

September 2020

# Executive Compensation at VC-Backed Tech Firms

Explaining the Canada–U.S. Gap



# Message from the Executive Vice President



**« It's essential that we all work together to continue to build and scale innovative companies that compete with the best in the world. »**

The Canadian venture capital (VC) ecosystem has been thriving in the last five years. Total VC investments in Canadian start-ups increased to a record-breaking \$6.2 billion in 2019, up from \$2 billion in 2014. The number of VC deals and average deal size over the same period also rose.<sup>1</sup>

Yet, due to the COVID-19 pandemic, we now find ourselves in an era of risk, uncertainty and challenges. As Canada's most active VC investor, we are in a privileged position to bring more transparency to decision-makers and stakeholders working to support the recovery of the sector.

This study provides information for start-ups and investors making crucial recruiting and compensation decisions. We expect to release further analyses and tools over the coming months

to help Canada's VC sector rebound from the crisis.

With a robust VC ecosystem, and a wealth of skilled, passionate workers and executives, Canada has everything it needs to continue its ascendancy as an emerging global technology leader.

In these trying times, more than ever, it's essential that we all work together to continue to build and scale innovative companies that compete with the best in the world.

**Jérôme Nycz**  
Executive Vice President,  
BDC Capital

1. Laura Buhler and Joshua Goodfield, "Canada transformed itself as a global tech player over the past decade. How can Canadians everywhere help sustain momentum now?" June 24, 2020, <https://medium.com/@thec100/canada-transformed-itself-as-a-global-tech-player-over-the-past-decade-2d8b5b2ec9b4>.

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<b>2</b> Adjusting the Canada–U.S. compensation gap firm and executive characteristics	12	The VC Ecosystem Development team of BDC Capital, the Bank's investment arm, prepared this study. It is based on public and proprietary data analyzed and interpreted by BDC. Any errors or omissions are BDC's sole responsibility. Reliance on and use of the information herein is the reader's responsibility.
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# Canada's tech sector leading the way forward

**This report presents the first comparison  
of Canadian and American executive  
compensation in the tech sector**

The data were analyzed in 2019, before the COVID-19 crisis. The dynamics of the U.S. and Canadian tech markets have since changed in ways that this report may not fully capture. However, we believe the results will provide a realistic benchmark for compensation trends before the COVID-19 pandemic and hope that the VC ecosystem can use it to evaluate recovery efforts.

We found that the average compensation for Canadian tech executives is US\$87,000 less than the comparable figure in the U.S. While lower average compensation can partially be explained by firm and executive characteristics, our results show that, even after controlling for these factors, U.S. executives still earn US\$60,579 more than their Canadian peers, on average. We explain this compensation gap by looking at labour market tightness, company efficiency, and skills

and experience.

These results raise questions about the ability of Canadian tech companies to compete for world-class talent. They also raise larger questions about the efficiency of the Canadian tech sector. We found that skilled tech workers are relatively abundant in Canada, yet Canadian tech companies are not able to capitalize on this advantage, partly because their fundraising lags that of their American counterparts.

We hope this report sends a clear message that Canada's tech sector has the talent it needs to lead the recovery. By joining forces, we can ensure that the ecosystem's past successes weren't just a flash in the pan but, rather, a harbinger of Canada's ascent as a global technology champion.

# Executive summary

This report compares technology-sector compensation practices in Canada and the U.S. before the COVID-19 pandemic. BDC Capital analyzed differences in compensation using logit regressions while controlling for factors such as company size, industry, revenue, stage of development and executive characteristics.

Here are the main highlights of our findings.

## \$87,000

### Compensation gap between Canadian and American VC-backed firms.

The average compensation level for a tech executive in Canada is \$87,000 less than that of their U.S. peers.<sup>2</sup> This gap exists regardless of funding stage, tech sector or the amount of capital raised by the start-up.

2. Throughout this report, all earnings are stated in U.S. dollars. Canadian amounts were converted using the purchasing power parity exchange rate to control for the cost of the living.

### Three factors can help explain the Canada–U.S. compensation gap

- ① Labor market tightness**  
Canadian cities are home to more tech workers per firm than major American tech hubs are. This has resulted in a tighter U.S. labour market, which most likely drives up compensation, everything else being held constant.
- ② Company efficiency**  
U.S. firms raise more VC dollars than Canadian companies do, on average; they also raise more VC dollars per employee. The lower number of tech employees relative to the amount of VC funding in the U.S. may indicate efficiency in allocating resources.
- ③ Skills and experience**  
It is also possible that the education or experience of individuals affects the compensation gap. This hypothesis was beyond the scope of this study due to data availability.

## Part 1

# Basic facts about the executive compensation gap

### The executive compensation gap remains across regions

Canada's tech executives are paid, on average, \$87,000 less than American executives (Figure 1.a). A deeper look at regional data shows that American executives earn substantially more than their Canadian counterparts across every region. The gap is highest in the east, where the average American tech executive can expect to earn \$273,400. This is \$105,000 more than their counterpart in eastern Canada.<sup>3</sup>

Figure 1

Average executive compensation gap between Canada and the U.S.

