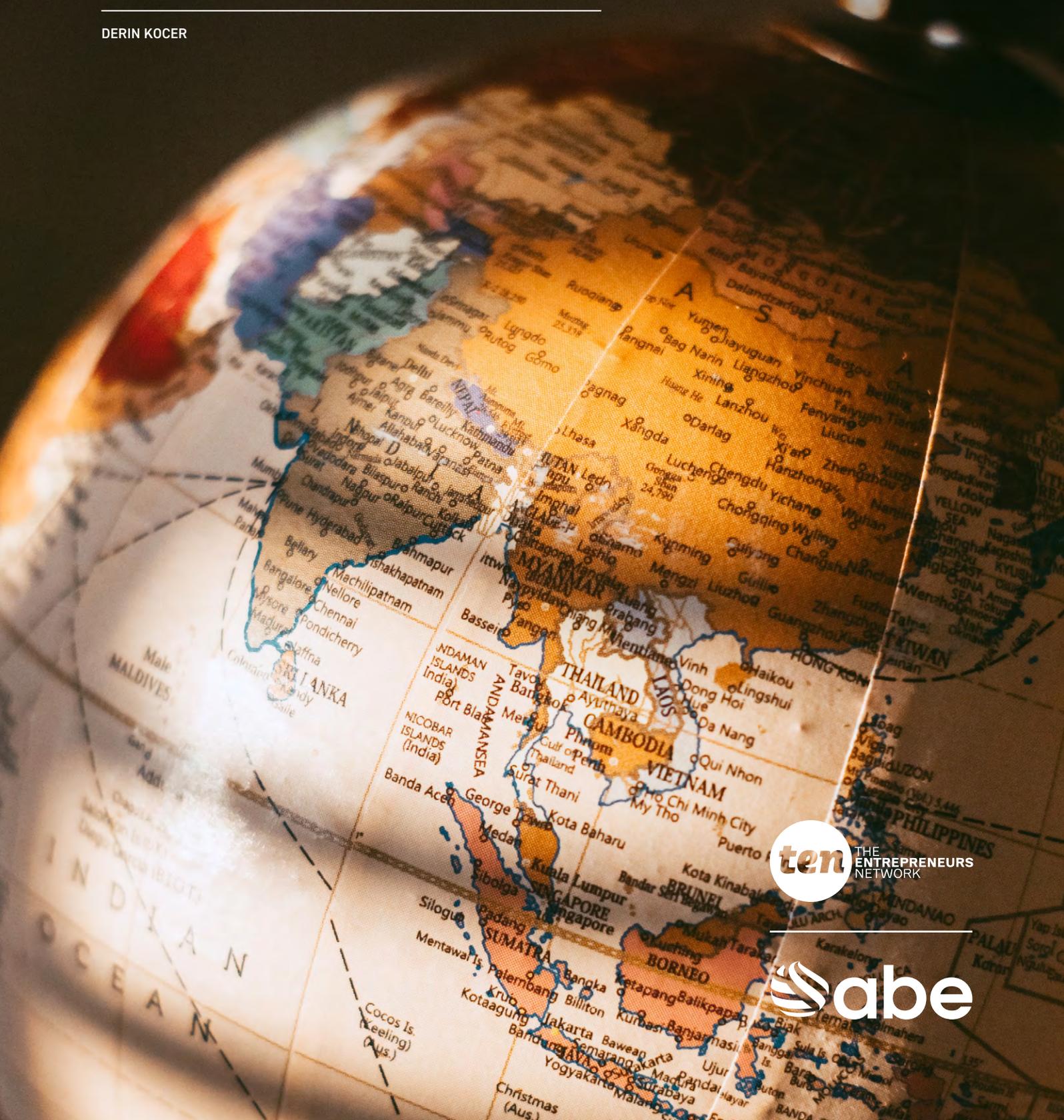


Passport to Progress

A Blueprint for the World's Most Pro-Innovation Visa System

DERIN KOCER





“In the end, migration policy cannot entirely remake economies, cultures or history. However, as our report will show, it can still have enormously impactful consequences if done right.”

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FOREWORD



LORD BILIMORIA OF CHELSEA CBE DL

Founder and Chairman of Cobra Beer
Independent Crossbench Peer in the
House of Lords
President, UK Council of International
Student Affairs
Co-chair of All Party Parliamentary
Group on International Students

One of the greatest qualities of the UK is our attractiveness to the world's most talented individuals. The international talent that comes here as students, professionals, academic researchers and entrepreneurs make the UK a more innovative, productive and creative country.

Nowadays, talent is much more widespread than ever before across the globe but these same individuals are also much more sought-after by countries worldwide. Around the world, governments know that economic growth depends on the ability to attract and retain high-skilled immigrants. To build the next phase of artificial intelligence, to unleash the potential of new green technologies and continue innovating on strategic fronts, everyone should seek international talent.

This automatically creates an environment of competition for policymakers where countries, like-

“To increase productivity, innovation and economic growth in the UK, immigrants are our natural allies.”

minded or not, are after the same people. For that reason, we have to rethink and redesign most of our immigration processes and policies. Bold and creative policymaking will be essential going forward.

That's why I welcome this report and the work that ABE Global and The Entrepreneurs Network have put into it to sketch out what a pro-innovation immigration system should look like. While a one-size-fits-all approach isn't realistic for immigration, as they rightly note, that does not mean there aren't broad guiding principles to tackle common challenges.

Until now, most countries approached immigration somewhat passively – where, at most, visa schemes were created to be used only by foreigners who want to use them. This resulted in the static and bureaucratic policymaking we see today, which shrinks the potential benefits of high-skilled immigration. Instead, we should build a more flexible, proactive and competitive immigration system in which international talent is actively provided with the right incentives to come, study and work here.

If our objective is to increase productivity, innovation and economic growth in the UK, immigrants are our natural allies. The desire to succeed, the craving to build something new and the entrepreneurial soul are a part and parcel of many immigrants' personalities. This report gathers evidence from all over the world to show that this is the case, but many of us already know this by heart. We know it from our friends, neighbours, and colleagues. Some of us know it even from ourselves and our families.

My personal story is also a testament to this. The cross-cultural experiences I gained as an Indian immigrant in the UK led me to a career full of entrepreneurial adventures.

I used to play polo as an international student at Cambridge University and led our team on a tour of India in the 1980s. That's when I realised that Indian manufacturers were producing high-quality polo sticks. The UK used to import polo sticks from Argentina, but the Falklands War made this impossible. There appeared to be a gap in the market and my first business venture was to fill that gap. That's how I started in business.

I came up with Cobra Beer, my 'big idea', whilst studying Law at Cambridge and seeing it become a household name in the country that welcomed me is a joy that endures. I know that there are tens of thousands of migrant entrepreneurs that share a similar story to mine. To re-energise our economy, we should provide opportunities for many more to start writing their own stories.

My entrepreneurial story led me to the House of Lords where I proudly champion efforts to make the UK a more welcoming and attractive place for international talent. It was only natural that I spearheaded efforts to introduce the 2-year post-graduation work visa in 2007/8 and then thereafter to re-introduce it in 2021. These visas enable international students to stay and work in the UK upon graduation.

However, our country has never stood still. This report shows clearly that there is much more work to do and it also sets out how we can go about doing it.

FOREWORD



ROB MAY

Chief Executive Officer of ABE Global

ABE is an education non-profit, operating globally to improve business and entrepreneurial skills.

Recently, the central relationship between immigration and innovation has come under attack.

Motivated by desires to limit headline net migration figures, the positive effects of migration have once again become clouded in a hostile narrative that finds its fulfilment in the populist rhetoric that any immigration is antithetical to national progress. This neglects the historical truth that the flow of ideas, talent and people has been the cornerstone of security and prosperity.

Harnessing the potential of migration, however, requires a strategic political framework capable of channelling this cross-border energy into long-lasting outcomes.

The immediate economic contribution of international student migration is well-documented. For 50 years, ABE has worked with students across the world and we have seen that for a significant number of our graduates, progressing to a prestigious university is only one element of their career aspirations. Their vision extends beyond education; they

“We hope to unlock a sensible conversation in which the true potential of migration can overcome misplaced concerns.”

have global ambitions and want to ‘arrive and thrive’ in their host country, not simply learn and leave as a fleeting ‘dollar sign’. They want to put their education and skills to good use in the economy of the country which welcomes them. They desire to actively contribute to the story of their host nation as employers, leaders, inventors and entrepreneurs, and to forge stronger commercial ties between their hosts and their homeland.

Regrettably, many of these bright and enterprising migrants are now deterred, wary of becoming collateral damage in the crossfire of domestic politics. This disillusionment is exacerbated by the reversal of initiatives meant to facilitate naturalisation and establish stable personal foundations from which professional success can flourish. Worst of all, homegrown anti-immigration attitudes are resurfacing at a time of stagnating economic growth, rapid changes in technology, industries and societal patterns, and an intensifying scramble for global talent.

ABE approached The Entrepreneurs Network to help remind policymakers of the bigger picture. We congratulate the author of this report for recasting talent migration as a long-term investment and attempting to revive the link between immigration and innovation.

As an expression of our not-for-profit, social mission, ABE cares deeply about making a responsible contribution to the communities we serve. For that reason, we fund and share independent research that supports policy development in business and entrepreneurship education around the world.

In this, our 50th anniversary year, we have made this research our flagship project. As a UK-based organisation, we hope that this report will contribute to a nuanced debate on how Britain can attract – and, importantly, *retain* – global talent but as an international company, we will share the research with our partner governments around the world as they seek out a blueprint for encouraging highly-talented migrants, students, innovators and potential investors.

As with all our reports, we’re not just sitting on the sidelines and complaining. Our aim is to be genuinely helpful to governments, which is why we challenged our research partner to come up with meaningful and pragmatic policy recommendations based on a comparative analysis of what works around the world, bringing together the best and most creative ideas into one report.

We hope that this research will be used by changemakers to review visa options that deliver better pathways into the workforce and into permanent residency, to reframe the messages and policies which will inspire diverse talent from abroad to build a life, career, and business in the UK, and to reconsider the factors that determine sustainable economic growth.

Above all, we hope to unlock a sensible conversation in which the true potential of migration can overcome misplaced concerns.

INTRODUCTION

Talent is everywhere and more important than ever. But not everyone, nor every nation, can access, attract and utilise it – despite the fact that most want to do so.

Individuals with a certain set of skills – who can innovate, launch businesses and disrupt industries – are critically important to modern economies. The slowdown in innovation, ageing populations and a decade-long near stagnation of economic growth in advanced economies also show that the need for talent is not only obvious but also urgent.

That's why most countries are on the lookout for talented individuals from all over the world to work and launch their enterprises on their soil. They not only need entrepreneurs but also world-leading professionals, promising researchers, talented engineers, students with high potential and other unusually gifted individuals. Such is the challenge ahead of us that in the bid to re-energise innovation, increase productivity and unleash growth, no stone can be left unturned.

Despite finding itself at the centre of numerous toxic political debates in recent years, immigration will be critical if we are to unlock economic prosperity. Thanks to the spread of technology and educational advances, talented people are now more evenly spread across the world than ever before – even if the opportunities to put that talent to use are not.

