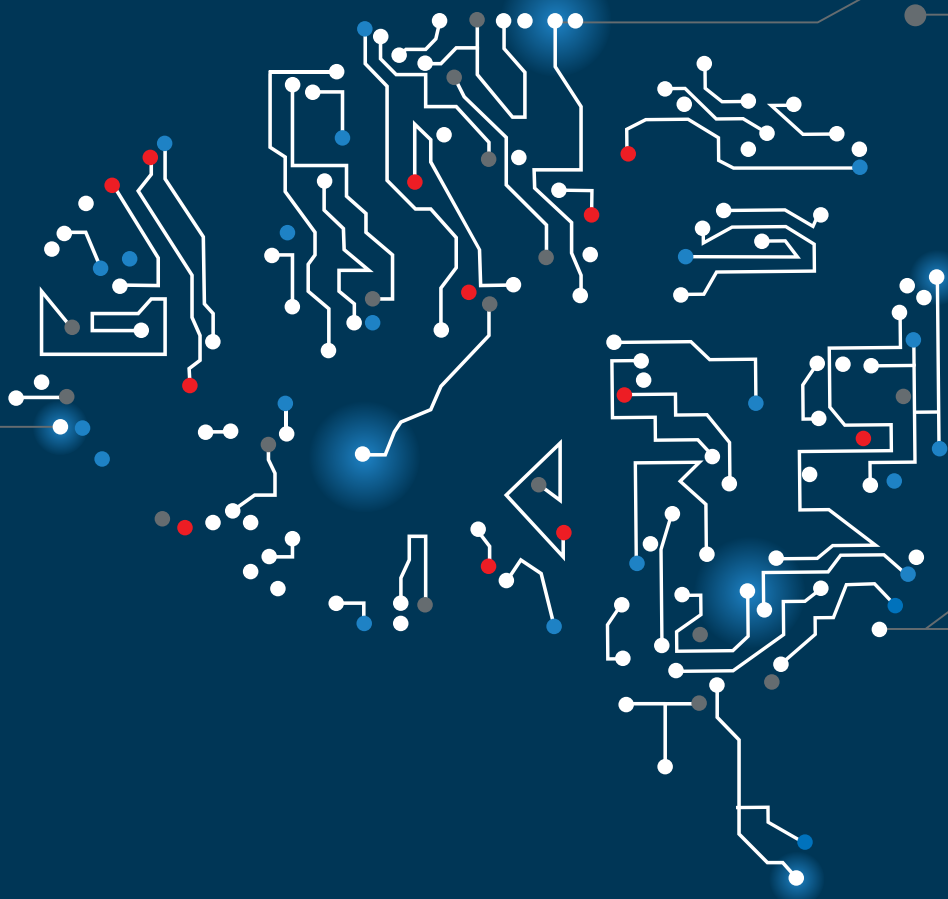


INFORMATION INFLUENCER, STRATEGY SHAPER

The changing profile of the CIO in Asia-Pacific

A report from The Economist Intelligence Unit



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ABOUT THIS RESEARCH

Information influencer, strategy shaper: The changing profile of the CIO in Asia-Pacific is a report from The Economist Intelligence Unit, sponsored by Dell. It documents how chief information officers (CIOs) in the Asia-Pacific region are taking on functional roles above and beyond information technology (IT).

This report draws on two main sources for its research and findings:

In November 2015 The Economist Intelligence Unit analysed 4,577 LinkedIn profiles of CIOs in Asia-Pacific to understand the different functional roles they have played during their careers. The analysis provides hints about how the role of the CIO is evolving and how the nature of the evolution differs across country markets, company sizes, industries and career spans.

- **Geography:** The profiled CIOs include 2,891 based in Australia/New Zealand, 222 in China, 945 in India, 180 in Japan and 339 in Singapore.
- **Industry:** The CIOs work in organisations spanning seven sectors:
 - Banking
 - Education
 - Government
 - Retail
 - Services (legal and financial services)
 - TME (entertainment, broadcast media, IT and services, online media)

- Manufacturing (electrical and electronic manufacturing, computer hardware, consumer goods, consumer electronics, pharmaceuticals)

- **Company size:** 61% of the profiled CIOs work in firms with more than 500 employees.