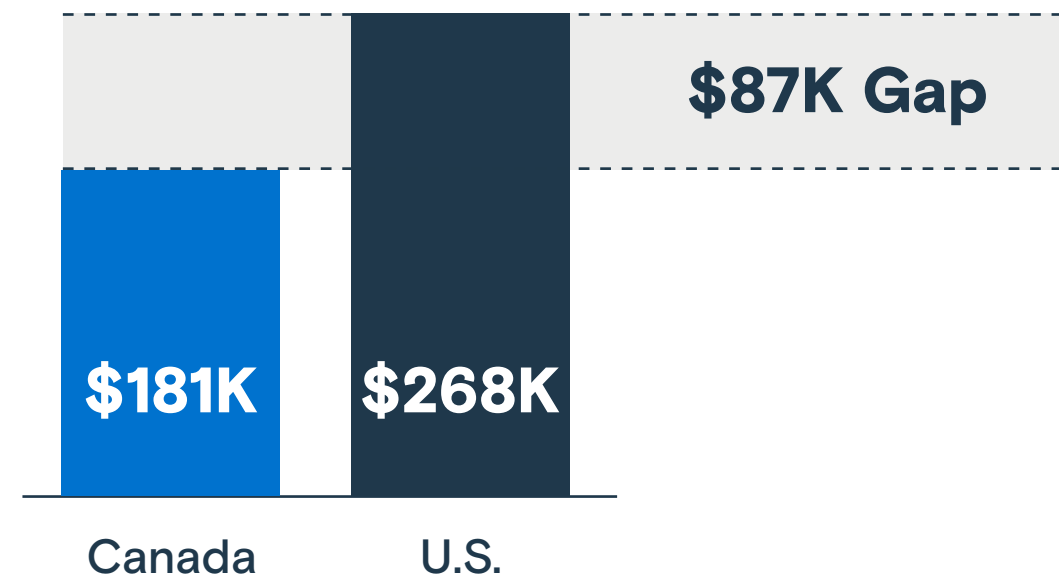
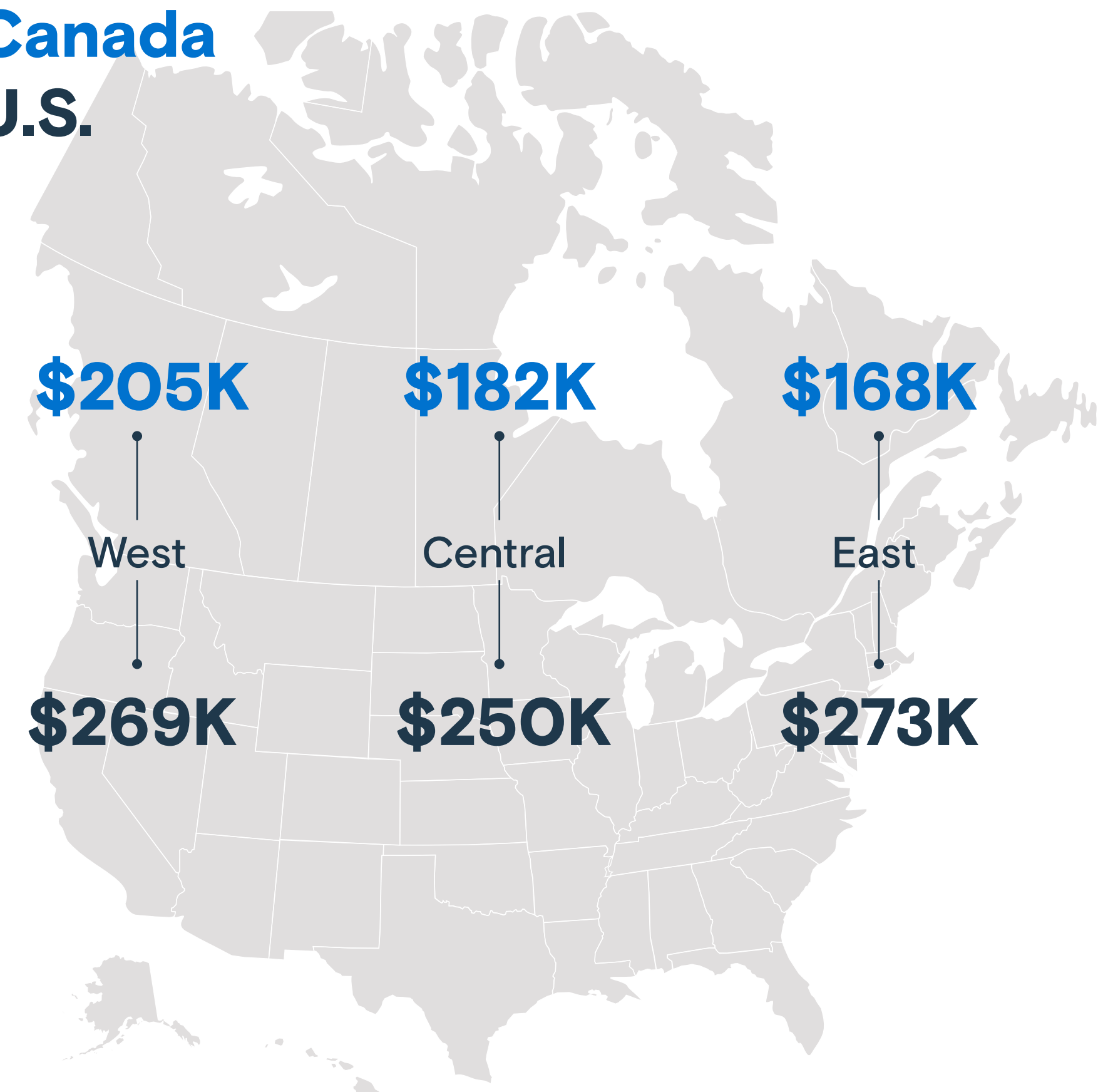


Figure 1.a

Average tech executive compensation in VC-backed firms, by region

Canada

U.S.