For that reason, we at The Entrepreneurs Network have been unashamedly making the case for immigration since our inception. With our *Job Creators* report, we revealed that while just 14 per cent of UK residents are foreign-born, 49 per cent of the UK's fastest-growing businesses in 2019 had at least one foreign-born co-founder.¹ This statistic has not gone unnoticed – and is something the Prime Minister, Rishi Sunak, has often quoted when making the positive case for immigration. Our follow-up paper came in August 2023 and showed that 39 per cent of the fastest-growing firms of that year also had foreign founders or co-founders.² In *Operation Innovation*, we explained how immigration helps boost innovation and economic growth.³ Our *Made in the UK* report, published with the National Union of Students, revealed the potential of international students in making the UK a more entrepreneurial and richer society.⁴ And finally, in *True Potential*, we proposed a new pathway for enabling high potential individuals from across the world to build a life, a career and a business in the UK.⁵

Simply put, we believe talented individuals, no matter where they were born, can make the UK and indeed the world a better place if they are given the chance.

In this report, published in partnership with ABE Global, we sketch out what the world's most pro-innovation migration system could look like. Truthfully, such is the ambition of the question we've set ourselves that giving a comprehensive answer is somewhat of an impossible exercise – and as such we don't argue that we figured it all out. Rather, this report should be seen more as an exercise in showing where policymakers have been getting it right and how we can make it even better. Incremental wins at the margin can often be the most powerful, durable and actionable policies, not least in a topic area such as immigration.

In short, this report makes the positive case for migration. We begin with an examination of the state of the international economy – showing first that it is underperforming, before affirming that international migration can be of help.

The second chapter then focuses on how to enable migrants to move to new beginnings. Across five subsections, each devoted to a specific 'group' of migrants – students, high-skilled workers, scientists, students, high-skilled workers, scientists, unusually talented individuals and entrepreneurs – we look at international policies designed to attract newcomers, evaluate what they get right, understand where they fall short, and propose how to make things better.

Of course, there is no one-size-fits-all approach to policymaking. Some countries can be attractive to potential migrants even if it seems like they are deliberately working hard to make life difficult for them. Conversely, some nations can adopt the best of the policies possible and fail to be regarded as a popular destination. In the end, migration policy cannot entirely remake economies, cultures or history. However, as our report will show, it can still have enormously impactful consequences if done right.

1 [Dumitriu, S., Stewart, A., *Job Creators: The Immigrant Founders of Britain's Fastest Growing Businesses.*](#)

2 [Ives, E., Kocer, D., Salter, P., *Job Creators 2023.*](#)

3 [Edited by Ives, E., *Operation Innovation: How to Make Society Richer, Healthier and Happier.*](#)

4 [The Entrepreneurs Network and National Union of Students, *Made in the UK: Unlocking the Door to International Entrepreneurs.*](#)

5 [Sockin, J., Dumitriu, S., *True Potential: Improving the High Potential Individual Visa.*](#)

CHAPTER 1

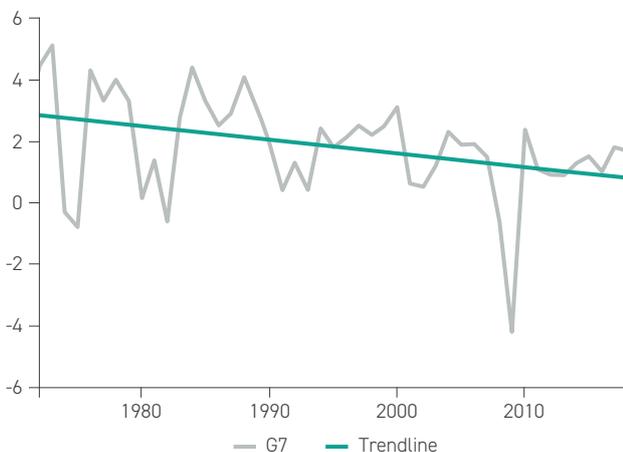
THE POSITIVE CASE FOR MIGRATION

The state of the international economy: stagnating innovation, the slowdown in productivity and underperforming growth

Economies can grow in many different ways. But for sustained economic growth, increasing rates of productivity are essential. Over the long run, this is the only way by which we can meaningfully make individuals better off.

The problem that much of the world has been grappling with of late, however, is that productivity levels have, by and large, been stagnant for the past decade. According to OECD data, the GDP per capita growth rate for G7 countries has halved since the 1980s.⁶ If these trends continue, most developed countries' fates will be described as nothing more than managed decline. Their populations are not growing quickly, their citizens are getting older, and their younger generations have fewer opportunities than their parents did.

FIGURE 1: G7 GDP PER CAPITA GROWTH



Source: OECD, Growth in GDP Per Capita, Productivity, ULC

Virtually all accounts of when the productivity malaise hit point to the Global Financial Crisis of 2007-2008. In the decade beforehand, the US grew its productivity by over two percentage points annually; since then, this has halved. A similar trend was seen in Germany. In the UK and France, the same metric went

down by around three quarters.⁷ Unsurprisingly, this correlates with the flatlining trends in GDP per capita growth. Fixing this state of affairs is essential and ought to be regarded as the key policy challenge of our time.

“We are not innovating as much as we think.”

The puzzling story behind the productivity stagnation is that it happened while everyone seemed to be talking about innovation more than ever. How can it be that productivity has slumped despite the steady stream of success stories coming out of Silicon Valley? Are we not innovating as much as we think?

This does seem to be the case – and economists have posited various explanations for why.

Firstly, innovation in so-called ‘general purpose technologies’ – which have the ability to revolutionise almost all aspects of the economy – all but ground to a halt. Around the turn of the twentieth century, electricity paved the way for refrigerators, telephones, modern production lines and, eventually, computers.⁸ Similarly, the invention of the internet didn’t just create dot-com companies, it unlocked new markets and created new business models. These technologies change the very fabric of the economy and society at large. The innovation that they enable is incalculable – and yet their development has by all accounts stalled.⁹

Secondly, a wealth of evidence suggests that it’s simply getting harder to innovate now, with this being especially pronounced in some fields. Paradoxically, one of the reasons behind this is down to our prior success – on many fronts, we progressed so quickly in the past century that this ‘burden of knowledge’ is slowing down progress in relative terms, with ideas becoming comparatively harder to find now than before.¹⁰

⁶ [OECD, Growth in GDP Per Capita, Productivity and ULC.](#)

⁷ [OECD, GDP Per Hour Worked.](#)

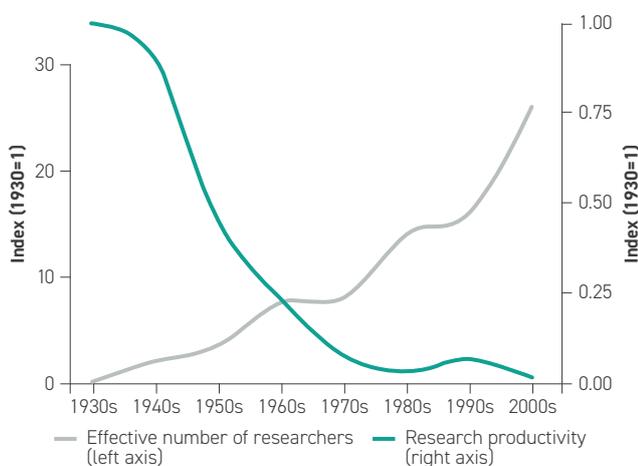
⁸ Cowen, T., *The Great Stagnation: How America Ate All the Low-Hanging Fruit of Modern History, Got Sick, and Will (Eventually) Feel Better.*

⁹ Admittedly, recent advances in artificial intelligence could herald the dawn of a genuinely transformative new general purpose technology. But even here, the significant gains could take time to emerge – as was the case with electricity and early computing.

¹⁰ [Cowen, T., Southwood, B., Is the rate of scientific progress slowing down?; Clancy, M., Are Ideas Getting Harder to Find Because of the Burden of Knowledge?.](#)

As a result, research has had to become more resource intensive. The number of researchers needed to reach a doubling of computer chip density, for instance, is more than 18 times larger today than the number required in the early 1970s.¹¹ During the early twentieth century, the average age of scientists when they won Nobel Prizes was around 37. Nowadays, it's 47 – and growing.¹² We have more researchers than ever but their contributions to their fields are also coming later and later, and in very niche fields of study.

FIGURE 2: RESEARCH PRODUCTIVITY AND NUMBER OF RESEARCHERS IN THE US OVER TIME

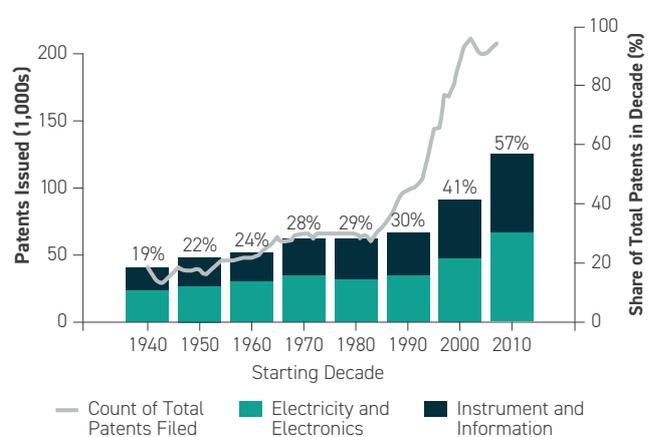


Source: Bloom et al., *Are Ideas Getting Harder to Find?*

“Innovation will be key to revitalising productivity and economic growth, and talented employees and entrepreneurs will be essential for achieving it.”

Patent data from the US also suggests that while there has been a constant increase in the number of patents over the years, this growth has come more in refinements rather than truly novel contributions.¹³ In other words, we are increasingly building on top of research that has already been done, rather than inventing completely new things – at least not at the same rate as we used to. Technological advancement is stuck to small, incremental steps forward in already advanced technologies.

FIGURE 3: NUMBER OF ISSUED US PATENTS BETWEEN 1940 AND 2010, AND SHARES IN ELECTRICITY AND ELECTRONICS, AND INSTRUMENTS AND INFORMATION



Source: Acemoglu et al., *Bottlenecks*

Lastly, there has been an innovation imbalance across industries. Daron Acemoglu, David Autor and Christiana Patterson have pointed out that the total number of patents filed in the US since the 1980s has more than doubled, but the overwhelming majority of the increase has come in information and communications technologies and electronics.¹⁴ This, they argue, has created ‘bottlenecks’ in other industries, where these innovations may ease some of the processes of business or manufacturing, but they do not lead to an overwhelming rise in productivity.

This is also preventing innovation spillovers from taking place. Studies on the US agriculture sector show that bursts of innovation don't necessarily come from research on this specific sector, but rather are built upon innovations seen in other fields.¹⁵ Worryingly, the patent trends show that innovation is accumulating in fewer industries than the case was previously – and this is limiting the extent for spillovers to occur.

11 Bloom, N., Jones, C., Reenen, J., Webb, M., *Are Ideas Getting Harder to Find?*

12 Jones, B., Weinberg, B., *Age Dynamics in Scientific Creativity*.

13 Strumsky, D., Lobo, J., *Identifying the Sources of Technological Novelty in the Process of Invention*.

14 Acemoglu, D., Autor, D., Patterson, C., *Bottlenecks: Sectoral Imbalances and the US Productivity Slowdown*.

15 Clancy, M., Heisey, P., Ji, Y., Moschini, G., *The Roots of Agricultural Innovation*. In: Moser, P., *Economics of Research and Innovation in Agriculture*.

However, an optimistic reading of our current state of affairs is that there is still much more ‘space’ for innovation. If the bottlenecks can be unblocked, exceptional innovations across industries could follow. For instance, until the invention of modern transistors, it was almost impossible to develop advanced technological hardware, which created a bottleneck in the advancement of electronics until the 1970s. Then, along came modern transistors, which made the manufacturing of microchips possible, and paved the way for mobile computing, the internet, artificial intelligence and many more technologies that made the contemporary world. Transistors are manufactured by the billions *a day* now.¹⁶

Hence, the way to solve bottlenecks is not to turn away from innovation but embrace it more tightly, and across more industries. That’s why innovation will be key to revitalising productivity and economic growth, and talented employees and entrepreneurs will be essential for achieving it.