The Economist Intelligence Unit also examined the career paths of seven CIOs in Asia-Pacific by drawing on LinkedIn data and other publicly available career information such as employee profiles on their company website. The CIOs are, listed in order of surname:

- VVR Babu, former CIO of Indian conglomerate ITC
- Angela Farrar-Tilley, CIO, Spar Australia
- David Gledhill, head of group technology and operations, DBS Bank
- Anoop Handa, founder and managing director, Anlight Consulting Services, and co-founder and director, Revutel Consulting Services
- Chas Isaac, CIO and director of cost management and corporate development, AET Tankers
- Shigeo Kitara, CIO, Nissin Foods
- Min She, chief process officer and CIO, Haier Group

Information influencer, strategy shaper is an Economist Intelligence Unit briefing paper sponsored by Dell. The EIU conducted the research and wrote the report. The findings do not necessarily reflect the views of the sponsor.



A note about methodology

The data used in the analysis was generated by querying CIO profiles on LinkedIn. The queries related to the non-IT functions the CIOs mention as having been involved with at some point throughout their careers. The queries were:

1. Do CIOs align themselves with functions other than information technology?
2. Does the length of experience of CIOs influence the breadth of functions they are involved in?
3. Does the range of functions CIOs are involved in vary with company size?
4. Does the range of functions CIOs are involved in vary with different industries?
5. What roles do CIOs in different markets tend to move to later in their careers?

The overall results for these five queries were broken down by the executives' country markets, industry groupings, company size categories and length of experience.

When calculating region-wide figures, a weighted adjustment factor based on each country's overall LinkedIn penetration was applied to the raw data to account for variations in the size of the country executive pools used in the study. For example, the largest pool is that of Australia/New Zealand, but its actual weight in the total LinkedIn population of the included countries is 14.5% — less than some of the others. Therefore a weight of 14.5 has been applied to Australia's raw data when aggregating figures up to the region-wide level. The same calculation has been made for all other countries' raw data.



INTRODUCTION

As a company's operations have become more integrated, the lines between different executive roles have blurred. Roles are no longer narrowly defined in terms of functions; professionals are instead required to handle a variety of responsibilities—even those that may have traditionally sat outside their primary domain.

There is no better example of this than the role of the chief information officer (CIO). Gone are the days when IT's sole mission in a company was to ensure systems ran seamlessly and cost-efficiently. Technology today has a fundamental role to play in all parts of a business, from sales to marketing and finance. In this context, CIOs have become vital to their organisations: besides directing the management of all IT resources, it is usually they who lead efforts to bridge the gap between technology and the rest of the business, and to ensure the success of the company's digital transformation.

As a result, CIOs in most regions and industries have seen their roles evolve, expanding from the basic mission of 'keeping the lights on' to encompass other less traditional responsibilities including finance, consulting, operations and entrepreneurship, among others.

This research explores the roles being played by CIOs today in five Asia-Pacific markets: Australia/New Zealand, China, India, Japan and Singapore. It provides insights on how CIOs are increasingly becoming multi-functional and breaking out of the mould of the traditional CIO.



A WIDER REMIT

Given IT's traditional support role, it may not be surprising that the non-IT functions CIOs across the five markets most strongly identify with are administration, operations and support ('operations' for short). More noteworthy is that CIOs align themselves almost as strongly (and more so in the case of Singapore) with functions well beyond the traditional IT remit—business development, sales, marketing and entrepreneurship ('business development'). Chas Isaac, Singapore-based CIO at AET Tanker Holdings, a Malaysian-owned petroleum shipping company, is one such person wearing several hats. While he has been the group's CIO for the past 10 years, he has also been the company's director of cost management and corporate development since 2012.¹

One in six Australia/New Zealand CIOs also aligns with the consulting and project management (consulting) function — substantially more than in other markets (see Figure 1). One example is Angela Farrar-Tilley, CIO at Spar Australia, a retail group. She has worked in the IT industry for more than 20 years and in her current role for the past four years; prior to that she was a consultant at multiple companies including Bayside Consulting Services, Tectura and Dialog Information Technology for over 12 years.²

Many CIOs in the developing markets of India and China also align themselves with operations and business development functions,

but the proportion doing so in each is substantially lower than those in the mature markets of Singapore, Australia/New Zealand and Japan. There are, however, outliers to this trend. Shigeo Kitara, for instance, is presently the CIO of Nissin Foods, a Japanese instant noodle company. In a career spanning 20 years, Mr Kitara has followed the pure IT route in a career that saw him start at Procter & Gamble, before moving on to Philip Morris Japan where he became director of information services, and finally on to Nissin three years ago. Not only has Mr Kitara's career always centred on IT, but it has also played out in the same sector.