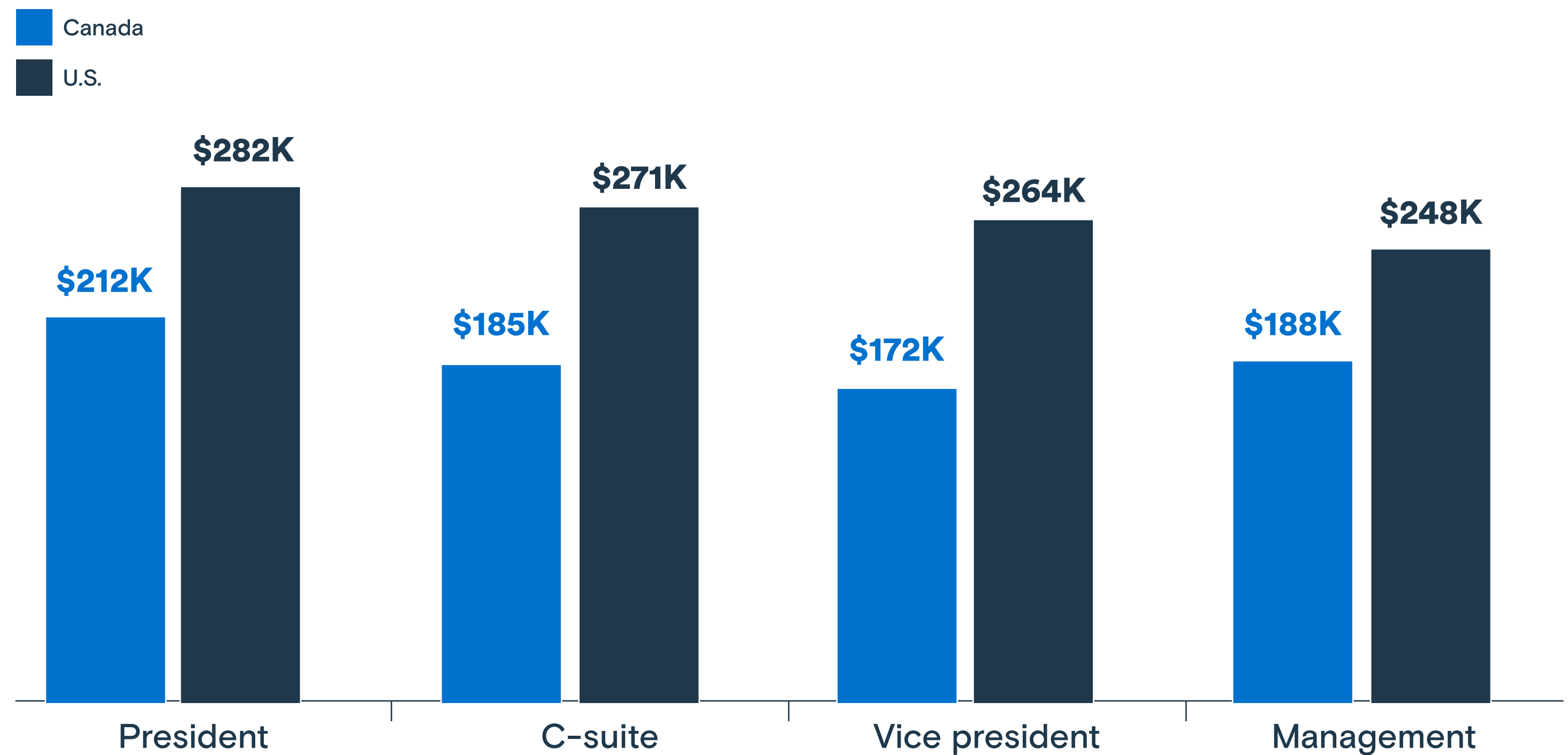
3. Geographic areas were defined aggregated from regions defined in the original dataset. The U.S. East includes North East, Mid-Atlantic and South East. Canada East includes Canada-East and Canada-Atlantic. U.S. Central includes Mountain, Central/Midwest, South West and Mountain. Canada Central includes Canada-Central. U.S. West includes Northern California (excluding the San Francisco Bay area), Pacific North West, San Francisco Bay area and Southern California. Canada West includes Canada-West.

## The compensation gap touches every executive position

The executive compensation gap exists regardless of seniority. Indeed, the average pay difference seems to be greater at lower seniority levels. The average Canadian VC-backed president is paid \$70,000 less than his or her American counterpart, while the gaps for C-suite executives and vice presidents are \$85,000 and \$92,000, respectively.

Figure 2

Average tech executive compensation in VC-backed firms, by position

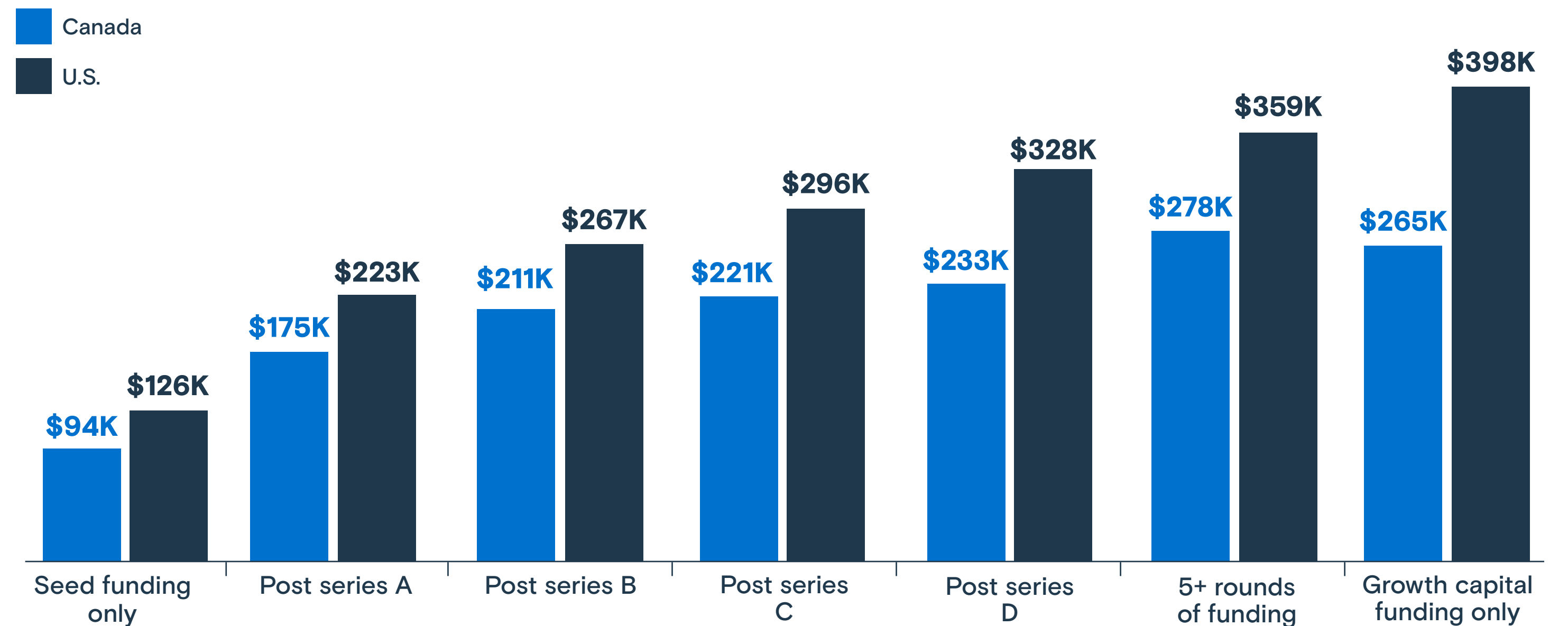


## Canadian executives receive lower compensation at every funding stage

As start-ups progress through stages, they raise increasingly larger sums, allowing them to better compensate their executives (Figure 3). Interestingly, the Canada-U.S. compensation gap also gets larger as we move through funding rounds. This could be explained by the fact that U.S. VC-backed firms raise larger sums at later rounds. This positive relationship exists in both the U.S. and Canada.

