

Immigration and Innovation in Australia

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**PEOPLE ARE THE
SINGLE MOST
IMPORTANT FACTOR
FOR AN INNOVATIVE
ECONOMY. AS THE
PRIME MINISTER
SAID RECENTLY,
"OUR GREATEST
ASSET IS NOT THE
ROCKS UNDER THE
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PEOPLE THAT WALK
ON TOP".**

Executive Summary

Knowledge and skills circulating through a network of people builds to a critical mass where innovation can prosper. Silicon Valley didn't pop up overnight, it took 60 years to build. People were and continue to be the essential component.

Immigration is not the first thing that springs to mind when considering innovation policy. A university with a singular focus on technology and access to capital are often raised as the first priorities. Yet immigration acts to fill skills and knowledge gaps when the creation of new companies can occur with little more than a new idea.

Australia has a proud modern immigration history. Support for immigration is the highest in the developed world. Government discrimination has been banished, replaced by a skills-based system generating unparalleled economic gain for Australia. Yet targeting innovation through Australian immigration has to date been difficult and subject to failure.

This in itself is not a bad thing. A willingness to experiment and see what works is positive for what can be a risk-adverse and incremental policy environment. But it is increasingly clear: Australia's current immigration innovation policies are not up to scratch. Migration is working on the whole but failing this critical part of the economy that has the potential to amplify growth.

The response from immigration to date has been too small. The one existing visa program is caught up on process instead of outcomes. Ideas are getting lost in administration. So while no immigration idea or policy by itself can create innovation, migration becomes a key component, complementing factors like access to finance.

This short paper provides a brief overview of existing approaches to migration and innovation and suggests three new ideas for Australian policy-makers. They are:

- A pragmatic approach to Startup sponsorship
- A global approach for accelerators and incubators
- Supercharging the attraction of talent

These ideas are designed to allow testing and modification as required for a dynamic environment where ideas can scale into opportunity.

Migration policy itself can be innovative if we think big and take chances.

Creating an Environment for Innovation

Creating an environment where innovation can thrive depends on immigration. With a population where one in four people are born overseas as well as a migration framework tilted toward skills, Australia is already well positioned to kick start a new period of growth. Research elsewhere highlights just how important immigration is to innovation.

In the United States, one in ten people of working age are migrants. However as outlined in Kerr (2008), key innovative occupations like engineering have a much higher proportion, where one in four are migrants. Incredibly, a full 50 per cent of doctorate degree recipients in the United States are migrants. As developed economies continue the shift towards service and knowledge based economic activity, this research is forming a foundational component of future growth.

This has a direct relationship to promoting an environment where innovation can thrive. The connection between research and new knowledge generating economic activity is strong. While patents do not capture the full extent of innovation in an economy, migrants are heavily over-representative in patent creation. Other factors point to similar innovative environments. Ghosh, Mayda and Ortega find a significant relationship between R&D spending and sponsoring migrant works on skilled visas, in this case the H-1B visa (the U.S. equivalent of the Australian 457 visa). These results are born out across a range of countries, including Germany (Niebuhr, 2006), the United Kingdom (Nathan and Lee, 2011), the Netherlands (Breschi, Lissoni and Tarasconi 2013) and Denmark (Parrotta, Pozzoli and Pytlikova, 2012).

The relationship between venture capital, migration and innovation is stark. In the 15 years from 1990 to 2005, migrants in the United States founded one in four venture-backed public companies. These companies were concentrated in industries where skills and knowledge drive activity: skilled manufacturing, information technology and life sciences. More importantly for domestic economic policy, more than half of all employment generated by these venture-backed firms in manufacturing came from companies founded by migrants (Andertson and Platzer, 2006).

While the environment for innovation and job creation in Australia has some stark differences with the United States, immigration is a mutual feature of success. Highly skilled migrants in particular have positive spill-over effects for the local area where they settle, both in terms of their occupation and industry as well as generating labour demand in other lower skilled occupations. While there is some debate over the scale of these effects, most economists agree on the fundamentals. Peri, Shih and Sparber find the H-1B visa (the American equivalent of the 457 visa) crowds-in productivity growth. This can be undermined however if migrants receive lower salaries than domestic workers, resulting in possible displacement (Doran, Gelber and Isen, 2015).

The Environment in Australia

The environment for innovation in Australia in relation to immigration is on a good foundation as Australia is a migrant nation. However there is potential to have a much greater effect.