In fact, China and India are the markets in which the smallest proportion of CIOs have an association with any functions besides IT—38% and 43% respectively, compared with Singapore (62%), Australia/New Zealand (57%) and Japan (53%).

VVR Babu, who served as CIO of ITC, an Indian conglomerate, for 12 years until early 2015, is another who has followed the pure technology track. Since joining ITC in 1979, Mr Babu worked in a succession of IT roles, first as a business analyst, solutions analyst and technology manager, then as CIO of its agriculture and fast-moving consumer goods business and later as senior vice president at ITC Infotech, before assuming the role of group CIO.³

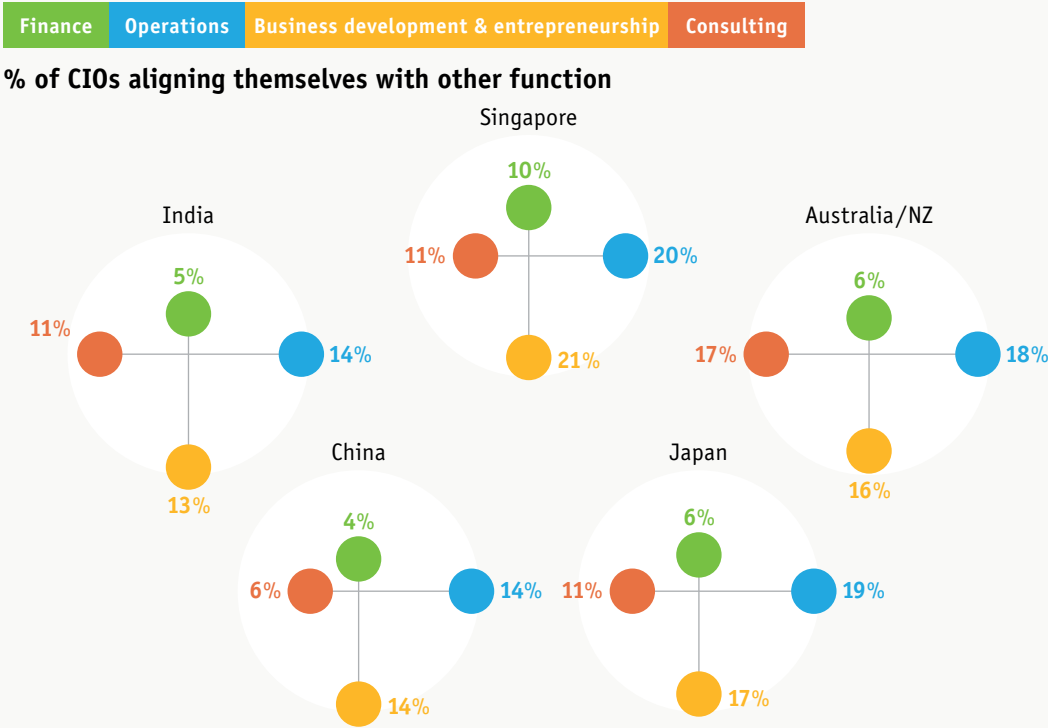
¹ LinkedIn profile of Chas Isaac, CIO at AET Tanker Holdings

² LinkedIn profile of Angela Farrar-Tilley, CIO at Spar Australia

³ LinkedIn profile of VVR Babu, CIO of ITC



Figure 1: Beyond information technology (IT)
CIOs involved with functions other than IT



Source: LinkedIn data. Based on research by The Economist Intelligence Unit © 2016

There could be several reasons why CIOs in the mature markets are more likely to identify with non-IT functions. The most plausible explanation is that IT’s role at developed-market companies is more likely to have expanded

as technology does more to drive business strategy and profitability. In other words, the role of CIOs in mature markets is no longer ‘boxed in’, owing to the requirements of the companies they are working at.