However, these people are also both in demand and hard to find. But, as we’ll explore later on, there are ways to make the process easier.

Immigrants are natural innovators and entrepreneurs

If we need innovation, we need innovators. If we need entrepreneurship, we need entrepreneurs. But neither can be taken for granted as if the natural flow of history will produce them.

Elon Musk of Tesla, Sergey Brin of Google, Arianna Huffington of The Huffington Post and Thrive Global, and Nikolay Storonsky and Vlad Yatsenko of Revolut all have at least two things in common – they are remarkably successful entrepreneurs and innovators, and all of them are immigrants. The same can be said for the scientists behind the Covid-19 vaccines and the mRNA technology – Pfizer’s founder was a German immigrant in the US; Moderna was co-founded by a Lebanese immigrant; and BioNTech’s co-founders were born in Turkey.

These select examples might represent the extreme end of the innovative and entrepreneurial spectrum, but a wealth of data shows immigrants’ contribution to economies at large.

“Migration often works as a self-selection process for people with entrepreneurial attributes.”

A 2012 study, for example, found that immigrants are more likely to start businesses than members of a country’s native population in most of the 69 countries it surveyed.¹⁷ Business ownership rates are higher among immigrants than the native-born in many developed countries, including the US, the UK, Canada and Australia.¹⁸ As we reported before, even though foreign-born residents make up only 14.5 per cent of the British population, 39 per cent of the UK’s 100 fastest-growing businesses in 2023 had at least one foreign-born co-founder.¹⁹ A 2018 National Foundation for American Policy study estimated that immigrants founded or co-founded 55 per cent of the US’s billion-dollar companies.²⁰ We could go on, but the message is clear – immigrants and entrepreneurship go hand in hand.

Unsurprisingly, the companies immigrants set up also create jobs. A 2020 study in the US found that at every level of firm size – from small businesses to Fortune 500 giants – immigrants are more likely to launch enterprises that generate employment compared to natives.²¹ The researchers estimate that “the total number of jobs created by immigrant-founder firms is 42 per cent higher than that of native-founder firms.”²²

Similarly, immigrants also expand investment and venture capital networks by building bridges between the places they left and the countries they relocated. It’s well established that the Venture Capital (VC) world uses networks to find new investment opportunities – and immigrant entrepreneurs thus pave the way for building these networks and leading their previous investment networks into the countries they migrated to.²³

Beyond simply setting up businesses, however, migrants also display a particularly innovative zeal. Very often, innovation comes from teams with individuals from diverse experiences – something that immigration provides almost by definition.²⁴ Immigrant scientists and immigrant-led research teams have been found to produce higher impact papers than natives and native-led teams.²⁵ Similar increases in productivity and innovation are seen in migrant-led enterprises as well.

16 [Laws, D., *13 Sextillion & Counting: The Long & Winding Road to the Most Frequently Manufactured Human Artifact in History.*](#)

17 [Xavier, S., Kelley, D., Kew, J., Herrington, M., Vorderwulbecke, A., *Global Entrepreneurship Monitor: 2012 Global Report.*](#)

18 [Fairlie, R., Lofstrom, M., *Immigration and Entrepreneurship.*](#)

19 [Ives, E., Kocer, D., Salter, P., *Job Creators 2023.*](#)

20 [Anderson, S., *Immigrants and Billion Dollar Companies.*](#)

21 [Azoulay, P., Jones, B., Kim, D., Miranda, J., *Immigration and Entrepreneurship in the United States.*](#)

22 [Ibid.](#)

23 [Balachandran, S., Hernandez, E., *Mi Casa Es Tu Casa: Immigrant Entrepreneurs as Pathways to Foreign Venture Capital Investments.*](#)

24 [Uzzi, B., Mukherjee, S., Stringer, M., Jones, B., *A Virtuous Mix Allows Innovation to Thrive.*](#)

25 [Hunt, J., *Immigrant Patents Boost Growth.*](#)



Studies examining enterprise data from the UK and France show that businesses with more immigrants are more likely to increase their productivity and are more likely to innovate.²⁶ Meanwhile, a study on the impact of increased immigration on the long-term growth of productivity across the US between 1960 to 2006 found that immigration positively influenced overall productivity growth.²⁷ The author suggested that approximately one-third to half of the increase in productivity growth could be attributed to enhanced specialisation and efficiency thanks to immigrants.

Similarly, researchers demonstrated that immigration flows significantly enhance firm innovation and economic dynamism at the county level in the US. It's estimated that an increase of approximately 12,000 migrants led to a 27 per cent rise in the number of patents received by local firms in that county compared to the average patent flow.²⁸

All this may well be because migration often works as a self-selection process for people with entrepreneurial attributes – after all, both migration and launching a business are generally risky endeavours. Testing this hypothesis among over 1,300 students, researchers at the Vienna University of Economics and Business showed that voluntary migrants were more likely to have the personality traits of entrepreneurs than non-migrants.²⁹ Accordingly, students who claimed to be more willing to take risks were more willing to emigrate and they were more likely to have founded businesses a decade later.

Overall, immigrants are great innovators, productivity hackers, driven entrepreneurs and exceptional job creators.

Time for a better public debate on immigration

To our minds, the case for a better approach to immigration is obvious. If we want to break out of our state of stagnation, the evidence suggests immigrants can play a key role in doing so.

“In the face of disruptive changes in the world of work, ageing populations and stagnant productivity, high-skilled immigrants can and should play a central role in modernising our economies, energising innovation and increasing investment.”

Yet, we would be remiss to ignore the all too often unfortunate political context in which immigration has found itself during recent years. Clearly, immigration is a divisive subject among electorates – and if we hope to achieve a better and more durable immigration framework, we need to be sensitive to this. Yet, there are good reasons to think this is politically manageable.

²⁶ [Krol, R., *Effects of Immigration on Entrepreneurship and Innovation*.](#)

²⁷ [Peri, G., *The Effect of Immigration on Productivity: Evidence from US States*.](#)

²⁸ [Burchardi, K., Chaney, T., Hassan, T., Tarquinio, L., Terry, S., *Immigration, Innovation, and Growth*.](#)

²⁹ [Vandor, P., *Are Voluntary International Migrants Self-selected for Entrepreneurship? An Analysis of Entrepreneurial Personality Traits*.](#)



Firstly, most developed countries and emerging economies are perfectly placed to welcome more immigrants to their countries if this can be done in a controlled manner. They are more diverse than ever and younger generations, raised in bigger cosmopolitan cities, are more tolerant than their parents.³⁰ Research shows that natives who don't know immigrants are more likely to dislike their presence, while those who do know immigrants are much more likely to have positive attitudes toward them.³¹ Additionally, academic studies reveal that individuals' perspective on immigration doesn't change easily after reaching adulthood. This means that in many countries, over time, attitudes toward immigration will stay tolerant if not more positive. Even in the post-Trump US, support for increasing immigration is at historic highs – and in fact, became more popular under the Trump Administration.³²

Secondly, citizens are good at understanding different types of immigration. Analysis of public behaviour in small American towns showed that in the US, mass high-skilled immigration did not create political backlash but unskilled migration did.³³ Opinion polling indicates that 60 per cent of the UK public would like to see immigration made easier for 'high-skilled workers'.³⁴ Similarly, most Western nations overwhelmingly support high-skilled immigration.³⁵

Even though irregular and illegal immigration is a topic of concern for many, this is not turning into opposition against immigration in the round. Polls show that the issue is no longer racing to the top of people's political concerns in the UK.³⁶ In addition, international examples show that tough border control can be matched by welcoming immigration policies.³⁷ Canada and Australia, both among the world's most pro-migration countries, are also extremely tough when it comes to illegal immigration. Arguably, their robust stance and policies against illegal immigration are what makes their pro-migration agenda sustainable.

What all this suggests is that there is an opportunity to have a reasonable debate on the issue of immigration.

Economies worldwide need the help and creativity of talented individuals to revitalise economic growth. In the face of disruptive changes in the world of work, ageing populations and stagnant productivity, high-skilled immigrants can and should play a central role in modernising our economies, energising innovation and increasing investment. The positive case for immigration is a positive case for sustainable and real economic growth.

Then, the question is: what would the world's most pro-innovation immigration system look like?

30 [Thomas, J., *Routes to Resolution*.](#)

31 [Kaufmann, E., Harris, G., "White Flight" or Positive Contact? Local Diversity and Attitudes to Immigration in Britain.](#)

32 [Gallup, *Immigration*.](#)

33 [Mayda, A., Peri, G., Steingress, W., *The Political Impact of Immigration: Evidence from the United States*.](#)

34 [Migration Observatory, *New Polling by Kantar Public and Migration Observatory Highlights British public's Contradictory Attitudes to Migration*.](#)

35 [Pew, *Majority of U.S. Public Supports High-Skilled Immigration*.](#)

36 [More in Common, *Issues Tracker*.](#)

37 [Yglesias, M., *Stricter Border Control, More Immigration*.](#)

CHAPTER 2

A BLUEPRINT FOR A PRO-INNOVATION VISA SYSTEM

Our age of slowing productivity growth, stagnating innovation and inconsistent economic dynamism require us to look again at immigration policy. The changing needs of individual countries have not been matched by corresponding changes in visa frameworks, and the negative consequences are beginning to bite.

Despite this, it would be wrong to say that no positive steps have been taken of late. Around the world, novel approaches to unlocking immigration policy have been adopted by various different nations. With careful design and effective implementation, impactful reforms are eminently possible.

In this chapter, we look at what some of those reforms are. Specifically, we focus on different pathways for five distinct 'groups' of immigrants that will be vital for boosting economic

growth and powering future innovation – namely: students; high-skilled professionals; scientists, technologists, engineers and mathematicians; other unusually talented individuals; and entrepreneurs.

In each instance, we set out the challenges commonly faced by each group, and propose policies or reforms tailored for them, based on existing ideas and initiatives which countries have adopted.

STUDENTS

Common challenges 	Notable policy solutions 	Paths to progress 
<ul style="list-style-type: none"> — Many international students have to move home upon graduation rather than becoming a part of the workforce. 	<ul style="list-style-type: none"> — Canada's 'Post-graduation Work Permit' grants international students three years to work in Canada. — The UK's Graduate visa similarly gives international graduates of UK universities two years to work there. 	<ul style="list-style-type: none"> — Sponsorship requirements from employers for international graduates should be scrapped. — International graduates should be exempt from migration caps.
<ul style="list-style-type: none"> — International students don't have a stable path to permanent residency. 	<ul style="list-style-type: none"> — Canadian 'Experience Class' laws grant graduates from a Canadian university with at least a year of work experience a fast-track route to permanent settlement. 	<ul style="list-style-type: none"> — Student visas should be designed as 'dual intent' schemes that see international students not only as temporary residents but also on the path to permanent residency. — Years spent as students and graduate workers should count towards permanent residency.
<ul style="list-style-type: none"> — Tuition and visa fees make top universities inaccessible for many exceptionally talented international students. 	<ul style="list-style-type: none"> — The Chinese Government offers many scholarship options, such as the Belt and Road Scholarship, for international students. 	<ul style="list-style-type: none"> — Governments should expand selective student loan programmes and scholarships to exceptional international students at annual caps.