Figure 3

Average tech executive compensation in VC-backed firms, by funding round

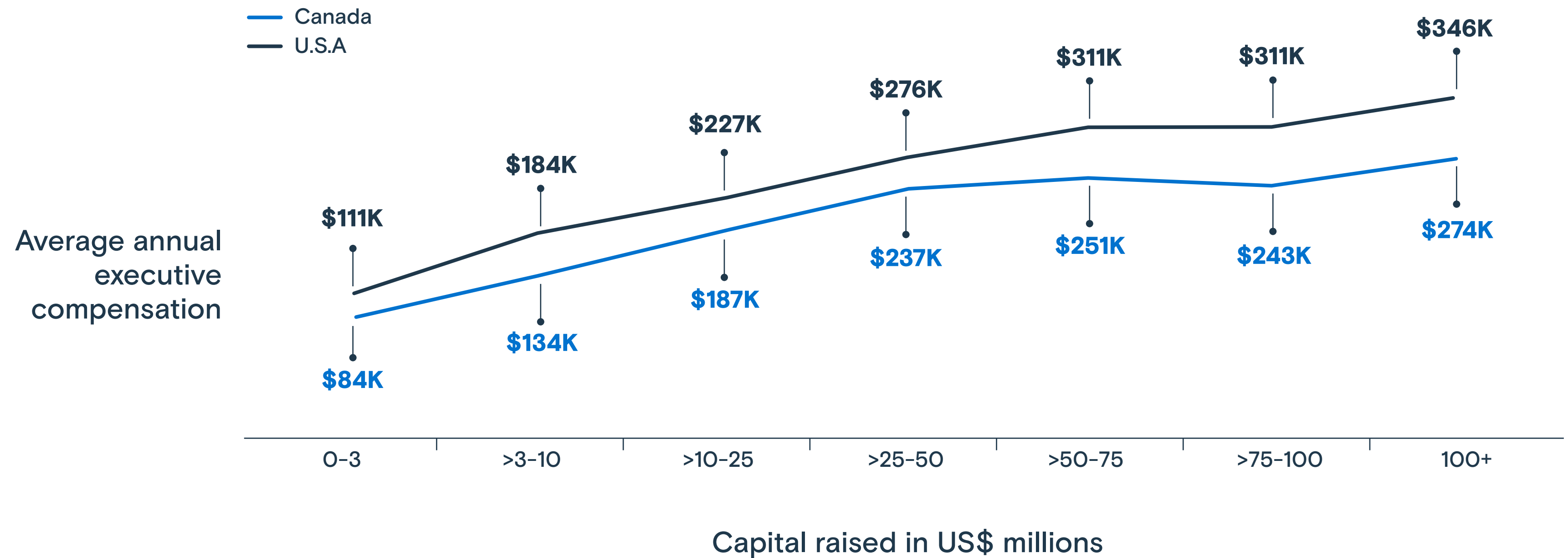




Similarly, we found that the amount of capital raised by a firm affects executive earnings. Again, executives in Canada have lower salaries at every level of capital raised, with a gap that tends to widen as the amount of capital raised increases (Figure 4).

**Figure 4**

Average tech executive compensation, by amount of capital raised, in US\$M



## Executive compensation is lower in Canada for every sector

We found the executive compensation gap exists in every sector (Figure 5). The business goods and services and the clean tech sectors offer the highest executive pay in both countries.<sup>4</sup> The reason could be that the business goods and services sector commands higher margins, while the niche clean tech sector requires specialized executives who are able to command higher levels of compensation.

Figure 5

Average executive compensation, by technology sector

Canada  
U.S.



Consumer goods and services

**\$135K** vs **\$256K**



Business goods and services

**\$191K** vs **\$279K**



Hardware and devices

**\$170K** vs **\$207K**



Clean tech

**\$182K** vs **\$263K**

**4. Sector definitions:**

Consumer goods and services: Technology products or services designed for purchase or used primarily by consumers.

Business goods and services: Technology products or services for purchase or used primarily by an enterprise.

Hardware and devices: All hardware products or devices, including computing, telecommunication, semiconductor and other components.

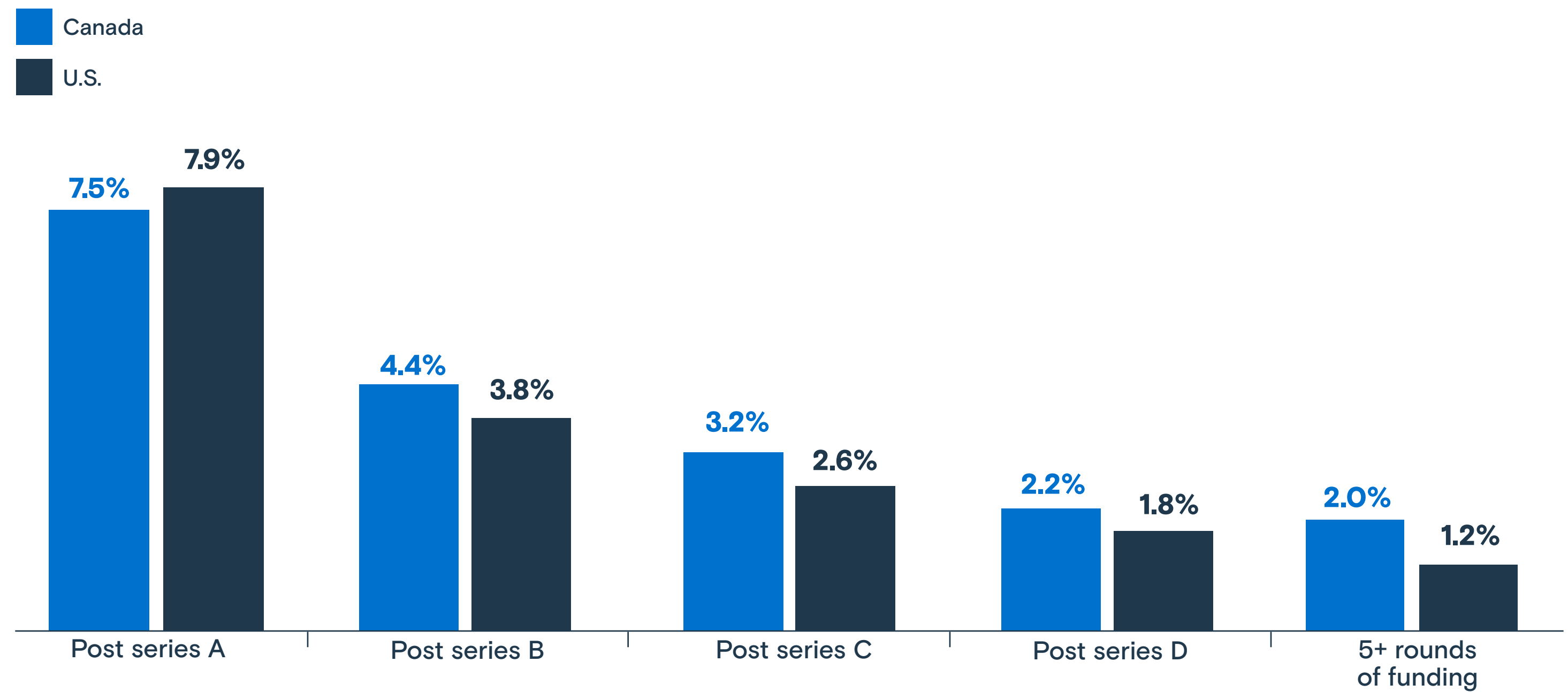
Clean tech: Green energy, renewables and other clean technologies.

