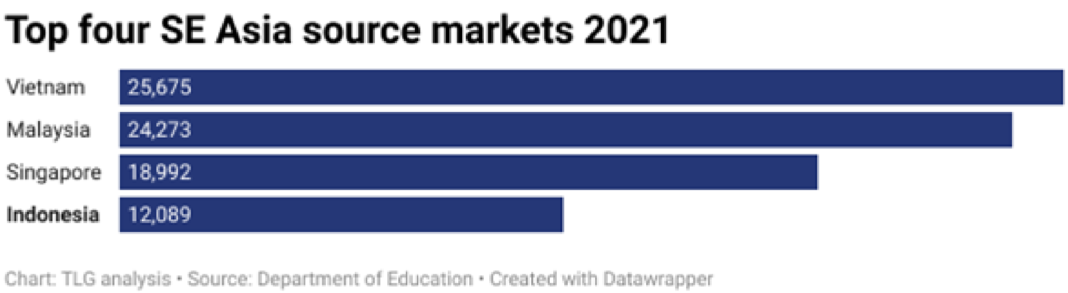
Whichever way we look at it, it is clear that by 2050, the nations of sub-Saharan Africa will be the new China, and perhaps India, as sources of international students.

Engaging with Indonesia

For decades, Australia's international education sector has been waiting for Indonesia to become a major source market of international students. Our closest neighbour is the fourth most populous in the world. Our sector has deep historical and contemporary engagement in Indonesia, and this will only increase in the next 10 to 30 years.

> Indonesia and India are about to undergo the 'demographic dividend'. If you get education and training right a country can achieve the dividend at a population level. But the key is education and training.
>
> *Dr Liz Allen, Demographer (ANU) and author of The Future is Us.*

So why is Indonesia not yet one of the top source markets for onshore international students in higher education?



We can expect Indonesia to be one of Australia's largest SE Asian source markets by 2050, and if the demographic dividend is realised, this will happen by 2033 at least in our view.

[10] India an international education "sweet spot" until 2050s, The PIE News, 25 April 2023

[11] Economic Update Kenya: Rising above the waves, World Bank, 2021

A new China approach

China has been the world's most populous country for decades. Australia's international education sector has benefited from the sheer scale of China and its rapid economic and social development.

Despite China's current economic slump and no longer holding the title of the world's most populous country, by 2050 it will remain a significant global economic power with a large middle class seeking education and experience abroad. We will continue to engage with China—finding ways to collaborate and work together on key global problems.

By 2050 Australia's universities will be working in genuine partnership with Chinese institutions. Australian institutions will take targeted approaches to the skills priorities of particular provinces and municipalities to align with the needs of Australia's industry. The one-size-fits all approach to China will no longer exist, as Australia's universities build on long-term relationships with increasingly sophisticated Chinese expertise.

The career aspirations of the post-COVID Chinese students have shifted. Chinese young people are facing the highest rate of youth unemployment on record, alongside the highest numbers of college graduates entering the workforce.[12] Students are increasingly looking to work in the state sector and the civil service, anxious about work-life balance and instability in China's private sector.[13] By 2050 Chinese students will be looking towards new kinds of courses with cohorts interested in reskilling, micro-credentials and postgraduate studies with high-quality digital options for delivery.[14]

Chinese international students will increasingly be drawn to Australia for post-study work experiences and potential migration pathways. Many young Chinese people facing tough labour markets and shifting social expectations, will find increasing appeal in staying on in Australia to build long-term careers.

Our increased domestic capacity to understand China — its potential areas of conflict, risks and opportunities — will be central to our new approach. Building and supporting Chinese studies and cultural fluency in Australia will be key to this future partnership approach.

The end of the anglosphere?

By 2050 the global international education sector will no longer be dominated by the traditional 'Western', English-speaking nations. Australia, the UK, Canada and the USA will be part of a more dynamic education ecosystem with many students choosing to study within Asia and the Middle East.

[12] China's 11.6m graduates face a jobs market with no jobs, The Guardian, 1 June 2023

[13] Chinese society's obsession with becoming a civil servant, Think China, 19 April 2023

[14] The Lygon Group's Industry Insights: China series has found shifting preferences for career and course choices and an increase in interest in reskilling and postgraduate studies in recent months. Insight available on request.