Each year, millions of individuals embark on new chapters of their lives as university students. For a significant portion of these, they do so as immigrants studying in a nation different to where they were born. Great universities are a powerful pull for talented young people – many of whom will go on to learn new skills, make new connections, and, for the most entrepreneurial among them, dream up new business ideas.

Countries should see foreign university students as long-term investments. But to capitalise on the potential economic benefits of students, governments need to have immigration frameworks in place for them to make use of upon graduation. Studies tracking international students' preferences show that the ease of obtaining a student visa significantly influences enrollment trends.³⁸

Common challenges

Three main hurdles must be solved to attract more talented students and to maintain them as a part of an innovative workforce. Firstly, many international students struggle to find easy and flexible paths to use in order to stay as skilled workers in the countries where they studied. Secondly, even though some may stay, they mostly lack stable paths to permanent residency. Thirdly, the sheer cost of studying at a top university makes this experience inaccessible for many exceptionally talented international students. Around the world, countries have adopted interesting ways to ease these challenges.

What works

Canada has been growing the number of international students it enrolls continuously in the past two decades, accounting for a six-fold growth.³⁹ This makes the country the third most popular destination in 2022 after the US and the UK by the total number of student visa holders.⁴⁰ (And, given Canada's lower starting population, looking at their rate of international students per capita, Canada easily outranks both the US and the UK on this metric.)

That Canada has managed to become such a draw for international students is hardly a coincidence – the country has been getting a number of policy decisions right for years.

“Talented international students should not require sponsorships from employers and should be exempt from migration caps.”

Canada sees international students as a central part of its future workforce. For that reason, upon graduation, international students are given the opportunity to stay in Canada with a post-graduation work permit for three years during which they can either be employed or launch their own businesses.⁴¹

Contrary to the US, Canada doesn't impose caps on the number of students who can continue working as skilled professionals after their post-graduation schemes end; and, unlike the UK, Canada doesn't require sponsorship licences from businesses to hire graduates from Canadian universities. It offers an easy and stable route to professional life.

Additionally, the Canadian Government eases the transition for students who decide to stay in Canada to become permanent residents. The 'Canadian Experience Class' laws, which passed in 2008, grant graduates from a Canadian university with at least a year of work experience a fast-track route to permanent settlement.⁴²

Right lessons and policies for progress

There are a number of lessons countries can learn from Canada in attracting and maintaining top international talent.

Firstly, countries that are serious about capitalising on students' potential upon graduation should make their journey into the workforce (or entrepreneurship, and eventually settlement) as easy as possible. The first step in doing this can be recognising student visas as a 'dual intent' scheme. Dual intent means that even though visa holders are granted temporary residency, they are also on the path toward staying permanently in the future.⁴³ In this way, students can be granted easy access to other visa options after graduation and their years spent in the country would count towards their applications for permanent settlement.

This would incentivise students to stay, work and innovate in the country. Otherwise, as seen in tens of thousands of US examples, talented students who can't access the workforce due to visa limitations are either forced to continue in the university for an unwanted postgraduate degree or, those who cannot afford to do so, are forced to go back home or move to a country with more flexible visa schemes.

Secondly, governments should design 'follow-up' visa schemes to student visas, which grant recent graduates the right to work where they studied without needing a sponsorship or an overly complex bureaucratic process. Even though it's a step in the right direction, the UK's Graduate visa scheme – which gives recent international graduates from UK universities the right to work for two years in the country without needing sponsorship

38 [Gopal, A., *Visa and Immigration Trends: A Comparative Examination of International Student Mobility in Canada, Australia, the United Kingdom, and the United States.*](#)

39 [Canada.ca, *International Students as A Source of Labour Supply: A Summary of Recent Trends.*](#)

40 [Institute of International Education, *Project Atlas 2022.*](#)

41 [Government of Canada, *Post-Graduation Work Permit Program.*](#)

42 [Porter, K., *Retain the Brains.*](#)

43 [Temple University, *Dual Intent.*](#)

from their employers – is underdelivering.⁴⁴ Polls show that the overwhelming majority of businesses are not using this visa scheme to hire new talent.⁴⁵ It has to be improved.

Even though the Graduate visa is unsponsored, after spending two years on it, migrant graduates still need to change their visas which will require the sponsorship of their employer. This narrows down options for graduates. Most startups and scaleups don't have a sponsorship licence and even though they need access to talent, they don't always have the financial or bureaucratic means to hire migrants.

“Meritocracy works best when people with talent also have the opportunity to utilise it.”

Similarly, in the US, even though international graduates are given a year to work after graduation, caps on immigration apply to them after this. Studies have shown that the caps on skilled worker visas in the early 2000s resulted in the quality of international students – as judged by SAT scores – dropping immediately.⁴⁶

To maintain and attract top international talent, governments must recognise that international students of their best universities should not require sponsorships from employers and be exempt from migration caps.

Lastly, affordability is another great challenge in attracting and retaining promising students. Meritocracy works best when people with talent also have the opportunity to utilise it. Yet countries with high tuition and visa fees and living costs can only attract international students with the means to pay their way through university.

That's why risk-averse colleges and universities “don't have an incentive to recruit and offer admission to promising foreigners who can't afford tuition” and, for that reason, almost no US university meets international students' needs.⁴⁷ Similarly, to study in London, an international student needs to show that she has around £13,000 in her bank account to cover expenses. Many exceptionally talented foreign-born students never get a shot at institutions they are worthy of.

No Government can provide all the young people of the world with the same opportunities to pay their way through university as it does for its own citizens. Even if one tried, it would be politically unsustainable and decrease the value of citizenship. However, top universities and governments can come together to expand available opportunities for exceptional international students and, at an annual cap, provide international student loans and scholarships.

For instance, the Chinese government offers a Belt and Road Scholarship for exceptional young foreign nationals included in the Belt and Road Initiative. As part of this competitive programme, China covers selected students' expenses in some of its best universities.⁴⁸

In most countries, which are much more popular and attractive than China, international scholarships are mostly left to the universities, charities and businesses. Even though these programmes are sponsoring foreign students, they are far from utilising the maximum potential. Accordingly, governments can create extremely selective student loan programmes and scholarships specifically for exceptional international students at annual caps. Universities can be made responsible for spotting the top talent and governments will provide the funding needed.

Implications for policymakers

- Student visas should be designed as ‘dual intent’ schemes and visa holders should be seen as being on a path to permanent residency, which would ease switching visas upon graduation. Time spent as an international student should count towards settlement.
- To attract the brightest international talent, governments must design flexible ‘follow-up’ visa schemes to ease the transition from student to worker or entrepreneur.
- International graduates should be exempt from migration caps and sponsorship requirements, which would give them the right to work for most businesses. Also, they should be given the right to launch their own businesses upon graduation.
- Governments should actively step in to expand loans and scholarship options for exceptional talent without the means to cover university and living costs.

⁴⁴ [UK Government, Graduate Visa.](#)

⁴⁵ [Hillman, N., 'Not Heard of This': Employers' Perceptions of the UK's Graduate Route Visa.](#)

⁴⁶ [Kato, T., Sparber, C., Quotas and Quality: The Effect of H-1B Visa Restrictions on the Pool of Prospective Undergraduate Students from Abroad.](#)

⁴⁷ [Neufeld, J., Immigration Powers American Progress.](#)

⁴⁸ [University of Hong Kong, Belt and Road Scholarship.](#)

HIGH-SKILLED PROFESSIONALS AND FUTURE ENTREPRENEURS

Common challenges 	Notable policy solutions 	Paths to progress 
<ul style="list-style-type: none"> — The changing world of work requires new skills, possessed by few. This creates urgent and acute skilled worker shortages in advanced economies. 	<ul style="list-style-type: none"> — The US Department of Labor's 1965 Schedule A priority occupations list made access to critical international talent easier. 	<ul style="list-style-type: none"> — Governments should create separate talent shortage lists for different industries to make the policies more proactive and adaptable. — Priority occupations should be given fast-track access to speciality visas with a clear path to permanent residency. — A Schedule A list for startups can be constructed so that growing firms can access talent without additional costs and prolonged bureaucratic processes.
<ul style="list-style-type: none"> — Sponsorships and migration caps create structural hurdles for startups and growing firms in hiring international talent. 	<ul style="list-style-type: none"> — Ireland's Critical Skills Employment Permit allows Irish firms to bring talent over as long as their workforce is 50 per cent EEA nationals and its eligibility criteria are flexible for startups. 	<ul style="list-style-type: none"> — A points-based sponsorship system <ul style="list-style-type: none"> – which would incorporate firm size, investment history and revenue – can be built to include startups into sponsorship schemes with minimum costs. — Minimum salary thresholds for sponsorship should be relaxed and stock options should count towards them. — Sponsorship requirements should be abolished for some industries that don't require semi-skilled jobs, such as manufacturing.
<ul style="list-style-type: none"> — Skilled worker visas aren't flexible enough for talented workers to launch their own businesses. 	<ul style="list-style-type: none"> — After spending two years in high-skilled employment in Ireland, migrant workers can apply for permission to work in Ireland without an employment permit. 	<ul style="list-style-type: none"> — Visas for skilled workers should be flexible enough for them to launch their own businesses without switching visa schemes. — Investment received from an acknowledged VC should count as a migrant worker's sponsorship, without them being required to switch visas.

High-skilled migration is a self-selection process from the start.

In his seminal research, George Borjas developed a model to describe how migrants can be categorised as either positively or negatively selected.⁴⁹ Positively selected migrants are those who come from the higher-skilled segment of their home country's population. They choose to migrate because their skills are more valuable in the destination country. On the other hand, negatively selected migrants belong to the lower-skilled segment and they migrate because the penalty for low skills is less severe in the destination country.

The positively self-selected migrants have skills and experiences that are useful worldwide, especially now. As economies change in the face of technological advancement, accessing the right people with the right skills at the right time is becoming an ever-increasing concern for businesses. 64 per cent of US businesses think a shortage of talent is standing in the way of adopting new productivity-enhancing technologies.⁵⁰ The World Economic Forum, meanwhile, estimates that half of the workforce will require some kind of reskilling and training to stay competitive and productive – a process that will take time for any country.⁵¹ A wealth of evidence shows how skills shortages act as a primary hurdle to firms' growth.⁵²

“Sponsorship systems are poorly designed for startups and SMEs.”

Even though skills shortages are present in many major economies, skilled workers are also more common worldwide. Thanks to the spread of education and the availability of technology, talented individuals are everywhere. Studies in the UK showed that high-skilled migrant workers were more productive than the natives and they also spread productivity to the companies they work for.⁵³ Attracting skilled professionals can both ease skills shortages and increase productivity.

Additionally, skilled professionals are also a stock of potential entrepreneurs. Contrary to the popular conception of a typical startup founder, research from Harvard Business Review suggests that the average age of a successful entrepreneur is around 45.⁵⁴ This is mostly because work experience is the critical factor when it comes to learning how to build

functioning organisations, especially if they have experience in the narrow industry in which they are launching their enterprises to compete. Attracting professionals is also an investment in entrepreneurship.

Common challenges

Examples of skilled worker visa schemes in the developed world are fairly similar to each other and have one big and ‘bad’ thing in common – they don't leave much space for growth.