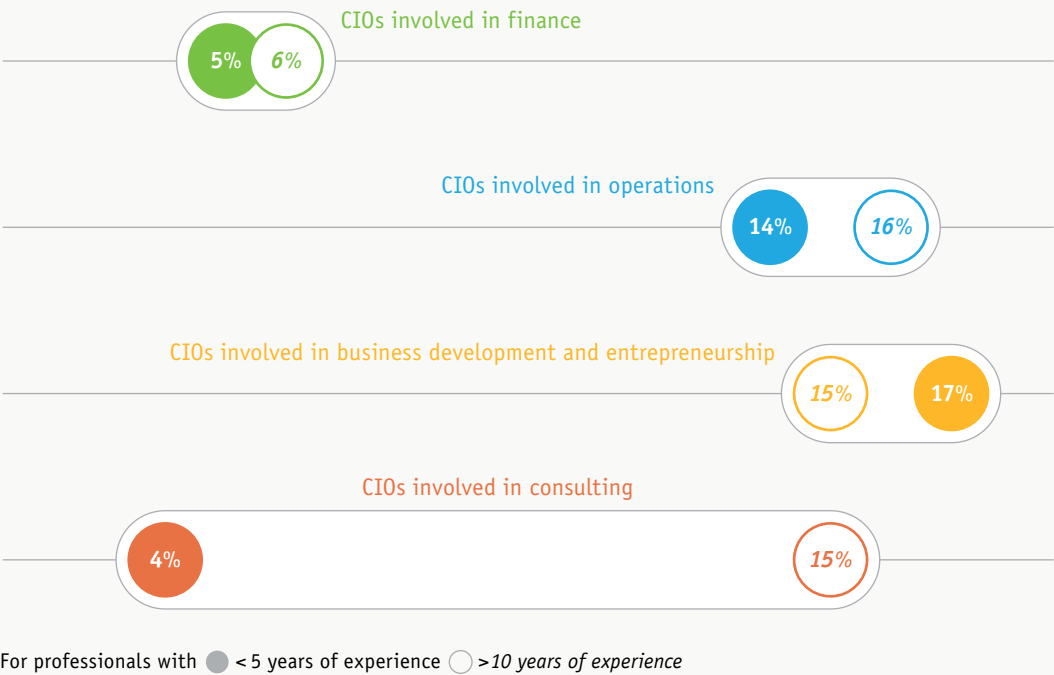


More experience, greater breadth

The vast majority (82%) of CIOs covered in this study have 10 or more years of experience. About one in 10 has between 5 and 10 years of experience; just 7% have five years or less, which is to be expected given the senior nature of the role.

The longer the experience, the greater the breadth of functional knowledge a CIO is generally likely to have. CIOs with 5-10 years of experience have relatively strong linkages with non-IT functions; this is the case for 32% of Singapore CIOs, 36% of those in Japan,

Figure 2: The longer the experience, the broader the role
CIOs involved with functions other than IT (by length of experience)
% of CIOs aligning themselves with other function



Source: LinkedIn data. Based on research by The Economist Intelligence Unit © 2016



53% in India, 60% in Australia/New Zealand and 66% in China. The linkages appear even stronger for those CIOs with more than 10 years of experience. This group's average is 51%, meaning that over half of our longest-serving Asia-Pacific CIOs have experience of one or more non-IT function. The highest linkage rate is found in Singapore, where two in three long-serving CIOs align themselves with at least one non-IT function.

The converse is also true: CIOs with five years or less of experience have had less occasion to practice a non-IT function. Only 14% of Singapore CIOs, for example, have done this. India CIOs, however, buck the trend, with 42% of this greener group having had exposure to other functions—the highest of any market.

David Gledhill joined Singapore-based DBS Bank as its head of group technology and operations in 2008. In one of his former roles, Mr Gledhill worked at JP Morgan for more than 20 years. While there, he was involved in several non-IT functions such as mergers, off-shoring and regionalisation of the bank's operations, and was, in his last position there, head of investment banking operations in Asia. At DBS, he is responsible for managing more than 5,000 staff and focuses on strengthening the bank's technology and infrastructure platform. He also looks at customer experience and process innovation, and is responsible for the bank's procurement and real estate initiatives.⁴

Size matters, in some ways...

A majority of the CIO group analysed work in larger organisations: 61% work in companies employing more than 500 people, and 39% in companies employing fewer than 500. Size does not seem to influence the overall incidence of CIO linkages with other functions in any predictable way. In some markets, such as Australia/New Zealand, the linkage levels are roughly the same; in others—Singapore, Japan and India—CIOs working in smaller companies have greater exposure to non-IT functions than those in larger companies, while in China it is the opposite.