China will be a major destination country. Already we are seeing an increase in promotion of the Study in China brand across Belt and Road nations—including Kenya,[15] Ghana , Nigeria[16], Vietnam and Indonesia. China offers generous scholarships and Chinese institutions are increasing fees for international students to appeal to students seeking guaranteed quality of education. Post-study work rights have been in place in China since pre-COVID times to increase the attractiveness of studying in China.[17] South Korea and Japan will also be major destination countries, and Singapore and Malaysia will continue their growth in attracting students from across the region.

The history of the global international education sector has been steeped in colonial power imbalances – richer, English-speaking countries providing skills and experience to young people from less developed, non-English speaking countries. As the global economic power base shifts, we will enter a new neo-colonial era for the sector.

In 2050 we will need to ensure that we are offering students more. Students will not be looking necessarily only for an education-in-English but a truly global education experience—interacting with students from around the world and learning from international academics. Students will have a greater range of choice, and this means ensuring we are viewing non-English speaking nations as true competitors, keeping abreast of policy changes, offerings and support services provided in these countries.

Building Australia's knowledge assets of the future

Universities will be at the forefront of the future global geopolitical landscape. The knowledge economy will be central — and those with the best minds, the best research infrastructure, scientific translation and innovation will dominate. This global race for talent is a race for leadership over the world's future marketplace and for national security.

Since the mid-1990s, China's investment in basic research grew by an average of more than 20 percent a year, to a point where it is now many multiples of Australia's research spending.[18] China is dominating the global race for future knowledge power, with the country establishing a significant lead in high-impact research across the majority of critical and emerging technology domains, according to a report from ASPI.[19] In the long term, China's leading research position means that it has set itself up to excel not just in current technological development but in future technologies that don't exist yet.

International graduates will play a part in this tech race. For example, of the 32 total Chinese contributors to GPT-4, 11 completed undergraduate studies in China and 21 in the United States.[20] But when it comes to graduate studies, nearly 80% of the Chinese contributors completed their degree in the United States and ended up staying. That cohort of Chinese talent may have even contributed to ChatGPT's relative advantage over Baidu's Ernie — the Chinese chatbot equivalent — in Chinese language capabilities. Open AI isn't exceptional in this regard. Engineering and research ranks across top tech firms are likely to have a similar Chinese talent presence. US companies' embrace of Chinese talent contributed to a 'win' in the AI competition with China.

[15] Why China is becoming a top choice for Ghanaian PhD students, Quartz, 15 December 2021

[16] Nigeria seeks more University scholarships from China, Business Day, July 4 2023

[17] Losing Talent 2020 An Economic and Foreign Policy Risk America Can't Ignore, NAFSA, March 2020

[18] Australia must engage with China, our future depends on it, Australian Financial Review, July 2 2023

[19] ASPI's Critical Technology Tracker - AUKUS updates, ASPI, 2 March 2023

[20] The Chinese Talent Behind Your Favorite Generative AI Product, Marco Polo, April 2 2023

Open AI isn't exceptional in this regard. Engineering and research ranks across top tech firms are likely to have a similar Chinese talent presence. US companies' embrace of Chinese talent contributed to a 'win' in the AI competition with China.

For Australia—or the US for that matter—to remain competitive on human capital, relying on domestic supply isn't sufficient. While to some degree, the future of technology—generative AI and genomic research, for example—may be difficult to predict, what Australia can control is ensuring that it is the best environment for the world's best and brightest to spend their productive years.

The future growth of greater China depends on building and attracting talent. The long-term need for returned Chinese scientists and knowledge workers—and the development of world-leading innovators and STEM workers—is essential to China's future. The Chinese government places innovation at the heart of its development strategy and by 2050 China will likely be a serious player in building well-funded, attractive research facilities with levers in place to attract talent and with a burgeoning industry-university translation and commercialization field. [21]

The recent use of technology access as a geo-political tool by the US and China has led to China pushing ahead with a new strategic approach to a "whole nation" approach to mobilise the resources of the nation's research institutions and companies to achieve technological breakthroughs. By 2035, China will be among the world's top countries in terms of its digitization level, for example, if their recently released strategy goes to plan. By 2050, the investment and strategic approach put in place now will be evident. Australia needs to take this seriously and ensure that technology, research and pipelines of knowledge talent are in place.