By outsourcing the admissions system to a handful of organisations – mostly big corporations – countries are actively limiting their access to talent. In these sponsorship schemes, such as the UK's Skilled Worker visa or the US's H-1B programme, companies need to pay fees to be able to bring talent from abroad and immigrants' visa status is dependent on their employers. Most of these sponsorship requirements are subject to annual caps and lottery systems that create great uncertainty for potential high-skilled migrants, leading them to consider alternatives.⁵⁵

Additionally, sponsorship systems are poorly designed for startups and small and medium-sized enterprises, which mostly lack resources and time to work through the associated bureaucracy. Therefore, sponsorship systems work well mostly for big corporations with legal and human resources departments and these firms don't have the incentives to bring in early-career risk-takers and potential entrepreneurs since they are more prone to leaving them. As a result of this system, immigrants who are skilled enough to work at the world's best companies are less incentivised to launch their own endeavours. Meanwhile, research also estimates that tying skilled migrants' visas to their employees hinders their career prospects and lowers wages.⁵⁶ This is self-defeating if increasing innovation and productivity are the desired outcomes.

In this way, the visa scheme automatically allocates the innovative potential of skilled migrants only in a few industries and corporations. However, innovation should not be expected to come from already existing large enterprises. Even though R&D investments increase as businesses grow, the return on this investment, calculated as introducing new services or products, decreases.⁵⁷ Similarly, big businesses get fewer patents per dollar of their R&D spending.⁵⁸ These are quite understandable outcomes because as companies grow, they focus more on improving

49 [Borjas, G., *Self-selection and The Earnings of Immigrants*.](#)

50 [Gartner Survey.](#)

51 [World Economic Forum, *The Global Risks Report 2020*.](#)

52 [International Monetary Fund, *Tech Talent Scramble*.](#)

53 [Campo, F., Forte, G., Portes, J., *The Impact of Migration on Productivity and Native-born Workers' Training*.](#)

54 [Azoulay, P., Jones, B., Kim, J., Miranda, J., *Research: The Average Age of a Successful Startup Founder Is 45*.](#)

55 [Marcus, J., *How Other Countries Are Luring Workers Trained in U.S. Universities*.](#)

56 [Lowell, B., Avato, J., *The Wages of Skilled Temporary Migrants: Effects of Visa Pathways and Job Portability*.](#)

57 [Argente, D., Baslandze, S., Hanley, D., Moreira, S., *Patents to Products: Product Innovation and Firm Dynamics*.](#)

58 [Bound, J., Cummins, C., Griliches, Z., Hall, B., Jaffe, A., *Who Does R&D and Who Patents?*](#)

their products and services rather than finding new things or investing in new areas of revenue.⁵⁹ This is partly why innovation bottlenecks are created – as discussed in Chapter 1.⁶⁰ It's also why sponsorship systems are reducing innovation potential.

What works

Ireland's high-skilled immigration scheme, Critical Skills Employment Permit, offers a flexible alternative.⁶¹

To be eligible for a Critical Skills Employment Permit, migrants must have a job offer lasting at least two years with an annual salary above €60,000. Companies must have at least 50 per cent European Economic Area (EEA) nationals among their employees to receive an employment permit, except for startups supported by Enterprise Ireland or IDA Ireland. For strategically important occupations listed in the Critical Skills category, the minimum salary required is €30,000, along with a relevant degree qualification for non-EEA nationals. After two years of employment with this type of employment permit, migrants may apply for permission to work in Ireland without an employment permit.

In this way, Ireland is maximising the reach of its businesses for skilled workers without making a politically unsustainable programme. Access to talent is granted to whoever needs it the most, rather than whoever has the financial and bureaucratic capacity to do so.

Skills shortages are hardly a new problem though, and we can look back to the past for other effective ways to tackle them.

Back in 1965, the US Department of Labor introduced the Schedule A scheme to mitigate skills shortages.⁶² Schedule A was designed to detect skilled labour shortages in American industries and tailor visa routes to address these shortages. Normally, American employers must prove that they attempted to hire native talent for the vacancy, but couldn't do so, and hence were looking to bring workers from overseas. This process can take up to ten months in some cases. With Schedule A occupations, employers could avoid almost all of this process.

To detect specific shortages, the US Department of Labor used to gather extensive data across sectors to understand the most common business needs. At the time, these shortages could be both in mid-skilled occupations and high-skilled roles. One of the first groups of people included in the list were advanced engineers and Master's degree holders in some scientific fields. However, as time went by, reforms watered down the attractiveness of the scheme – policymakers added wage requirements, and other bureaucratic hurdles, and excluded STEM professionals. Nevertheless, Schedule A showed promise

as a way of streamlining the migration processes of skilled individuals in needed occupations. It's therefore unsurprising that in the face of skills shortages, many American think tanks are advocating for re-invigorating the policy today.⁶³

Right lessons and policies for progress

The original idea behind Schedule A fits today's needs around the world but it can go further.

The ever-changing world of work comes with changing needs for businesses and economies. For instance, even though they almost didn't exist two decades ago, artificial intelligence experts are now seen as not only essential for business but for national security as well. Shortage Occupation lists, such as the UK's, are too static to adapt as quickly as business needs change and gathering all occupations in the same list creates clashes across industries to get their share while some try to use it to lower wages. This hinders the whole process.

“The changing world of work and demographic trends show that talent shortages will stay with us for a long time.”

To speed up the process and increase effectiveness, governments should create separate talent shortage lists for different industries with different objectives and criteria. Rather than waiting for bottom-up feedback from businesses, policymakers can consider industrial strategy and business trends to create a “Talent to Innovate” list for fitting critical occupations. For instance, in the US, the landmark semiconductor investment via the CHIPS Act, which is central to President Biden's industrial strategy, led to a shortage of advanced electronic engineers. This could have been prevented with proactive policymaking.

Similarly, a separate list for startups can include engineers with specific expertise, project managers or product developers. This way, growing firms that don't have the capacity to hire from overseas due to sponsorship needs or similar hindrances would be able to utilise these lists to bring talent over easily. Another list can be focused on STEM talent, while one can look at mid-skilled occupations in hospitality or care industries.

Accordingly, listed occupations could be given fast-tracked access to visas and – to increase attractiveness – these visa routes can

59 [Akcigit, U., Kerr, W., *Growth through Heterogeneous Innovations.*](#)

60 [Acemoglu, D., Autor, D., Patterson, C., *Bottlenecks: Sectoral Imbalances and the US Productivity Slowdown.*](#)

61 [Citizens Information, *Critical Skills Employment Permit.*](#)

62 [Milliken, L., *A Brief History of Schedule A: The United States' Forgotten Shortage Occupation List.*](#)

63 [Milliken, L., *Coalition of Experts Urges DOL to Update the Schedule A Shortage List.*](#)



lead to permanent residency quicker than other types of worker visas. The changing world of work and demographic trends show that talent shortages will stay with us for long. Fit for purpose, proactive and flexible policies can help.

However, policymakers can go even further and reform the sponsorship systems and skilled worker caps altogether. Skilled worker visas are hindering the entrepreneurial potential of immigrants while serving mostly big businesses in a few industries.

Firstly, sponsorship systems should be more inclusive for startups and scaleups. A points-based sponsorship system – which would incorporate firm size, investment history and revenue – can be built to include these businesses in the sponsorship schemes without much bureaucracy and their sponsorship costs can be reduced in comparison to larger firms.

Additionally, stock options can be framed as alternatives to salary thresholds in sponsorship requirements. Startups mostly operate with scarce resources and stock options are a crucial way for them to attract talent, and incentivise growth. Going further, sponsorship requirements could also be abolished for some industries that aren't reliant on large, semi-skilled workforces that already create opportunities for the native population.

Lastly, without reforming the whole sponsorship system, countries can give around six months to a year of self-employment time to skilled migrant workers after they leave their employers. If, in the meantime, they can raise investment from acknowledged VCs, or reach a certain revenue level, this should count as their sponsorship.

The static structure of most skilled worker visa schemes has real-life consequences that are unforeseeable today. According to an Institute for Progress report, if Katalin Kariko, a leading researcher

on the mRNA vaccine technology who migrated to the US from Hungary in 1985, had to move to America today, she wouldn't be able to secure an H-1B visa.⁶⁴ The world was lucky enough to have her in the US for all these years, but it begs the question of which other talented people like her we are missing out on as they get stuck in the immigration system? Waiting till the next crisis to see what is lacking is not a great strategy at all.

Implications for policymakers

- Governments should build separate adaptable and proactive talent shortage lists for differing industries to fight off acute skills shortages. Easy and flexible visa routes for priority occupations should be in place to fill these shortages.
- Sponsorship schemes work against startups and scaleups, which mostly don't have the financial means and bureaucratic patience to sponsor migrant workers. These should be reformed with more flexible policies, which would give more firms the right to hire international talent so long as a certain proportion of their workforce is made up of native citizens.
- Stock options should count towards salary thresholds in sponsorship requirements to ease startups' access to international talent.
- In some industries that aren't reliant on large, semi-skilled workforces, sponsorship requirements can be abolished altogether.
- Skilled workers should be given sufficient time to continue living in the country without a job for them to establish their own businesses. Investment from an acknowledged VC or reaching a certain revenue threshold should count as their new 'sponsor'.

64 [Neufeld, J., *Immigration Powers American Progress*.](#)

SCIENTISTS, TECHNOLOGISTS, ENGINEERS, AND MATHEMATICIANS

Common challenges 	Notable policy solutions 	Paths to progress 
<ul style="list-style-type: none"> — With a seismic shift, R&D investments are now led by private companies rather than the public sector. Immigration systems haven't adapted to this. 	<ul style="list-style-type: none"> — Canada included STEM workers in its 'Express Entry' programme which gives migrants a faster route to permanent residency. 	<ul style="list-style-type: none"> — STEM professionals should be exempt from migration caps and sponsorship requirements. — R&D and industrial investments should be matched with reforms in migration policies to avoid skills shortages.
<ul style="list-style-type: none"> — Most careers in advanced STEM start in universities, so retaining students upon graduation is key. 	<ul style="list-style-type: none"> — The US's Optional Practical Training Extension for STEM Students gives graduates from STEM backgrounds three years to work in the US. 	<ul style="list-style-type: none"> — Advanced STEM graduates should be granted permanent residencies upon graduation. — Housing and living costs for early-career STEM researchers and PhD candidates should be eased.
<ul style="list-style-type: none"> — International competition for STEM professionals is fierce. 	<ul style="list-style-type: none"> — The UK's Global Talent visa gives independent entities room to pick and bring exceptionally talented professionals over. 	<ul style="list-style-type: none"> — Governments should build specialised task forces to actively recruit talented STEM professionals, without waiting for them to apply for jobs or visas.

It will surprise nobody to say that scientists, technologists, engineers and mathematicians play a disproportionate role in generating the innovations that push forward the frontiers of the economy. If there was one group of people a country would want to attract in order to boost innovation in its economy, it would be STEM researchers.

Migrant STEM professionals are exceptional innovators and they have a positive effect on native researchers' performance too. Research shows that Jewish scientists who escaped Nazi Germany revolutionised the US research scene and increased the performance of American researchers.⁶⁵

From 1950 to 2000, immigrant graduates with STEM degrees in the US demonstrated a patent rate twice as high as that of natives. Accordingly, researchers estimate that a one per cent increase in immigrant college graduates results in an increase of patents per capita by about 15 per cent.⁶⁶ The significant number of patent citations they receive also suggests that these patents were of particularly high quality.⁶⁷

Advancement in most industries depends on the invention of the new or the refinement of the once-new. It's not a coincidence that the productivity of academic researchers working in STEM has spillover effects in other industries, fueling innovation across the board.⁶⁸ Most nations, including the US and China,

⁶⁵ Moser, P., Voena, A., Waldinger, F., *German-Jewish Emigres and U.S. Invention*.

⁶⁶ Hunt, J., Gauthier-Loiselle, M., *How Much Does Immigration Boost Innovation?*

⁶⁷ Krol, R., *Effects of Immigration on Entrepreneurship and Innovation*.