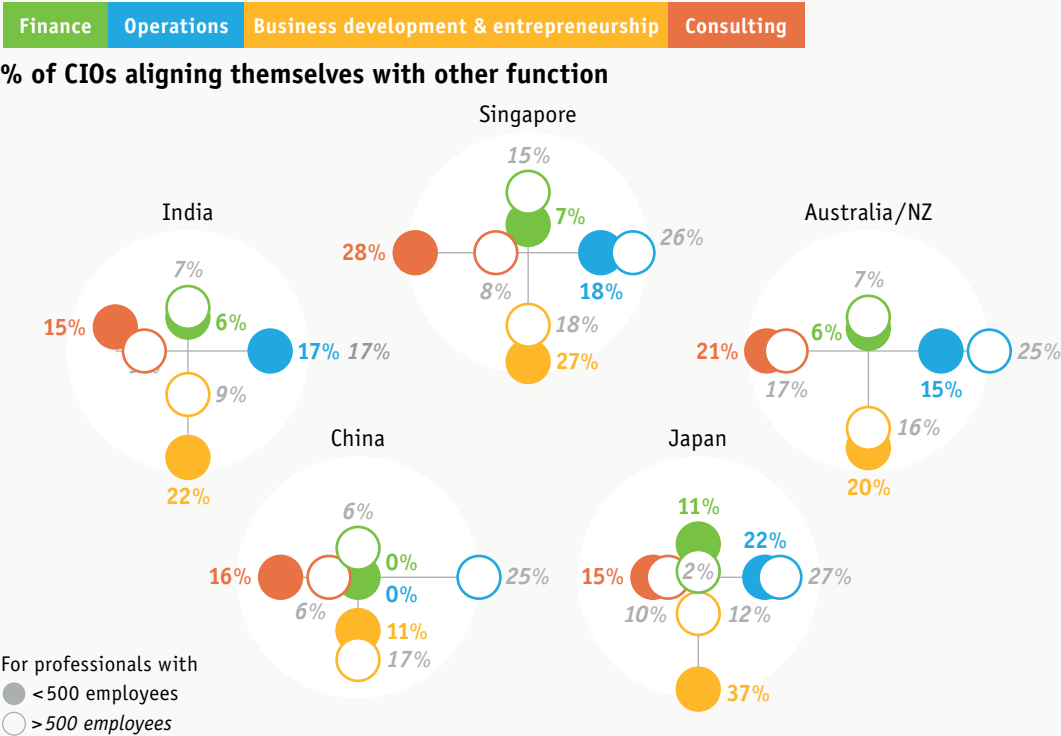
Size does appear to have an influence, however, when comparing CIO exposure to different non-IT functions. As is clear in Figure 3, CIOs working in larger companies are much more likely to align themselves with the operations function than with any other. This is not the case among CIOs working in firms with less than 500 employees; with the exception of those in China, these executives appear to have as much or more exposure to business development as to other non-IT functions.

Explanations are not readily apparent, but the greater exposure to business development could result from greater entrepreneurialism and organisational youth—attributes more likely to be found among smaller companies than larger ones. For example, it would not be unusual for CIOs of start-ups to work closely with sales and marketing colleagues.

⁴ DBS Management. Available online at <http://www.dbs.com/about-us/our-management/david-gledhill/default.page>

Figure 3: Size matters

CIOs involved with functions other than IT (by company size)



Source: LinkedIn data. Based on research by The Economist Intelligence Unit © 2016