According to Deloitte, there are four startup hubs in Australia: Sydney, Melbourne, Brisbane and Perth. Combined, these four hubs are smaller than the startup scene in New York and about one third the size of Silicon Valley. This is to be expected given a range of factors. One prominent issue is how to scale a successful start-up, with scaling rates in Australia substantially lower than in the United States.

Other reports identify similar issues.

According to BCG's International Innovation Index, Australia ranked 22nd in 2010.

Compass, a San Francisco-based strategy company, published their Global Startup Ecosystem Ranking 2015 where Sydney dropped from 12th to 16th (Compass, 2015). They identify the increasing trend whereby a successful start-up will move given access to funding and labour.

Immigration programs specifically designed to promote innovation is not a magic bullet. However immigration is an important element, complementing other ongoing policy change to foster innovation.

Migration in Australia

Australia is recognised as a global leader in skilled migration. A hybrid system of temporary and permanent migration, combined with unique understanding of employer sponsorship and independent migration allow for a diverse approach to immigration.

In 2014-15, over 127,000 permanent skilled visas were granted to migrants. Of these visas, over 55 per cent were granted to people who already live in Australia.

Some 6,400 of these visas were in the existing Business Innovation and Investment streams. However nearly all of these visas are in relation to investment and general business ownership, as opposed to innovation and entrepreneurship. Many require the sponsorship of state governments.

One of the innovation visas highlights some of the difficulties of existing policy. Australia was the first country to offer a permanent entrepreneur visa (subclass 132). However excessive requirements — like an investment threshold of \$1m — ensure there is almost no take-up. An investment threshold of this level shows little engagement with what is actually occurring in Australia's innovation environment.

In addition to permanent visas, as at June 2015, there were over 370,000 international students, 188,000 temporary sponsored workers, 143,000 working holiday makers and 26,000 temporary graduates in Australia.

Students and temporary graduates in particular have great potential for innovation if they are allowed to explore new ideas and opportunities.

Global policy approaches

According to a recent report from Migreat (2015), there are 12 countries with specific visa policies aimed at attracting entrepreneurs. These approaches can be classified into the following three categories:

- An Entrepreneur visa: programs distinct from general work visas, with their own specific rules, requirements and rights. Countries include New Zealand (2014), Singapore (2004) and United Kingdom (2008).

- Fast-tracked general work visa: Expedited work visas aimed entrepreneurs. Countries include Ireland (2012), Spain (2013), Italy (2014), Netherlands (2015) and Denmark (2015).
- Entrepreneur sponsorship: Allowing incubators and accelerators to recruit migrants for their programs. Canada (2013) and Chile (2010) are two examples.

The following table summarises the Migreat research, explaining key variables and policy approaches:

	Funding source	Capital requirements	Business type	Visa length	Visa extension	Government funding	Government loan
AUS	VC	\$1m	Innovative	Permanent	N/A	None	None
NZL	Any	\$0-\$100k	Any	1 yr	Yes, 2 yrs	None	None
SIN	Any	\$50k	Innovative	1 yr	Yes, 1yr	None	None
GBR (G)	Any	No threshold	Innovative	1 yr	Yes, 1yr	Limited	None
GBR (E)	Govt/VC	\$50k-\$200k	Innovative/ Any	3 yrs	Yes, 2yr/3yrs	Up to \$50k	None
IRL	Any	\$50k	Innovative	2 yrs	Yes, 3 yrs	None	\$25k-1.5m
ESP	Any	No threshold	Innovative	1 yr	Yes, 2 yrs	None	None
ITA	Any	\$50k	Innovative	1 yr	Yes	None	None
NED	Any	No threshold	Innovative	1 yr	No, transfer	None	None
DEN	Any	No threshold	Innovative	2 yrs	Yes, 3 yrs	None	None
CAN	Incubator/VC	\$0-\$200k	Innovative	Permanent	N/A	None	None
CHI	Any	No threshold	Innovative	1 yr	Yes, 1 yr	\$20m-\$60m	None
FRA	Any	No threshold	Innovative	6 months	Yes, 6 mths	\$12.5k	None

There are various exemptions and waivers applicable to a range of these programs. With the exception of the Australian (subclass 132) and Canadian startup visa, all visa are temporary. There are options to transfer to permanent visas in other countries providing eligibility requirements are met.