## The Canada–U.S. difference in equity ownership is marginal

Executive compensation in tech start-ups is typically a mix of salary and equity. The difference in equity ownership between the U.S. and Canada, by funding stage, appears to be marginal (Figure 6). Interestingly, Canadian executives appear to keep a slightly larger share of ownership as a company moves through funding stages.

Figure 6

Average equity held by executives, by funding stage



## Part 2

# Adjusting the Canada–U.S. compensation gap for firm and executive characteristics

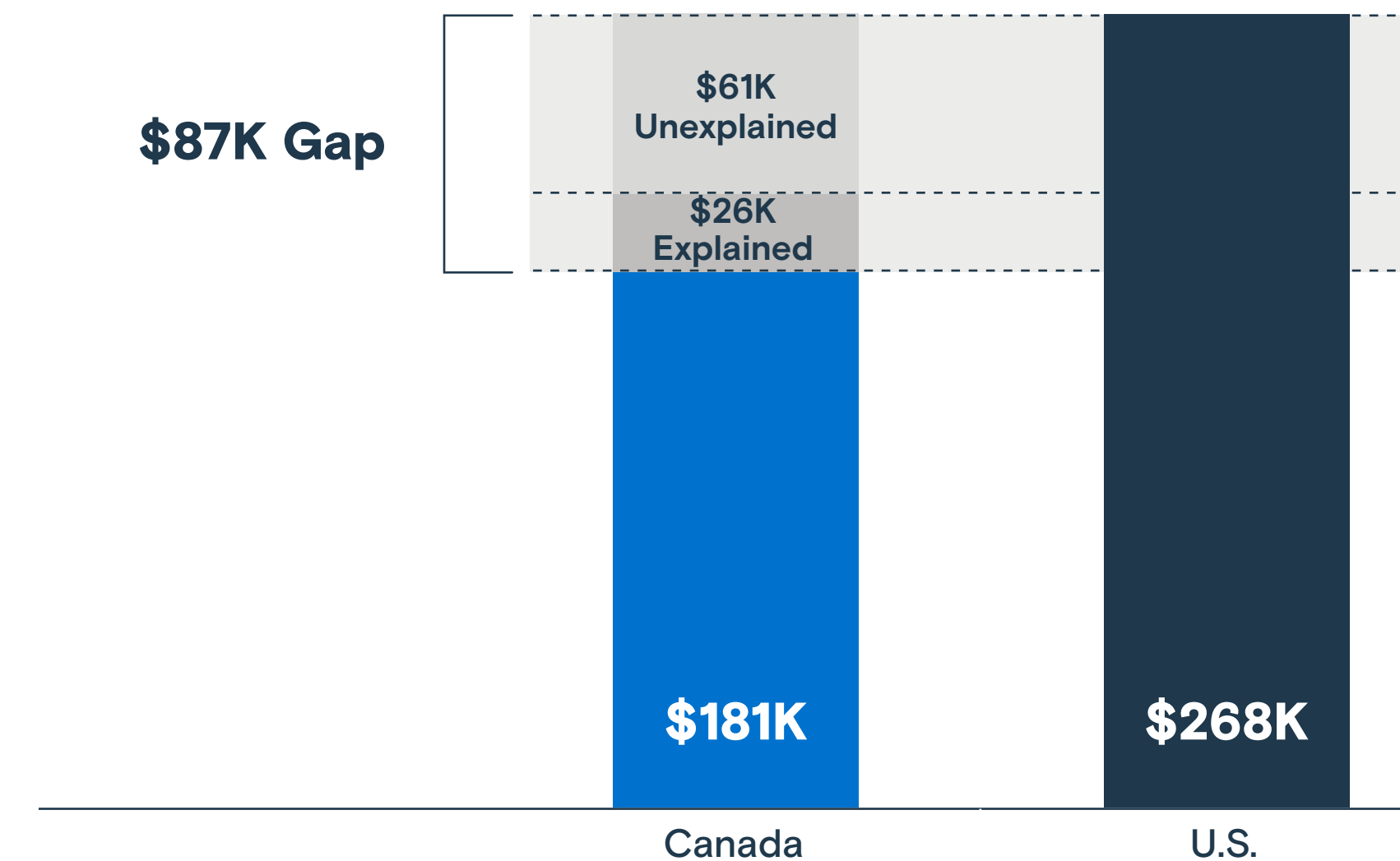
To understand how much of the tech executive compensation gap can be explained by structural differences between Canada and the U.S., we applied the Oaxaca–Blinder decomposition analysis.<sup>5</sup> Under this approach, we decomposed how much of the gap is “explained” by firm and executive characteristics, and how much is left “unexplained” and may be due to other factors.<sup>6</sup>

After applying statistical controls for firm and executive characteristics, Canadian executives earn, on average, \$60,579 less in an identical firm and position (Figure 7).<sup>7</sup> The rest of this report attempts to understand this unexplained compensation gap.

5. For example, a significant part of the gap could be due to the higher proportion of smaller VC-backed firms in Canada, relative to the U.S.
6. See Ronald Oaxaca, “Male–female wage differentials in urban labor markets,” *International Economic Review* 14 (1973): 693–709; and Alan S. Blinder, “Wage discrimination: Reduced form and structural estimates,” *Journal of Human Resources* 8 (1973): 436–455. For a practical overview of the way researchers at the World Bank implement the Oaxaca–Blinder decomposition, see Owen O’Donnell, Eddy van Doorslaer, Adam Wagstaff and Magnus Lindelow, *Analyzing Health Equity Using Household Survey Data: A Guide to Techniques and Their Implementation* (Washington, D.C.: World Bank, 2008).
7. The regression model explains 45% of the variation in compensation ( $r^2=45\%$ ).