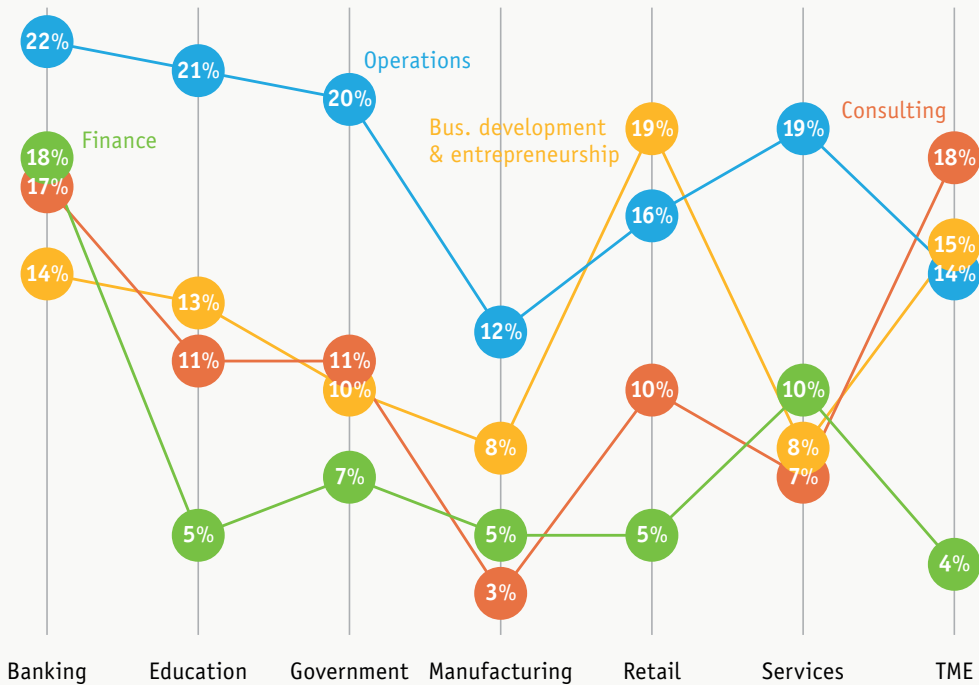


... and so does industry

The extent to which CIOs align themselves with functions other than IT varies significantly with the industry they are operating in. Across the Asia-Pacific region, CIOs working in the manufacturing sector tend to have fewer

linkages with non-IT functions than CIOs working in other sectors. The industries in which CIOs more closely align themselves with other functions, meanwhile, vary with the country they are based in.

Figure 4: Functional drift across industries
CIOs involved with functions other than IT (by industry)
% of CIOs aligning themselves with other function



Source: LinkedIn data. Based on research by The Economist Intelligence Unit © 2016



In Singapore, for instance, CIOs in the banking sector and the legal and financial services sector ('services') have relatively stronger linkages with other non-IT functions than those working in sectors such as manufacturing, education, government, retail and TME (entertainment, broadcast media, IT and services, online media). The same is true in Australia/New Zealand, although CIOs working in the education sector there seem to have strong linkages with operations functions (26%).

In China, on the other hand, CIOs working in manufacturing have strong linkages with the business development function (31%). Min She, for instance, is the chief process officer and CIO of the Haier Group, a consumer electronics and home appliances manufacturer. Prior to this, he was a senior director at an international advisory firm, BBK, where he led business development activities and, according to his profile, helped companies grow through restructuring and improving operations. Before that, he was the director of supply chain management at GE Advanced Materials.⁵

Additionally, 28% of China CIOs in the service sector and 27% in the banking sector have strong linkages with operations functions.

Although the picture is somewhat mixed in India, CIOs working in the banking sector there have greater exposure to non-IT functions than those in other sectors.

Life after CIO

Among different career paths open to CIOs, the most frequent move for those from our five Asia-Pacific markets is to become an entrepreneur or founder of a new company (15%). Just under 12% of our CIOs have moved up to the role of chief executive officer, just over 7% to chief operating officer and 3% to chief financial officer.

The results vary greatly by country, with CIOs most likely to become CEOs in India (21%), and least likely in Singapore (4%). More India CIOs also go on to become entrepreneurs/founders (22%) as compared to just 10% in Australia/New Zealand and 6% in Japan. One such example from India is Anoop Handa, who began his career as a programme manager at Tata Consultancy Services, before assuming other

15%

of CIOs in Asia-Pacific move on
to become entrepreneurs at
some point, higher than the
number going on to other roles