The start-up program in Chile is unique as applicants apply to the incubator or accelerator and successful applicants are eligible for a 12 month temporary visa to attend a six month program.

There are a range of investor visas across different countries, including Australia, however these are distinct from attracting entrepreneurship and innovation.

Many of these programs have been plagued by difficulties. It is difficult for program design to match up with migrant intentions while achieving the goal of attracting willing entrepreneurs. There are some broad lessons to be taken from existing programs:

- A single requirement can undermine the entire program: The \$1m investment threshold for the Australian Business Talent visa ensured failure from the outset.
- Entry requirements can be exploited: In the United Kingdom, the number of entrepreneur visas soared on the back of former international students who failed to gain other visa types and were unlikely to have entrepreneurial outcomes.
- Restricted investment types restricts activity: In Canada, designated investors were at first highly restricted to VC and Angel firms, withdrawing other potential investment, particularly incubators and accelerators.
- Long process times remove incentives to work with migrants: Again in Canada, processing periods blew out to 12 months, meaning startups and businesses could not plan effectively and lacked certainty.

One key factor common across countries and visa programs is the difficulty in attracting entrepreneurs once they have established an idea. Moving country after an idea is established doesn't make much sense unless the issue is scaling into a bigger market.

Evidence and research suggests existing residents are the key to establishing new ideas and businesses. This means instead of trying to attract entrepreneurs with an existing idea via the lure of a visa, migration can better play a role in allowing people to come who then have ideas or using proxies to foster innovation, such as accelerators and incubators.

This is the key takeaway from global policy to date. There is perhaps nothing harder in business than scaling up a new idea. Achieving this in a foreign marketplace exponentially increases the risk of failure. Consumer markets, supply chains and regulatory frameworks are just a few of important contextual factors that differ radically across countries.

These are not easy barriers to adjust to and ensure business ideas that can succeed in Australia are more likely to be created by people who already live in Australia. Understanding this basic premise is central to successful immigration policy designed to foster innovation and entrepreneurship.

Ideas for Immigration and Innovation in Australia

Australia can take lessons from these examples. Ideas for how to encourage more innovation through immigration programs must be both pragmatic and scalable. There must be a willingness to explore and engage with employers and innovative industries.

The following three ideas could provide the basis for a new approach to migration and innovation in Australia.

Startup sponsorship: A pragmatic approach

Just as new businesses and startups take chances on new approaches, so should immigration policy. Working out how to adapt existing visas to new demand such as startups is crucial to ensure a responsive immigration framework.

One of the most difficult issues for small start-up companies in Australia is to access to skills when little is available in Australia. Smaller companies have fewer resources to support administration and engage with visas like the 457 program. This is despite the opportunity cost for a start-up company being much higher than an established visa if skills aren't found.

The 457 visa program exists to fill skilled vacancies and labour force niches when local employment opportunities are not available. Yet the 457 visa program skews towards catering for larger businesses. The application process is detailed and can be time-consuming. Regardless if a business plans to hire one worker or twenty, they must become an official sponsor.

Recognising the value of sponsorship and an efficient regulatory framework for sponsoring migrants, there is space to carefully apply a bespoke agreement for proven start-up businesses. This is particularly important for those who have an eye to growth and future employment. While young small and medium enterprises comprise about 15 per cent of the labour market, they generate over 40 per cent of job growth. According to a research paper from the Department of Industry and Science released this year, "for every 100 existing jobs in Australia in any given year, startups will, on average, add 5 jobs within the following three years".

The best part about this policy idea is the existing regulatory framework already exists. Under the Migration Act, the government can designate sponsorship of 457 visas under bespoke contracts for certain employers or sectors of the economy, called labour agreements. By creating an easy to use template for startup businesses to engage with the 457 visa program, government would help to address key talent gaps.

This template agreement should be designed specifically for startup founders to use themselves. Creating a process without building dependency on professional advice firms would be pragmatic, allowing startup engagement. Focusing on STEM startups at first will road test this approach for those experiencing the most acute skills shortages.

As well as getting the sponsorship agreement in place, there are a number of small policy tweaks to better engage startup businesses. Nomination of a 457 visa should occur at the 4-digit ANZSCO occupation instead of the 6-digit occupation level. This means startups can be afforded more flexibility with regard to employee duties.