**Figure 7**

Average executive compensation gap between Canada and the U.S.



## Part 3

# Explaining the gap

We believe that the portion of the compensation gap that cannot be explained by firm and individual characteristics can partially be explained by three important factors.

The following section delves more deeply into these three factors to explore their relationship to the compensation gap. Our objective is not to reconcile the differences in pay practices but, rather, to identify potential explanations as opportunities for future research.

- ① **Labour market tightness**
- ② **Company efficiency**
- ③ **Skills and experience**

# ① Labour market tightness

## Tech talent in the U.S. and Canada

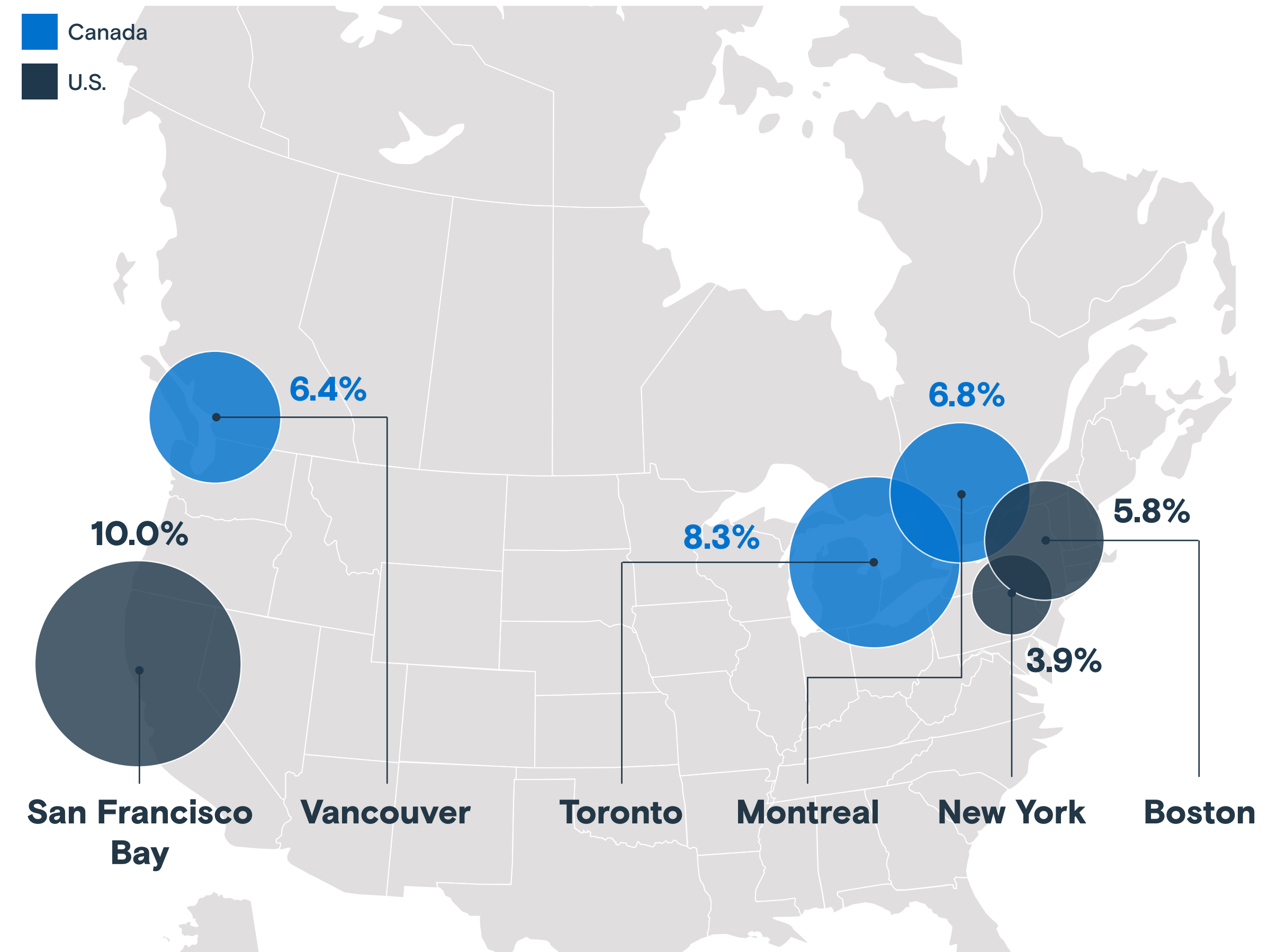
Tech workers are part of a highly competitive and supply-constrained market.<sup>8</sup> The category represents 5.2 million people in the U.S. and 833,000 people in Canada, accounting 3.7% and 5.3% of all workers, respectively.<sup>9</sup>

Figure 8 shows the proportion of tech employment as a percentage of total employment in key tech hubs in the U.S. and Canada. Tech jobs represent 10% of total employment in the San Francisco Bay area, which is the highest concentration for both countries. Interestingly, several Canadian cities have a higher concentration of tech jobs than do major American hubs, such as Boston and New York.<sup>10</sup>

8. We defined tech talent as people employed in all tech-related occupations. They include software developers and programmers; computer support, database and systems workers; computer and information systems managers; and people in technology engineering-related occupations. They also include those who work for established non-VC-backed companies.  
 9. CBRE Research, 2019 Scoring Tech Talent (Los Angeles: CBRE, 2019), <https://www.cbre.us/research-and-reports/Scoring-Tech-Talent-in-North-America-2019>.  
 10. Ibid.

Figure 8

Tech employment as a percentage of total employment in key tech hubs, 2018



Source: CBRE Research, 2019 Scoring Tech Talent (Los Angeles: CBRE, 2019), <https://www.cbre.us/research-and-reports/Scoring-Tech-Talent-in-North-America-2019>.