⁶⁸ Branstetter, L., Ogura, Y., *Is Academic Science Driving a Surge in Industrial Innovation? Evidence from Patent Citations*.

have vacancies to fill with workers and researchers from STEM backgrounds. In the face of fierce competition, most economies are scrambling to attract scientists, technologists, engineers and mathematicians. Finding the best-tailored, competitive migration schemes is key to unlocking this innovative potential.

“Attracting scientists is not only seen as a way to gain the upper hand with respect to innovation and entrepreneurship – it’s also a national security matter.”

Attracting scientists is not only seen as a way to gain the upper hand with respect to innovation and entrepreneurship – it’s also a national security matter and of paramount importance for tackling challenges like climate change and health inequalities.

Common challenges

Historically, states were key drivers of research & development (R&D) investment. However, since the end of the 1960s, public spending decreased as governments increasingly left the task to the private sector. Although immigrants always played an important role in research, immigration systems did not adapt quickly enough to match this seismic change. In many countries, STEM researchers are treated almost as equals to skilled workers, and their migration processes remain hindered by sponsorship requirements or migration caps.

Additionally, the battle for talent is fiercer than ever. Not only are geopolitical adversaries competing, but allies are racing against each other as well – for instance, Canada has been advertising its easier migration policies in the US. In this environment, firms and research organisations should both be given the tools to attract talent easily, and governments should also get proactively involved in recruiting talented scientists.

What works

The UK’s recently introduced Global Talent visa, which authorises private entities and third-sector bodies to serve as sponsors for visas granted to skilled professionals and entrepreneurs is a step in the right direction.⁶⁹ These designated organisations actively seek out talented individuals globally,

support their visa applications, and assist them in settling in the country.

Canada’s decision to include STEM professionals in its ‘Express Entry’ programme is also indicative of progress.⁷⁰ Accordingly, Canada will welcome skilled newcomers from STEM backgrounds with work experience in priority jobs as permanent residents.

A career in STEM overwhelmingly begins at university, especially now that the ‘burden of knowledge’ – touched upon previously – has made making original contributions more difficult and time-consuming. Specific ‘student-to-worker’ programmes, such as the US’s Optional Practical Training Extension for STEM Students scheme, tailored for advanced STEM students are key to retaining talent. American chip technology leader Intel stated that without this policy, “we would be able to hire just 30 per cent of the highly skilled graduates we currently hire.”⁷¹

Right lessons and policies for progress

There is still room for improvement, however, and given the scale of challenges before us, more radical changes are required.

Firstly, STEM student-to-worker schemes should go much further. Even though the US’s policy gives graduates time upon graduation to work, it doesn’t provide them with a reliable path to permanent residency. After they complete the Optional Practical Training Extension, they are still required to switch visas that are capped and require employer sponsorship. Unsurprisingly, around 60 per cent of US-trained international AI PhDs who left the country after graduation said that immigration issues, such as green card caps, were relevant to their decision.⁷²

“STEM professionals should be exempt from prolonged sponsorship requirements and migration caps.”

Governments should go further and start considering granting permanent residencies to advanced STEM students, such as the ones doing Master’s or PhD programmes at distinguished universities and in critical fields, on the day of graduation if they made original contributions to their field or graduated with high grades.⁷³ Their talent mustn’t be gambled in unreliable job markets.

69 [UK Government, Global Talent Visa.](#)

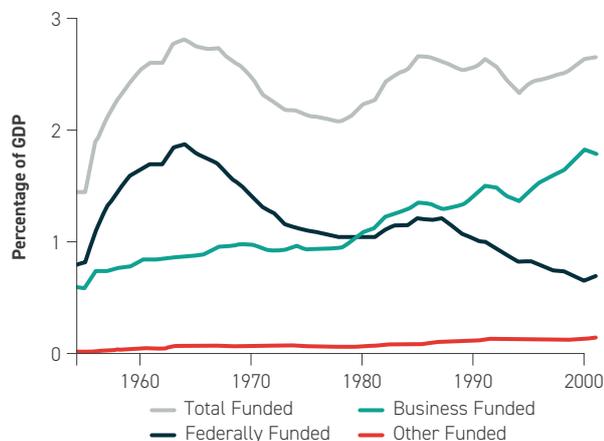
70 [Canada.ca, Canada Announces First-Ever Express Entry Invitations for Skilled Newcomers with STEM Experience.](#)

71 [Arnold, Z., Zwetsloot, R., Optional Practical Training.](#)

72 [Zwetsloot, R., Winning the Tech Talent Competition.](#)

73 [Strain, M., Stapling Green Cards to Diplomas: Time to Make This Cliche a Law.](#)

FIGURE 4: RATIO OF US R&D TO GDP, BY SOURCE OF FUNDS: 1953-2021 (US NATIONAL CENTER FOR SCIENCE AND ENGINEERING STATISTICS)



Additionally, PhD students and early-career STEM researchers bet their careers on future accomplishments that may be decades ahead. This is a risk factor for them, as most have to accept lower wages than they could get if they were to use their skills in the private sector. That's why countries that can ease housing and living costs for them will attract more talent as well. As noted in *The Housing Theory of Everything*, access to housing affects productivity and innovation deeply for professionals and it's a crisis in many major cities throughout the world.⁷⁴

Secondly, the private sector should be given flexible visa options for STEM talent. Since the end of the 1960s, in the US, total R&D spending ratio to GDP has been broadly constant. However, publicly funded R&D has gone down to one third since 1965, and the overwhelming majority (76 per cent in 2020) of research investment is now left to the private sector.⁷⁵ Similar trends can be seen in other developed economies as well.⁷⁶

Migration systems must adapt to this investment environment and create tailored schemes for researchers that will play a part in R&D. Governments should design 'STEM visas' for public and private organisations that are investing in R&D, and these schemes should provide easy paths to work and permanent residency. Unlike skilled workers, STEM professionals should be exempt from prolonged sponsorship requirements and migration caps.

Thirdly, research indicates that R&D capabilities are just as much an indicator of attractiveness for scientists' emigration choices as immigration policies. The international

migration patterns of STEM researchers show that they are moving to places that offer them opportunities.⁷⁷ That's why a migration scheme designed for scientists must incorporate plans for public and private funding of R&D capabilities. Vice versa, immigration reforms must always be included in critical industrial policies – otherwise, as seen in the US after the ambitious CHIPS Act aiming to increase semiconductor manufacturing, skills shortages will follow investments.⁷⁸ Increasing opportunity will increase attractiveness too.

Lastly, governments should get proactively involved in the recruiting of talented STEM professionals. Policies mentioned above would ease the process for businesses and research organisations but states can get involved in the talent search processes themselves. States can create small STEM task forces within their Technology or Education Ministries, responsible for finding and recruiting top STEM talent worldwide. For instance, a 2019 study in *Nature* showed that early-career researchers who were able to co-write papers with senior experts in their fields were more likely to lead successful academic careers.⁷⁹ Governments should use such indicators to spot talent earlier on, create opportunities for them and offer these talented individuals permanent residencies and paths to citizenship without any attachment to sponsorship or employment requirements.

Implications for policymakers

- Permanent residencies for exceptional advanced STEM students should be granted on the day of graduation.
- Flexible visa schemes for international STEM professionals should be designed and kept exempt from sponsorship requirements and migration caps.
- Designated 'STEM Task Forces' within government ministries should be established to actively identify and recruit top STEM talent worldwide and offer them easy paths to permanent residency.
- Housing and living costs for PhD students in critical STEM fields and early-career STEM researchers should be eased.
- Immigration reforms should be incorporated into critical industrial policies, such as investments in semiconductors or artificial intelligence, to enhance attractiveness and ensure skills alignment.
- To attract more STEM talent, governments should invest in more R&D capabilities or incentivise the private sector to do so.

⁷⁴ Myers, J., Southwood, B., Bowman, S., *The Housing Theory of Everything*.

⁷⁵ U.S. R&D Increased by \$51 Billion in 2020 to \$717 Billion; Estimate for 2021 Indicates Further Increase to \$792 Billion.

⁷⁶ 2019 R&D expenditure data analysed.

⁷⁷ Appelt, S., Beuzekom, B., Galindo-Rueda, F., Pinho, R., *Which Factors Influence the International Mobility of Research Scientists?*

⁷⁸ Chu, A., Irwin-Hunt, A., *US executives call for immigration reform to staff manufacturing boom*.

⁷⁹ Li, W., Aste, T., Caccioli, F., Livan, G., *Early coauthorship with top scientists predicts success in academic careers*.

UNUSUAL TALENT

Common challenges 	Notable policy solutions 	Paths to progress 
<ul style="list-style-type: none"> — Talented individuals with a proven track record are difficult to attract. 	<ul style="list-style-type: none"> — The US's O-1 Extraordinary Ability Visa, Australia's Global Talent or Business Innovation and Investment visas, and Singapore's Overseas Networks and Expertise visa are good examples of flexible and selective policies targeted for top talent. — The UK's High Potential Individual visa grants unsponsored work permits to graduates of top international universities. 	<ul style="list-style-type: none"> — Taking inspiration from Canada's special migration scheme that grants work permits for US's H-1B visa holders, similar programmes should be built to create a more mobile international talent pool. — The definition of 'high potential' should be expanded from its academic focus and other factors, such as work experience should be incorporated.
<ul style="list-style-type: none"> — Unusually talented individuals without many credentials are extremely difficult to identify. 	<ul style="list-style-type: none"> — Entrepreneur First picks individuals with entrepreneurial potential and creates a talent pool of potential founders, rather than directly investing in startups. 	<ul style="list-style-type: none"> — A 'Global Talent Exam', testing analytical skills and critical thinking capabilities, should be offered to everyone who wants to take it and successful applicants could be supported to launch their endeavours.

In his book *The Lever of Riches*, economic historian Joel Mokyr argues that “invention occurs at the level of the individual” and consequently invites policymakers to think about “the factors that determine individual creativity.”⁸⁰ Having a creative, innovative mind that is also capable of building disruptive organisations is extremely rare. As our Head of Innovation Research, Anton Howes, argues, the modern world – from office jobs to electricity – was made possible by “the incremental and accumulated work of just a few thousand innovators.”⁸¹

Every country, let alone every company, wants to recruit the unusual talents of the world. The benefits are straightforward – exceptional people build exceptional products, services or academic research. Having more of this extraordinary talent and giving them the opportunities they need will benefit every country in the world.

“Governments fall short in spotting new talent without polished references to show for it.”

Common challenges

Policymakers should remember that there is more human potential in the world than ever before thanks to economic and technological advancement worldwide. Internationally renowned entrepreneurs and inventors come from all over the world; meanwhile, top business schools in India are promising higher wages upon graduation than elite universities in the US.

⁸⁰ Mokyr, J., *The Lever of Riches: Technological Creativity and Economic Progress*.

⁸¹ Edited by Ives, E., *Operation Innovation: How to Make Society Richer, Healthier and Happier*.

However, it's not always easy to spot and attract such extraordinary talent.

The difficulty in identifying remarkable individuals especially applies to people without a track record of success, perhaps because they haven't had the opportunities to display their genius. The difficulty of attracting them, on the other hand, generally comes from the sheer competition for talented individuals.

What works

There are multiple policy examples designed to attract exceptionally talented individuals with unusual credentials. However, governments fall short in spotting new talent without polished references to show for it.

The UK's High Potential Individual visa, which gives a pathway for recent graduates from 50 top international universities to come to the UK without a job offer for up to two years, is a genuinely standout example of innovative thinking within government to enable future success stories to come to a new country and build a career or business.⁸² However, as we'll turn to later, it can go much further.