The initial pieces of this vision for China's future are being put into place. China's universities are increasingly forming institutes and collaborations with industry. Return talent programs are becoming increasingly lucrative and are being facilitated by bureaucratic hurdles Chinese researchers feel they need to comply with in the West. Hong Kong SAR is rolling out special visa programs to lure talent and pitching industry as a sandbox for innovation.[22]

The US are reporting that large numbers of Chinese scientists are returning to China with anti-China sentiment and the Trump-era 'China Initiative' reportedly making it challenging to attract funding and collaborative partners. From 2010 to 2021, the number of scientists of Chinese descent who left the United States for another country surged from 900 to 2621.[23] The USA is no longer the largest contributor to high-quality natural science as China has surpassed it for the first time in the index scientific publication, Nature Index.[24]

Australia should not repeat the mistakes of the United States. It should reassure academics that they will not be targeted unfairly on the basis of their connections to the PRC. This could attract some world-class scientists who are caught between the PRC and the US.[25]

There is evidence that Australia faces similar deterrents to Chinese-background researchers who are concerned about freely collaborating with China-based scientists or attracting funding within Australia's research funding ecosystem bounded by national security policy. A recent study by The Australia China Research Institute (ACRI) at UTS found a sharp decline in ARC funding support for collaboration with the PRC relative to other international partners.[26] This is despite many of these other partners being less significant creators of knowledge globally.

[21] Outline of the 14th Five-Year Plan (2021-2025) for National Economic and Social Development and Vision 2035 of the People's Republic of China, The People's Government of Fujian Province, 9 August 2021

[22] Hong Kong May Lower the Bar for Top Talent Visas, Caixin Global, July 6 2023

[23] Chinese Scientists Are Leaving the United States, FP, July 6 2023

[24] China surpasses US for 1st time in contributing to research in Nature Index, PressTV, 22 May 2023

[25] Winning hearts and minds: the PRC's efforts to attract scientific talent, China Matters and Australian Institute of International Affairs, December 2022

[26] Australian government support for research collaboration with the PRC, Australian-China Relations Institute, UTS, July 17 2023

There is evidence that Australia faces similar deterrents to Chinese-background researchers who are concerned about freely collaborating with China-based scientists or attracting funding within Australia's research funding ecosystem bounded by national security policy. A recent study by The Australia China Research Institute (ACRI) at UTS found a sharp decline in ARC funding support for collaboration with the PRC relative to other international partners. This is despite many of these other partners being less significant creators of knowledge globally.

The report demonstrated that this decline in research collaboration is primarily led by the fears and hesitations of researchers themselves and could result in a future for Australia with a diminished research relationship with the world's leading technology and innovation powerhouse.

> China is not going to become any less important in global knowledge creation. By some measures, and in certain fields of research it is already the world's largest knowledge creator. So the future can't involve decoupling from China without Australia massively shooting itself in the foot. We've got to mitigate risks, but the future has to recognize reality. And the reality is, China is only going to become more important.
>
> *Professor James Laurenceson, Director Australia-China Relations Institute*

It is vital that we understand the risk to Australia's knowledge capabilities and research outputs of security policy and ensure that we protect Australia's national interests while also protecting our ability to attract and retain talent.

Australia could play a vital part of the future global knowledge economy. To achieve this we need to ensure that government policy is facilitating the attraction and retention of leading talent. By 2050 Australia should have found the right balance between curtailing collaboration with the PRC in specifically defined areas while also facilitating a climate of welcome and support for researchers and postgraduate students.

Global comparative R&D expenditure

Australia's Gross Research and Development Expenditure (GERD) remains low compared to other similar economies. Globally, GERD is highly concentrated in China and the USA with Japan, Germany and South Korea making the top five leading countries for GERD in 2022.[27]

Regionally, the Australia and Oceania region sits above Africa and Central America in its R&D spending. In the most recent Australian Federal Budget, government R&D spending declined further to 0.49% of the GDP, the lowest level since the late 1970s.[28]

[27] Global Investments in R&D, UNESCO, June 2020

[28] Science and research, Australian Parliament House, May 2023

Global R&D expenditures, by region: 2019

	Region	Billions of AU PPP dollars	Percent
1	East and Southeast Asia	1293.6	36.8
2	North America	1024.8	29.2
3	Europe	768.6	21.9
4	Middle East	118.3	3.4
5	South Asia	92.6	2.6
6	South America	69.5	2.0
7	Central Asia	65.9	1.9
8	Australia and Oceania	38.9	1.1
9	Africa	35.9	1.0
10	Central America and Caribbean	3.2	0.1

PPP = purchasing power parity
Table: The Lygon Group • Source: OECD and UNESCO • Created with Datawrapper

The shape of the global R&D landscape in 2050 is likely to further increase the concentration of global expenditure in the two major economies.