Critically, incorporating employee share schemes into the remuneration framework would remove a key impediment to attracting talent under a visa process. This would see a bespoke approach to salary thresholds with the provision no worker undermines existing labour market conditions. Replacing the current training requirement with a flat levy would swap onerous paperwork for a contribution to existing training funds used for domestic training in related occupations.

Recommendation:

A startup template allowing sponsorship under the 457 visa program.

Accelerators and Incubators: Looking global

In a related idea, current startup accelerators and incubators have difficulty engaging with the standard migration programs. Accelerators and incubators occupy a unique place within a startup ecosystem. While some migrants may be eligible for these programs through existing permanent residency visas as well as some post-study student visas, there is no dedicated visa option for accelerators and incubators to look beyond Australia for new ideas and business opportunities.

A template 'sponsorship' agreement for approved accelerators and incubators would extend the marketplace of ideas past Australia's border and enable recruitment from around the world.

This would allow new ideas to be imported to Australia in a structured, support method smoothing out any bumps in gaining knowledge in a new environment. Certified accelerators and incubators would act as proxies to pick and choose exciting ideas and the people behind them.

The most important element for any template agreement would be recognising the difference between normal employees and participants in selected accelerator and incubator programs. In contrast to a standard 457 visa, participants would not be paid a normal salary. Designing a set of regulatory process with this would allow for key migrant protections to remain while retaining flexibility.

Critically, only accelerators and incubators with an established track record of success should be considered. This would remove the need for a regulatory framework designed to mitigate against the worst possible types of employer exploitation. Building on this principle would allow for a streamlined system of effective regulation instead of a heavy-handed approach.

Recommendation:

An accelerator and incubator template allowing sponsorship under the 457 visa program.

Supercharging the ecosystem: Attracting talent

The two previous ideas aim to build individual startup businesses. The ideas will assist with filling skilled vacancies and scaling up. Sponsorship-based ideas are a response to demand from an individual business.

Another way to build the startup ecosystem is through a broader supply side approach for the labour market. For over a decade now, Australia has not been good at generating a domestic talent base. This issue was identified in the early 2000s yet little progress has been made. If anything, we have gone backwards.

One idea to help address this over the medium term is a visa lottery of up to 10,000 international students from across the global. As demand to come to Australia generally outstrips the number of available places, a visa lottery would ensure a fair approach. Targeting students across the world in disciplines such as, amongst others, computer science and engineering would help build the workforce of the future.

This will supercharge the innovation ecosystem with talent and ideas. Each graduate would be offered a four-year working visa without the requirement of a sponsoring employer. Instead of getting bogged down with visa criteria, program design should be simple with a select number of key requirements:

- An undergraduate or Masters degree from a recognised world-leading university in a designated field of interest;
- Be under 30 years old;
- Have English proficiency; and,
- Pass standard health and character requirements.

Other requirements would add unnecessary detail to what is a simple policy idea. To link these new migrants to innovation, anyone who can document a successful new business would be extended automatic permanent residency while other standard pathways to permanent residency would remain open.

The timing for an idea like this is crucial.

At the moment, other countries like the United States and the United Kingdom are turning away international students who complete university qualifications. New ideas and best practice innovation are going to waste and Australia can capitalize. In addition, with some of the IT departments at universities in Asia, an ability to open up people to people links in the Asian Century would further enmesh Australia into our region.

Lastly, running a visa lottery would be an innovative approach in itself. It is expected well more than 10,000 graduates would apply, requiring the need for a sorting mechanism like a lottery. Working out the mechanics and process would add another policy tool to the Australian migration framework. 10,000 temporary work visas is a small addition to the current migration trends but if the policy is right, the effects for the startup environment in Australia will be enormous.

Recommendation:

10,000 temporary work visas allocated by a new visa lottery aimed at the best and brightest graduates from across the world.

**IDEAS FOR HOW
TO ENCOURAGE
MORE INNOVATION
THROUGH
IMMIGRATION
PROGRAMS MUST BE
BOTH PRAGMATIC
AND SCALABLE.**

Conclusion

The qualities of migrants — a willingness to tackle risk and an appetite for disruption — are the same as those required for successful innovation.

While it requires many component factors to create an environment where innovation can thrive in Australia, people are at the centre of the equation. In addition to the large and necessary domestic focus, immigration can help complement a wide range of other measures. Getting the policy tools right — such as sponsorship opportunities for start-ups and accelerators — and creating the right set of incentives to attract people will help grease the wheels of innovation in Australia.

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