But the UK is not alone in developing policies to attract particularly high-potential individuals. The US's O-1 Extraordinary Ability Visa, for example, attracts scientists, artists, entertainment professionals, inventors and athletes with a proven track record to come to the US.⁸³ Similarly, the UK offers a Global Talent visa⁸⁴ for leading researchers, artists and executives while Australia's Global Talent or Business Innovation and Investment visas⁸⁵ are tailored for exceptionally talented individuals and entrepreneurs with a track record of success. Singapore's Overseas Networks and Expertise visa scheme⁸⁶, on the other hand, is specifically designed for international businesspeople and artists.

All these visas are very competitive and granted extremely cautiously. Applications take time and may often require external advice to complete.

The visas have also spurred innovative policymaking in other countries. Canada, for example, has recently started to offer work visas for migrants with H-1B visas in the US, piggybacking American bureaucracy by interpreting their approval as a good enough indicator for skilled work.⁸⁷ This provides a novel approach which other countries may wish to replicate.

Right lessons and path to progress

Taking inspiration from Canada's special visa scheme for H-1B holders, similar programmes should be built to ease other countries' access to unusually talented individuals, where cooperative diplomatic relationships already exist. This way, the bureaucratic toll of high-talent admissions would decrease, and international talent ecosystems would emerge.

Secondly, countries could build on top of the UK's High Potential Individual visa. Accepting graduates of top international universities is a bold but consensus-seeking step. It can get more creative and effective.

Many of the world's great universities, which offer high incomes upon graduation, do not make the list of the 50 institutions. In order to be included in the list of 50, a university must appear on at least two of three internationally recognised university rankings. But these lists don't reveal much about wealth-creation potential. In fact, the majority of the top 25 global universities as measured by average earnings upon graduation are not eligible for the visa, including the famous Indian Institute of Technology Ropar, which tops the list, or any international business school.⁸⁸

“Policymakers can attempt to find talent proactively and give them opportunities to succeed.”

Also, while an academic record may be a good proxy of high potential, it is far from the only one. Experience in highly competitive multinational companies can indicate as much potential, if not more. Many elite companies, including Google or McKinsey, have lower acceptance rates for their internship programmes than the world's best universities do for their Bachelor's degrees.⁸⁹ Steady employment records in top multinational companies could also be included in high-potential visas.

However, even though these are all great efforts and more international talent schemes can be implemented, they disregard one thing – past achievements are not the only indicator of talent. It's one thing to build a visa system for those who can demonstrate qualifications, it's another to build one which can proactively find new talent, or rather, currently 'unacknowledged' talent.

82 [Home Office and HM Treasury, Points based system welcomes highly skilled graduates to the UK.](#)

83 [USCIS, Eligibility for O Classification.](#)

84 [GOV.UK, Apply for the Global Talent visa.](#)

85 [Australian Government, Visas for Innovation.](#)

86 [Singapore Ministry of Manpower, Overseas Networks & Expertise Pass.](#)

87 [Anderson, S., Canada's Immigration Rules Boost Companies And H-1B Visa Holders.](#)

88 [Martellini, P., Schoellman, T., Sockin, J., The Global Distribution of College Graduate Quality.](#)

89 [Glenn, A., How to land an internship at Google, from someone who did.](#)



To achieve this, governments can create ‘Global Talent Exams’, open to application from everyone with the right language skills worldwide, designed to understand the applicants’ skills, talents and intelligence. It shouldn’t resemble ordinary school tests that people can prepare for, but rather test for more fundamental skills, such as problem-solving, cognitive abilities and analytical thinking. The high-achievers on this ‘exam’ should then be interviewed by designated ‘talent searchers’ who will be responsible for making the decision on these candidates’ final outcomes. In this way, policymakers can attempt to find talent proactively and give them opportunities to succeed.

Accordingly, governments can accept a tightly capped number of candidates annually and support them to settle into their new life – helping with finding housing, networking and accessing finance. Successful British entrepreneurial organisation Entrepreneur First provides a good example of how this could work in practice. Rather than investing in startups, Entrepreneur First picks talented individuals with entrepreneurial capabilities to join their talent network. Individuals in this pool find co-founders and utilise the network while building their businesses. Similar unusual talent pools could be built via this international programme and investors, VCs and governments should come together to pave the way for projects that will sprout eventually.

Implications for policymakers

- Special visa schemes to attract high-potential individuals can be developed. Graduates of top universities, both in terms of academic reputation, wealth creation potential and exceptional faculties, and professionals of selective multinational corporations should be given access to these migration routes.
- To increase international mobility of talented individuals, like-minded governments should see each others’ selective visa schemes for unusually talented individuals as a good enough indicator to fulfil their own visa requirements.
- Governments can trial ‘Global Talent Exams’ to identify unusually talented individuals worldwide. Spotted talent should be recruited and financed to move and build their own project. They can be included in a network of talent where they can partner with others and access finance.

ENTREPRENEURS

Common challenges 	Notable policy solutions 	Paths to progress 
<ul style="list-style-type: none"> — Competition to attract entrepreneurs is fierce, with many advanced economies introducing tailored visa schemes for founders. 	<ul style="list-style-type: none"> — Singapore's EntrePass and Taiwan's Entrepreneur Visa are built to grant permits to intellectual property holders and experienced entrepreneurs with flexible visas for long time frames. 	<ul style="list-style-type: none"> — Governments should pick foreign entrepreneurs and proactively offer them fast-track visa schemes to expand their businesses. — Visa schemes designed for entrepreneurs should not be capped and should offer visa holders long enough time frames and a stable path to permanent residency as they build their businesses. — Skilled worker visas should be reformed for potential entrepreneurs to quit their sponsored jobs and launch their own businesses. Investment should act as sponsorship.
<ul style="list-style-type: none"> — Accessing finance, building a team and finding the right infrastructure is challenging for newcomers to a country. 	<ul style="list-style-type: none"> — E-residency programmes, such as Estonia's, with tax incentives, attract entrepreneurs. In that way, immigration becomes a less risky process. — Israel's Innovation Labs programmes provide migrant entrepreneurs with training and access to critical technological infrastructure. New Zealand's Global Impact Visa, in partnership with the Edmund Hillary Fellowship, provides participants with training, investment and networking opportunities. 	<ul style="list-style-type: none"> — Entrepreneur visa holders, chosen by independent organisations, should have easy access to office space, and business and administrative training.
<ul style="list-style-type: none"> — Spotting entrepreneurial talent is a difficult task if there isn't a track record of success. 	<ul style="list-style-type: none"> — The UK's Innovator Founder visa and similar policies from around the world let potential entrepreneurs try out their ideas with independent business professionals before emigrating. 	<ul style="list-style-type: none"> — Via a 'Global Entrepreneurship Programme', governments can invest in and train foreign talent in business schools around the world before the immigration process begins. — An annual 'Global Entrepreneurship Competition', organised by a government in partnership with potential investors, can create a meritocratic competition field for potential entrepreneurs. Any selected by VCs can be granted fast-track visas to launch their businesses.



Entrepreneurs are key to delivering innovation and economic growth. Through the process of presenting new ideas, products and business models, they challenge incumbents and keep economies moving forward. Increasing the number of people with the capabilities to launch a business is a benefit for any country. Lately, the spread of ‘startup’ and ‘entrepreneur visas’ in advanced economies indicates that most countries are on the lookout for more of them.

Common challenges

The competition for founders automatically creates common challenges for policymakers all over the world. Firstly, it becomes ever more difficult to attract already-successful entrepreneurs through existing policy routes. Secondly, it creates a competition for spotting future entrepreneurs with high potential. Lastly, for migrant entrepreneurs themselves, accessing finance, building a team and finding the right infrastructure are challenges they face right from the moment of arrival.

Policymakers worldwide have been trying to overcome these challenges – some with success, some less so.

What works

Countries which attract entrepreneurs directly quickly reap the benefits of doing so. Statewide data from Australia shows that migrants who were entrepreneurs in their home countries are, compared to other visa holders, more likely to launch their businesses after migration.⁹⁰ Unsurprisingly, an entrepreneurial background gives migrants a head start.

For attracting entrepreneurs with a good track record, Singapore’s

EntrePass is seen as a particularly successful policy scheme. Singapore accepts past entrepreneurial activity, like founding and selling a tech company, raising significant investment from investors in the past, or owning intellectual property as good enough indicators of potential. Just like Singapore, Taiwan also considers owning a patent as a sign of potential and expertise and considers it enough to grant an Entrepreneur Visa.⁹¹

For potential entrepreneurs, the most common policy seems to incorporate independent business bodies responsible for endorsing entrepreneurs’ business ideas and plans, making sure they are innovative – though this is mostly blurry – and scalable. Canada, the UK, Denmark, UAE and Estonia implement similar startup/entrepreneur visas with these requirements. Then, to compete, countries need to find incentives for entrepreneurs to choose them over the other, and these can hardly be weather or culture, things you cannot change via policy.

“There is intense competition from countries to attract entrepreneurs from all over the world.”

Estonia, for instance, markets its ‘digital state’ as a competitive edge. Accordingly, migrant entrepreneurs can run their businesses “almost entirely online, report automatically pre-filled taxes in a few clicks, and use the mobile ID to sign legal documents on your phone”. It also highlights low taxes, a well-educated native population and high quality of life.⁹² Canada links potential entrepreneurs with venture capital funds and

90 [Mahuteau, S., Piracha, M., Tani, M., Lucero, M., *Immigration Policy and Entrepreneurship*.](#)

91 [Ministry of Economic Affairs, *Taiwan Entrepreneur Visa*.](#)

92 [Startup Estonia, *Why Estonia?*](#)



grants visas to those who secure an investment.⁹³ Although this makes the visa programme more selective, it gives easy access to capital for foreign entrepreneurs which remains the greatest challenge for their businesses to grow.⁹⁴

Meanwhile, Israel's Innovation Labs Program assists startups with access to technological infrastructure and expertise in market insights via collaborations with other companies in the industry, investors and academia. Accordingly, the Israel Innovation Authority funds 33 per cent of the costs to establish the necessary technological infrastructure up to a maximum of NIS 4 million (around £850,000) and takes on 50 per cent of the lab's operating expenditures each year up to a maximum of NIS 500,000 (£105,000).⁹⁵ Similarly, New Zealand's Global Impact visa is partnered with the Edmund Hillary Fellowship which provides participants with training programmes, investment opportunities, access to talent and access to a network of local and global investors, advisors and partners.⁹⁶

Lastly, the digital residency models of Estonia and Georgia help them with attracting entrepreneurs. For instance, Estonia's flexible digital policy lets people living outside the country benefit from digital residency, giving entrepreneurs the opportunity to build their business anywhere. Matched with tax policies designed to incentivise entrepreneurship, similar e-residency programmes can attract promising startups. Georgia taxes only one per cent of business turnover up to about \$155,000 and even though Estonia's tax rates for e-residency are low, the success of the scheme means that it has already more than paid for itself in extra income tax receipts.⁹⁷

Right lessons and path to progress

Clearly, there is intense competition from countries to attract entrepreneurs from all over the world. However, there is also room for progress.

“Thanks to the self-selection process of immigration, which leads individuals with entrepreneurial mindsets to immigrate, many countries already have potential migrant entrepreneurs.”

First, in this environment, Governments must stop thinking from the perspective of “we'll build visa schemes, they'll come” and start proactively recruiting talented entrepreneurs.

This has been done historically – as part of Operation Paperclip, the US actively recruited over 1,600 German engineers after the Second World War. They became leading figures in the world of engineering, research and science – even pioneering the US space programme.⁹⁸ Governments should do something similar today for entrepreneurial talent. They should make a compelling offer to entrepreneurs for why they should expand or launch their next endeavour in their country.