In the coming years, Australia needs to prioritize the provision of funding for research, the development of pipelines of PhD graduates into research and development careers and the inclusion of industry within the R&D space. This focus needs to be global — that is, attracting the best and the brightest to work in Australian institutions and attracting international graduates of Australian universities to work in R&D across Australian industry and universities.

The future of research

Australia's university sector is a research powerhouse. In the latest QS World University Rankings, three of our universities are in the global top 20, six are in the top 50, nine in the top 100, 15 in the top 200, 19 in the top 300, and 23 are in the top 400.[29]

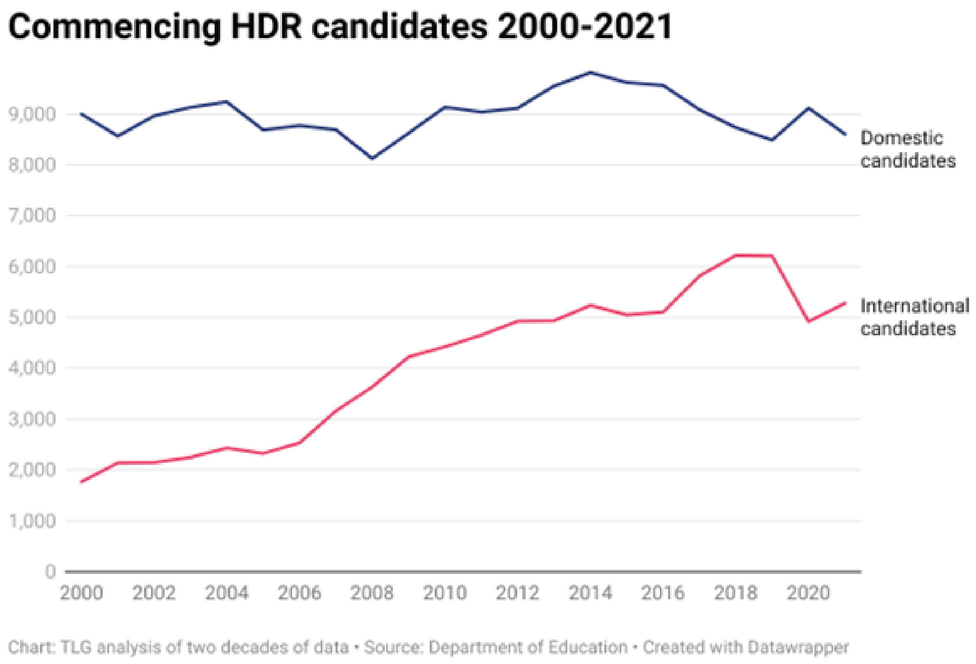
This is a remarkable achievement, due in no small part to the quality of our research output, and the collaboration of our researchers and research groups with international partners. To sustain and maintain research output we need a constant re-supply of PhD candidates. PhD candidates play an enormous role in generating quality research output, and in turn are the future research workforce.

By 2050, where will this future academic workforce come from? It's likely to be all about international research candidates.

In 2000, 16 percent of commencing research candidates were international students. This proportion has been creeping up in nearly every one of the past 20 years. Pre-pandemic, in 2019, international candidates made up 42 percent of all commencing candidates. At the same time, commencing domestic PhD candidates remained relatively flat between 2000 and 2021.

[29] QS World University Rankings 2024, QS, July 2023

If the past is prologue, we will see a greater proportion of commencing international PhD candidates, unless something remarkable changes and the number of Australian candidates starts to grow.



As the Accord process contemplates important questions of research futures, should we be brave enough to imagine a time in which international students make up over 50 percent of all commencing research candidates?

Or, put another way, if we want to remain globally competitive, producing ever greater research output, do we have any choice?

Future research engagement opportunities: India and the nations of Africa

By 2050, the nations of Africa will be more than just a source of students. A July 2023 conference of the Association of African Universities adopted a charter aimed at achieving:

> "a fundamental rebalancing of the global science and research ecosystem, to ensure that scholars, institutions and knowledges from the continent take their rightful place in the global scientific effort.
>
> "We can no longer ignore the need for a fundamental rebalancing of the global science and research ecosystem, to ensure that scholars, institutions and knowledges from the continent take their rightful place in the global scientific effort.
>
> "This is a matter of social justice and a matter of fostering the richer science that the global community urgently needs to properly sustain human dignity and address the multiple crises we face i.e. the rebalancing will benefit Africa and it will benefit the world.
>
> "We must understand Africa-Global North research collaborations as the entry point, or the leverage point for advancing such a rebalancing." [30]

[30] Africa "can take the wheel" in global research shift, The PIE News, 5 July 2023.