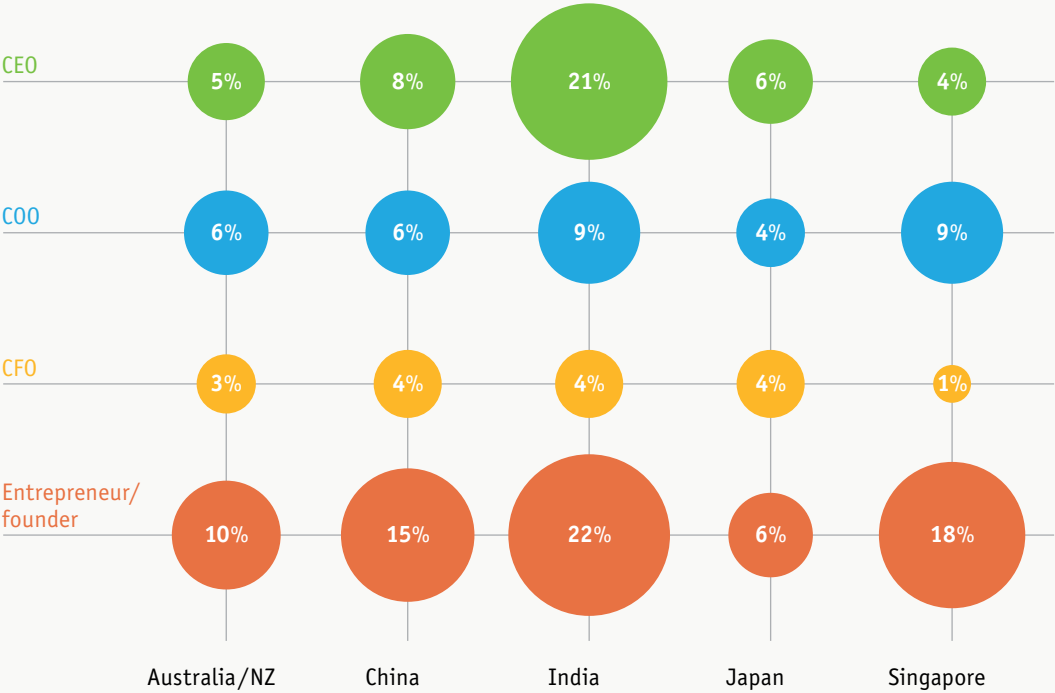
⁵ LinkedIn profile of Min She, chief process officer and CIO of the Haier Group



IT roles at finance-related companies, and then went on to become CIO of Fullerton Securities & Wealth Advisors, and then Fullerton India Credit Company, both held by Singapore sovereign wealth fund Temasek. Since leaving Fullerton in 2013, he has founded Anlight Consulting Services and co-founded Revutel Consulting Services.⁶

Generally speaking, CIOs from less mature markets appear to be more upwardly mobile than peers from developed markets. Japan and Australia/New Zealand CIOs, for example, are the least likely of the group to move up into other executive roles (20% and 24% respectively), while 56% of past India CIOs have done so.

Figure 5: The entrepreneurial CIO
Role CIOs move to later in their career (by country)
% of CIOs who move onto other role



Source: LinkedIn data. Based on research by The Economist Intelligence Unit © 2016

⁶ LinkedIn profile of Anoop Handa, founder and managing director of Anlight Consulting Services, and co-founder and director of Revutel Consulting Services



CIO DIVERSITY ACROSS ASIA-PACIFIC

The analysis has found several commonalities among CIO profiles across the five markets. In each, for example, the majority have more than 10 years of experience, they work at a large organisation (>500 employees), and the largest number work in the TME sector. There are as many, if not more, differences, however, making it difficult to identify a 'typical Asia-Pacific CIO' based on their company affiliation or functional linkages. 'Typical' characteristics may be identified at individual market level, however, and these tend to differ across each market:

Australia/New Zealand: Among various non-IT functions, a typical, experienced CIO in Australia/New Zealand has greatest exposure to the consulting function. Outside of TME, the CIO is most likely to be working in the government sector. However, those working in government are likely to have the least alignment with other non-IT functions. There are fewer CIOs in the banking sector, but these are the most-rounded in terms of having responsibilities aligned with other functions besides IT. One in 10 Australia/New Zealand CIOs is likely to progress to the role of an entrepreneur/founder, with the rest moving into a diverse mix of roles.

China: A typical China CIO will have exposure to the operations or business development function. Outside of TME, he or she is most likely to be working in either the manufacturing or the services sector. A CIO working in either of these sectors is also most likely to have a role that requires

greater alignment with non-IT functions. CIOs working in manufacturing are more closely aligned with the business development function, while for CIOs in the services sector there is greater alignment with operations. Of all other executive roles, a China CIO is most likely to become an entrepreneur/founder.

India: A typical CIO in this market will have greatest exposure to the operations function, and outside of the TME sector is likely to be found in either banking or services. The CIOs with the most rounded roles—those aligning more with other functions—are found in banking. India CIOs tend to be highly entrepreneurial, as illustrated by the fact that 43% [as in Figure 5] of them go on to become either CEO or to found their own business.