93 [Canada.ca, How can I qualify for the Start-up Visa Program?](#)

94 [Fairlie, R., Lofstrom, M., Immigration and Entrepreneurship.](#)

95 [Israel Innovation Authority, Innovation Labs Program.](#)

96 [Global Entrepreneurship Network, Atlas: Global Impact Visa.](#)

97 [e-Estonia, How do e-residents pay taxes?: ExpatHub, 1% Tax.](#)

98 [Dumitriu, S., Howes, A., Salter, P., Operation Paperclip 2.0. In: The Entrepreneurs Network, The Way of the Future.](#)

Secondly, policymakers should focus on utilising the entrepreneurial capacity already existing in their countries. Thanks to the self-selection process of immigration, which leads individuals with entrepreneurial mindsets to immigrate, many countries *already* have potential migrant entrepreneurs. Policymakers should remember that most successful entrepreneurs don't start their careers as entrepreneurs, and create flexible policy schemes for these migrants to make the jump from being skilled workers to entrepreneurs.

The continuous need for sponsorship from employers in the UK and the US is making this an unnecessary challenge for many would-be entrepreneurs. Other avenues to sponsorship should be considered – such as funding raised from institutional investors by entrepreneurs. That way, skilled workers can stay on their visa paths as entrepreneurs.

Thirdly, to attract them in the first place, policymakers should focus on easing the process for migrant entrepreneurs to launch their businesses and restart their lives. Migrant entrepreneurs report that ordinary processes such as setting up a bank account, accessing loans, renting a house and an office, and administrative duties delay their business journeys.⁹⁹ Many migrant entrepreneurs find themselves in vicious cycles where opening a bank account requires an address while renting a house requires a bank account. Public policy should make this transition easier for migrant entrepreneurs.

Similarly, given the international race for talent, entrepreneur visas should not be restricted by annual caps and visa holders must be given a long enough time and easy paths to permanent residency to establish their businesses. For instance in France, unlike most of its peers, the La French Tech¹⁰⁰ visa is not capped and New Zealand offers 3-year-long visas to entrepreneurs.¹⁰¹ Caps make countries miss out on potential talent and restrictive timeframes make utilising talent unnecessarily difficult.

Additionally, governments can train potential entrepreneurs before bringing them over. Building on top of the 'skills mobility partnerships', in which countries that need access to workers with certain skills train immigrants prior to relocation, government can partner with local business schools and universities to train and handpick entrepreneurs under 'Global Entrepreneurship Programmes'.¹⁰² Skills mobility partnerships have under-delivered mostly because they are expected to give access to a high number of semi-skilled workers. Contrary to this, the Global Entrepreneurship Programmes should be deliberately selective and its 'graduates' should be given fast-track access to entrepreneurship visas.

Lastly, to create an egalitarian playing field for potential entrepreneurs, governments should come together with international investors and Venture Capitalists (VCs) to create a 'Global Entrepreneurship Competition'. As part of this annual online competition, potential founders should start with

elevator pitches to talent searchers and the selected few – at the end – should present their ideas and business plans to VC professionals. Startups chosen by VCs should receive investment and an invitation to the country to launch their businesses.

Overall, to increase migrant entrepreneurial potential, governments must focus on both maximising the entrepreneurial potential of its migrants and attracting more talent from abroad. However, advanced economies are racing for international talent. That's why the right incentives, such as flexibility, access to capital and ecosystem-building, and other creative policies are essential to getting ahead.

Implications for policymakers

- To maximise the entrepreneurial potential of migrants who have already emigrated, governments must reform sponsorship requirements for skilled workers to let them launch their own businesses without going through a lengthy bureaucratic process to change visas.
- Migration processes of foreign entrepreneurs with a track record of success should be eased. The establishment of successful companies in the past or the ownership of top-quality intellectual property should be enough indicators of potential to grant them entrepreneur visas.
- Entrepreneur visas should be exempt from migration caps. Also, they should offer visa holders long enough time frames before extension and a stable path to permanent residency as they build their businesses.
- Governments should provide entrepreneurial migrants easy access to training, technological infrastructure, local networks and access to capital upon emigration.
- Digital residencies and tax incentives can be offered to foreign entrepreneurs to establish their companies in another country without them needing to move.
- Governments should proactively recruit talented entrepreneurs by making compelling offers for expansion or new ventures.
- Through 'Global Entrepreneurship Programmes', governments can partner with business schools around the world to train and handpick potential entrepreneurs. Selected immigrants can be granted entrepreneur visas without going through ordinary bureaucratic processes.
- In partnership with VCs, governments can create 'International Entrepreneurship Competitions' in which potential entrepreneurs from all over the world can present their ideas and business models to investors. Chosen ones would be given access to entrepreneur visas to emigrate alongside their first investments from VCs to establish their companies.

99 [Vandor, P., Research: Why Immigrants Are More Likely to Become Entrepreneurs.](#)

100 [Global Entrepreneurship Network, Atlas: La French Tech Initiative.](#)

101 [Global Entrepreneurship Network, Atlas.](#)

102 [UN Migration, Skills Mobility Partnerships.](#)



CONCLUSION

Ability plus opportunity equals innovation. Yet while the world has more talent than ever before, it is not always possible for it to be matched up with the opportunities on offer as much as we might wish. This is true within countries, and even more so between them.

To remedy this, it is essential countries have immigration systems which help, rather than hinder, the movement of talented individuals. By looking around the world for inventive and durable solutions, we can see what initiatives are working to enable the creation of new pathways for innovators to relocate to where their talents are best deployed. However, there is still much more room for progress.

The ideas put forward in this report to start making progress revolve around four key guiding principles: holism, flexibility, proactivity and competitiveness. To make migration systems fit for this age, policymakers in every country must have these core values at the front of their minds when making policy.

Taking them in reverse order, competitiveness is key simply because almost everyone is racing to get international talent. It's common sense that talented individuals are key in enhancing innovation, productivity and entrepreneurship – and many countries are desperate for them. For that reason, offering a few tailored visa schemes cannot put countries ahead of the game; that's only the starting point. That's why investing in further capabilities – such as easing access to capital or technological infrastructure and easier routes to permanent residency – will differentiate some countries from others. Right incentives will make a difference.

Similarly, designing proactive policies to spot and recruit talent will also be key in making countries more attractive than others. Until now, migration policies have been based on building visa schemes to let people arrive. In this competitive environment, governments should be going to the builders first – let them be entrepreneurs or STEM researchers – rather than

waiting for them to come. That's why building bureaucratic capabilities to recognise and recruit international talent will be essential going forward. This can be achieved through many ways, from Global Talent Exams to International Entrepreneurship Competitions, which are yet to be built.

Additionally, flexibility will be essential to utilise the potential of high-skilled immigrants at a maximum level. Static migration schemes of the past restrain talented people's career prospects. Standard procedures such as migration caps and sponsorship requirements disincentivise employers to hire entrepreneurial talent, make emigration harder for entrepreneurial individuals and work against innovative startups and scaleups. Thus, migration routes must be reformed to give skilled migrants the capabilities to be risk-takers and self-starters.

Lastly, even though tailored policies for entrepreneurs or students can attract talented individuals, policymakers should see migration from a holistic perspective. In the end, migrants' journeys evolve over time: students turn into STEM researchers, STEM professionals turn their research into companies and high-skilled professionals build innovative businesses. Innovation does not come from a single source and nobody should expect it to. That's why the world's most pro-innovation visa system isn't the one attracting any of the mentioned sub-groups of immigrants – it's the one giving opportunities to all of them.

For some time, everyone seemed to be very excited that the world was turning into a 'global village'. Most countries fell short of building the migration policies fit for that world. Why not start now?

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We are the Secretariat of the APPG for Entrepreneurship, which was set up to encourage, support and promote entrepreneurship and to engage with entrepreneurs; and to ensure that Parliament is kept up to date on what is needed to create and sustain the most favourable conditions for entrepreneurship.



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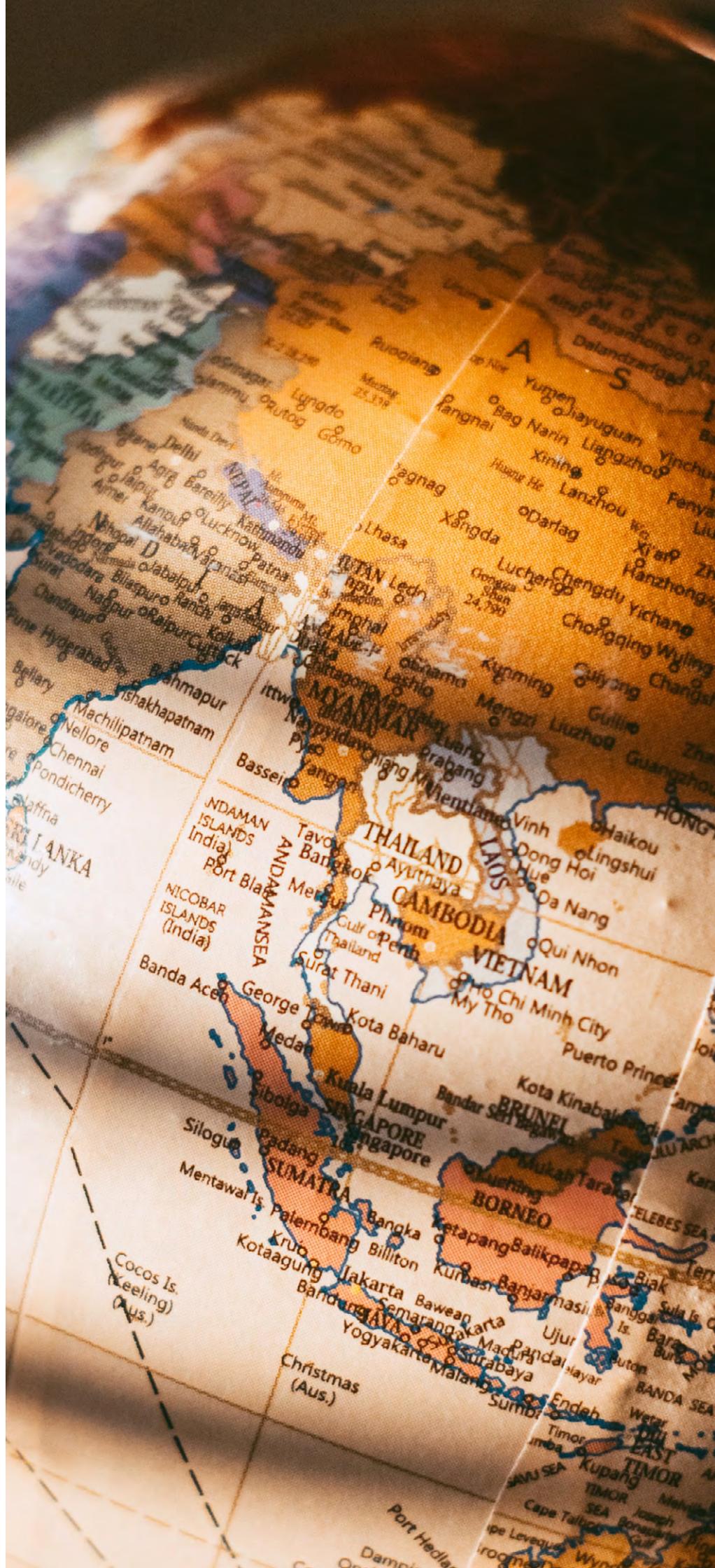
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