To ensure that Australia is well positioned to take advantage of the emerging research engagement opportunities in the nations of Africa, we need to start engaging with African universities now. Building strong research engagement takes time, and if we are to realise the opportunities in 10-30 years time we need a concerted effort to get going.

India as research collaborator

India will be an increasingly important research partner for Australian universities over the next 30 years, particularly with the proposed National Research Foundation, likely to be legislated later this year. First flagged as part of the NEP, the NRF aims to significantly boost R&D and innovation across the higher education system, beyond the IIT's and other universities with significant existing research output. Indian universities will need to collaborate with international partners to elevate research quality and output, and Australia's universities are well positioned to assist.

Dr Monica Kennedy, Austrade's Senior Trade and Investment Commissioner in Mumbai, described for us a long term vision to elevate perceptions of the quality of our university sector in India, so that Australia is considered to be equal to the UK and the USA as a study destination, rather than a close second.

Do we need new ways of hearing student views?

The international student experience is — rightly in our view — at the top of just about every university agenda. The Council for International Education has a core focus on the experience of students, the National Strategy for International Education includes a commitment to placing "students at the centre".

The states and territories—through the study clusters—have student ambassador programs. The Department of Education's international education division concerns itself with improving the student experience.

But do we have the right structures in place to continually improve the student experience as we look to the next 10-30 years of international education? Are the existing structures nimble and agile enough to consider the diversity of student experiences?

The ways in which international students experience life on-campus, in communities, in workplaces and beyond are not homogenous. Student experiences differ by nationality, study level, gender, sexuality, study location, and more. The pandemic—and the post-pandemic era—demonstrate just how quickly student experiences can shift. How student needs shift. How student attitudes to issues as diverse as mental health, employability, or flexible study modes shift.

While our sector is admirable for its commitment to the international student experience, in The Lygon Group's view we can lean too heavily on elected representatives to provide insights into the student experience. Student voices are at the table—on the National Council, the EVCC, and other sector bodies—but often it's one voice amongst many.

Do we need to reconceptualise the ways in which we consult students?

Is it time to create an international student experience committee or panel, consisting of the heads of representative bodies plus students selected via a competitive process? A panel made up of students who are engaged and active, and students who feel they have a valuable contribution to make. A panel made up of diverse voices. A competitive process would provide students with an unrivalled employability experience. A panel available to the Department of Education—and indeed other government departments—the Minister for Education and other Ministers—to test and generate ideas.

Students could be selected to serve on a student experience committee for defined terms. Meetings could be held quarterly. A panel could provide rapid responses to policy changes, emerging issues, or even the inevitable crises that will emerge from time to time.

Concluding thoughts

Thinking about international education futures in time scales of decades is complex, but critically important. Australia's future prosperity, place in the world, ingenuity, and regional security depend on a thriving and globally-engaged university sector.

The need for our sector to clearly communicate the benefits the sector delivers to everyday Australians is not new. In the future domestic public diplomacy will have an added importance. We will need to build awareness within Australian communities of the broader strategic, economic and global leadership functions our sector plays.

The need for government to consider overlapping policy responses is not new. In the future universities and education and research policy will increasingly interact with other policy spheres—national security, migration and the labour market, peripheral industries such as tourism and real estate, community building and regional development. Facilitating means to bridge these policy silos will be vital.

We are entering a future in which the ways we engage globally is new. We will be working in new ways with mature markets, while deepening our engagement with emerging markets. And that work needs to begin now.

The challenge we face as we step into the coming decades is aligning what is best for Australia with a competitive sector with diverse priorities and strategic interests.

National and institutional interests do align if we keep at the centre of our vision the student. While technology, global challenges and demographics will shift—young people and their parents and their communities will continue looking towards engaging with Australian universities to fulfil their ambitions. Listening to their needs, concerns and truly understanding these ambitions will set Australia up for long-term continued success.

The Lygon Group is a group of international education experts

We are from the sector and we exist for the sector

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