Japan: A Japan CIO is most likely to have exposure to either the operations or the business development function. After TME, CIOs in this market are most often found in the services sector. Services is also the sector in which a CIO has the most extensive linkages to other functions besides IT.

Singapore: Aside from IT, in this market a typical CIO will be aligned most closely with the business development function. Those with the most extensive exposure to other non-IT functions will be found in either the banking sector or services sector. The role a Singapore CIO is most likely to progress to is that of entrepreneur/founder, with one in five doing so.



Female-tech

Perhaps the most common trait that CIOs in Asia-Pacific have is that they are men. And in this, the region is not alone. In America's largest companies—those listed in the Fortune 500—the number of female CIOs increased by 43% between 2012 and 2015. But even after this phenomenal growth, just 87 of the Fortune 500 companies had female CIOs as of January 2015.⁷

When a larger pool of companies is considered, the gender disparity is even more revealing. A 2014 study from Gartner revealed that globally, only 14% of CIOs are women. Worryingly, this number has remained largely unchanged since 2004. When drilling down further, it emerges that only 12% of CIOs in Asia are women, compared with 18% in North America.⁸

A few signs of change are emerging, however. A recent survey of CIOs and CTOs in eight countries, including Australia, Singapore and Japan, showed that more women are being hired in technology-focused roles. While in Japan 31% of respondents say they are hiring more women now than before, 65% of those in Australia say their companies are hiring more women than before, while about half of the Singaporean respondents say the same.⁹

12%

of CIOs in Asia-Pacific are women
compared to 14% globally

In another promising sign, in 2015 the number of technology positions occupied by women in the world's eight largest technology companies—Microsoft, Facebook, LinkedIn, Twitter, Yahoo!, Ebay, Apple and Google—grew 4-5 faster than those occupied by men.¹⁰

The ranks of female technology entrepreneurs is also receiving a fillip as investors increasingly look to back them with funding. A handful of venture capital firms have emerged that focus largely or exclusively on funding tech start-ups founded by women; such funds include BBG Ventures, Aligned Partners, Belle Capital and Illuminate.¹¹

There is clearly increasing acknowledgement that not only are women underrepresented in technology roles, but also that their presence in these roles adds real value to companies. The National Australia Bank (NAB), for instance,

⁷ "Five Facts About Fortune 500 Female CIOs", Boardroom Insiders, January 13, 2015.

⁸ "Women in technology: no progress on inequality for 10 years", The Guardian, May 14, 2014.

⁹ "The rise of women in technology roles in Singapore", Robert Half, June 18, 2015.

¹⁰ "The promising numbers for women in tech", Tech in Asia, October 30, 2015.

¹¹ Ibid.



two years ago started its Women in Technology programme, which seeks to help women develop professionally and personally, and to help them play more active and prominent roles in IT.

One of its initiatives is a female employee swap programme that sees it send its female tech employees to technology partners—the first of which was Microsoft—for short durations. Following the success of the programme, the initiative is being extended to other partner companies. Other initiatives have involved taking female tech employees to India so they can learn more about India's tech industry and companies, as well as a range of learning and development sessions. Since the implementation of the programme, the share of senior technology roles at NAB occupied by women has increased from 18% to 24%.¹²

These are all hopeful signs for the future of female CIOs in Asia, provided women are given the same opportunity as their male peers to step up into that senior-most technology role.

¹² NAB to expand Microsoft female tech job swap program. AFR Weekend. 22 February 2016.



CONCLUSION

As technology drives more and more business processes, and increasingly underpins a company's ability to compete effectively, the CIO's responsibilities will come to span the organisation. Already today, a CIO's effectiveness is determined not so much by how efficiently the technology infrastructure supports the business, but by how it enables the business to grow profitably and conquer new horizons. Mastery of the IT function is not enough; to work effectively with other functions in the business, the CIO must be thoroughly familiar with them.

In this context it is encouraging that so many Asia-Pacific CIOs have had exposure in their careers to functions outside of the traditional IT remit. It is also encouraging that, in both the developed and developing markets in the region, CIOs are nearly as likely to have experience of the more growth-oriented business development, sales and marketing roles as any other. Familiarity with financial, operational and other functions is also important, and the research suggests that Asia-Pacific CIOs will gain more experience of all of these over time. Anything less will put their careers, and their organisations' success, at risk.

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