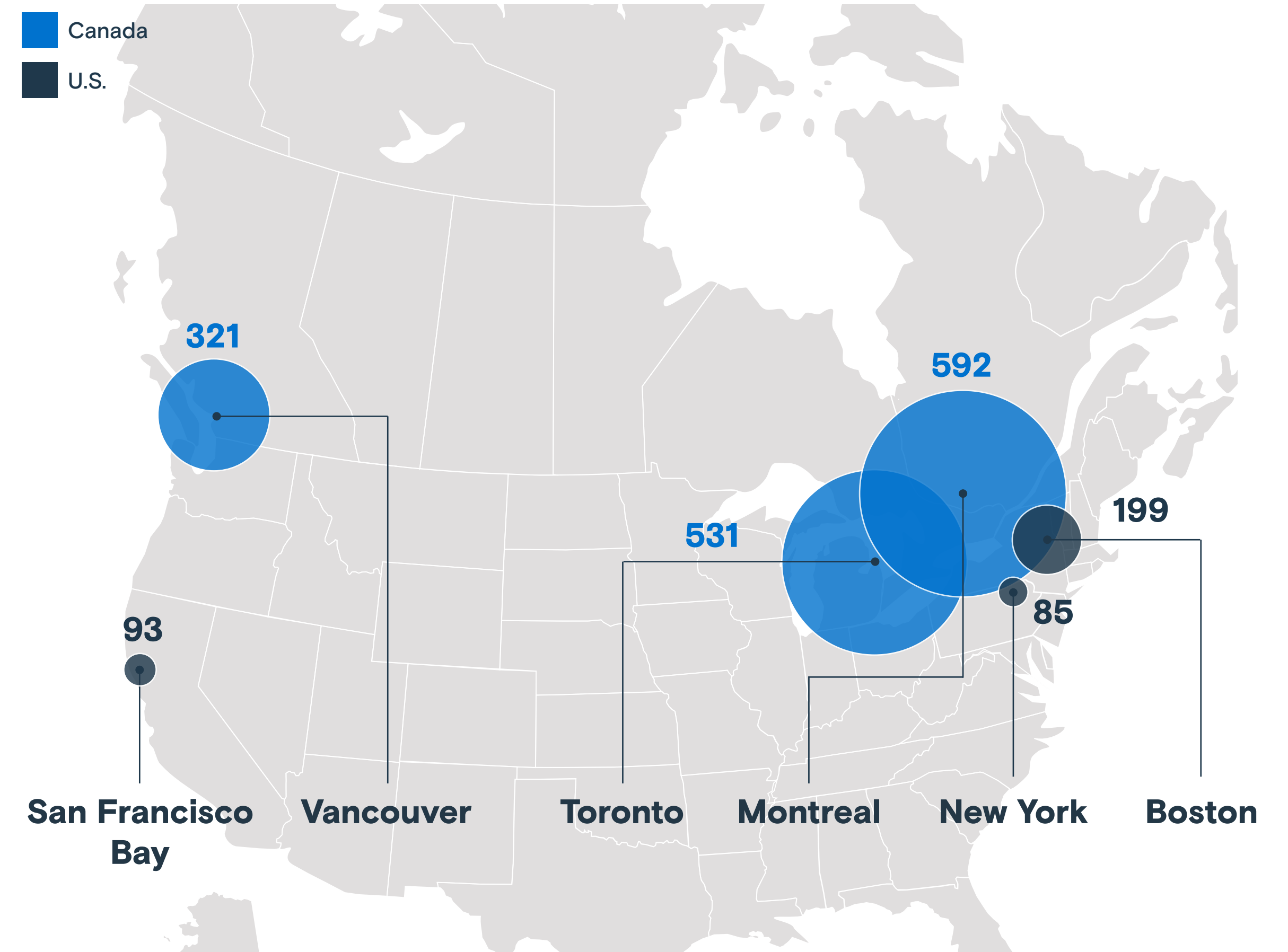
## Canadian cities have more technology workers per start-up

Labour market tightness describes the balance between the demand for, and the supply of, labour in a market. The tighter the labour market, the greater the number of firms seeking to fill jobs relative to the number of would-be workers looking for jobs. In tighter labour markets, firms must compete for employees, leading to higher compensation and faster increases in wages. We use the ratio of tech workers per locally based start-up in a city as a proxy for the tightness of the labour market.

Canadian cities have the greatest number of available technology workers per locally based start-up (Figure 9). This can be interpreted as a sign of a tighter technology labour market in U.S. cities, which contributes to higher overall compensation there.

**Figure 9**

Available tech workers per locally based start-up, 2018



Source: CBRE Research, 2019 Scoring Tech Talent, and a search of VC-backed companies in the above cities using CB Insights.

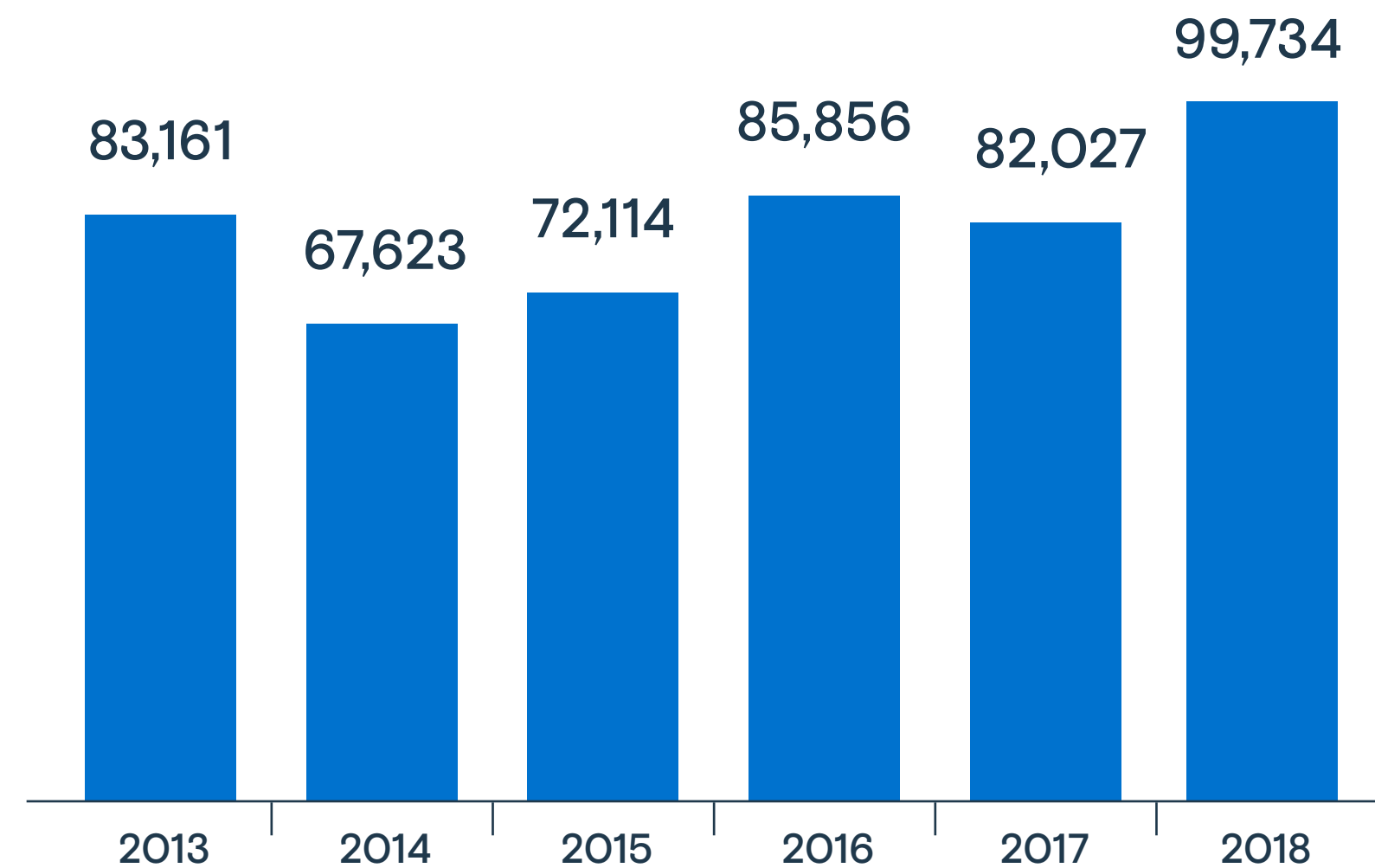
## Canada admits a higher proportion of skilled immigrants than the U.S. does

Immigration policy also plays a part in supplying talent to employers. This could partly explain the higher availability of technology workers in Canada. Indeed, Canada has more open immigration policies than the U.S. does and launched the Global Skills Strategy in 2017. The program was designed to speed up the application and work permit exemption processes for skilled foreign workers.

Figure 10 shows Canada's immigration numbers under the Federal Skilled Workers and Federal Skilled Trades Program. Canada also consistently admits more skilled foreign workers as a percentage of its population than the U.S. does. In 2018, for example, Canada admitted almost five times more skilled immigrants as a percentage of its total population than the U.S. did (Figure 11).

**Figure 10**

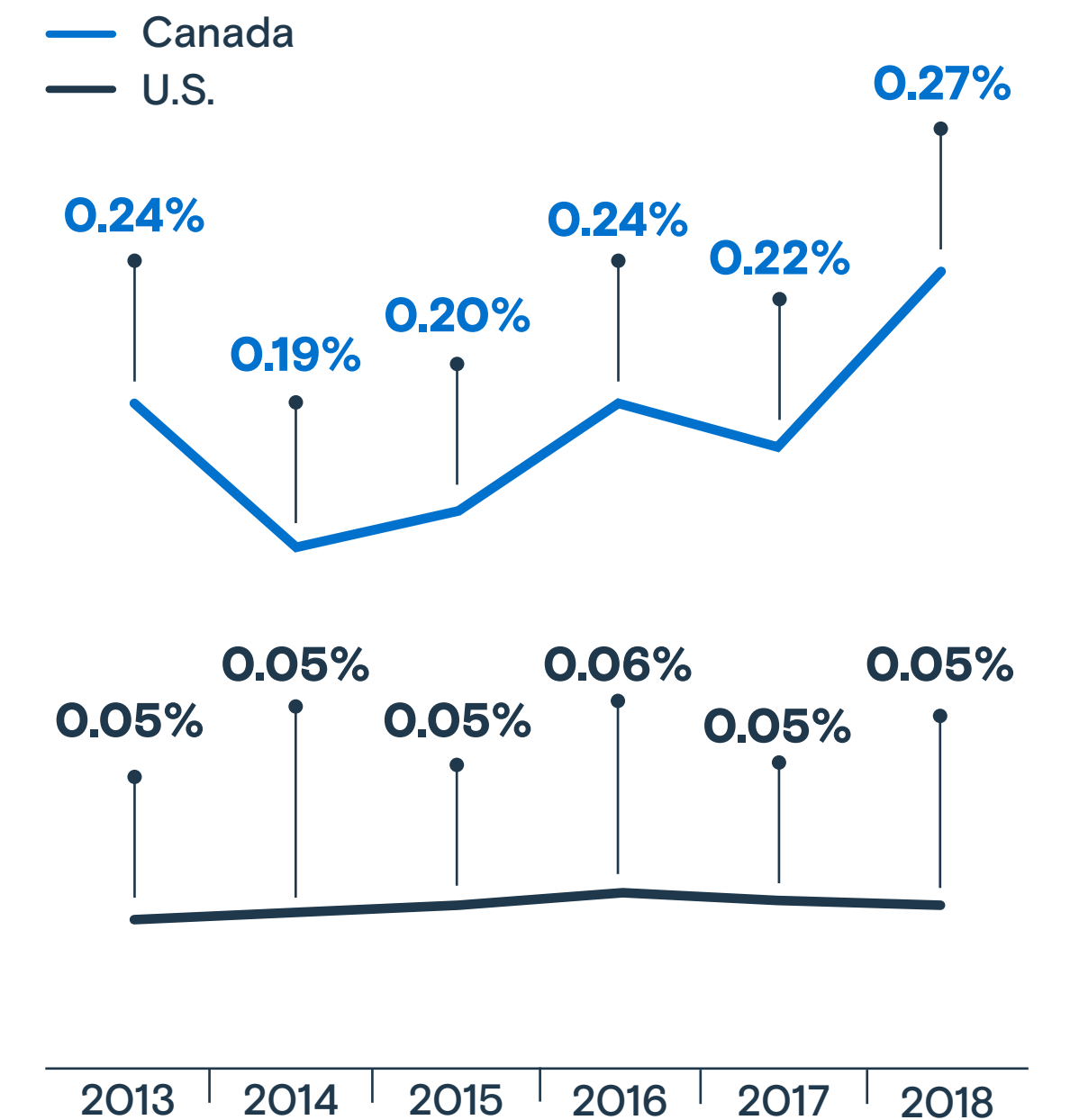
New permanent residents admitted to Canada under the Federal Skilled Workers Program and Federal Skilled Trades Program



Source: Government of Canada, annual reports to Parliament on immigration, 2014 to 2019, <https://www.canada.ca/en/immigration-refugees-citizenship/corporate/publications-manuals.html>.

**Figure 11**

New skilled immigrants as a percentage of total population



Source: Government of Canada, annual reports to Parliament on immigration, 2014 to 2019; and U.S. Department of State, "Nonimmigrant Visa Statistics," <https://travel.state.gov/content/travel/en/legal/visa-lawO/visa-statistics/nonimmigrant-visa-statistics.html>.



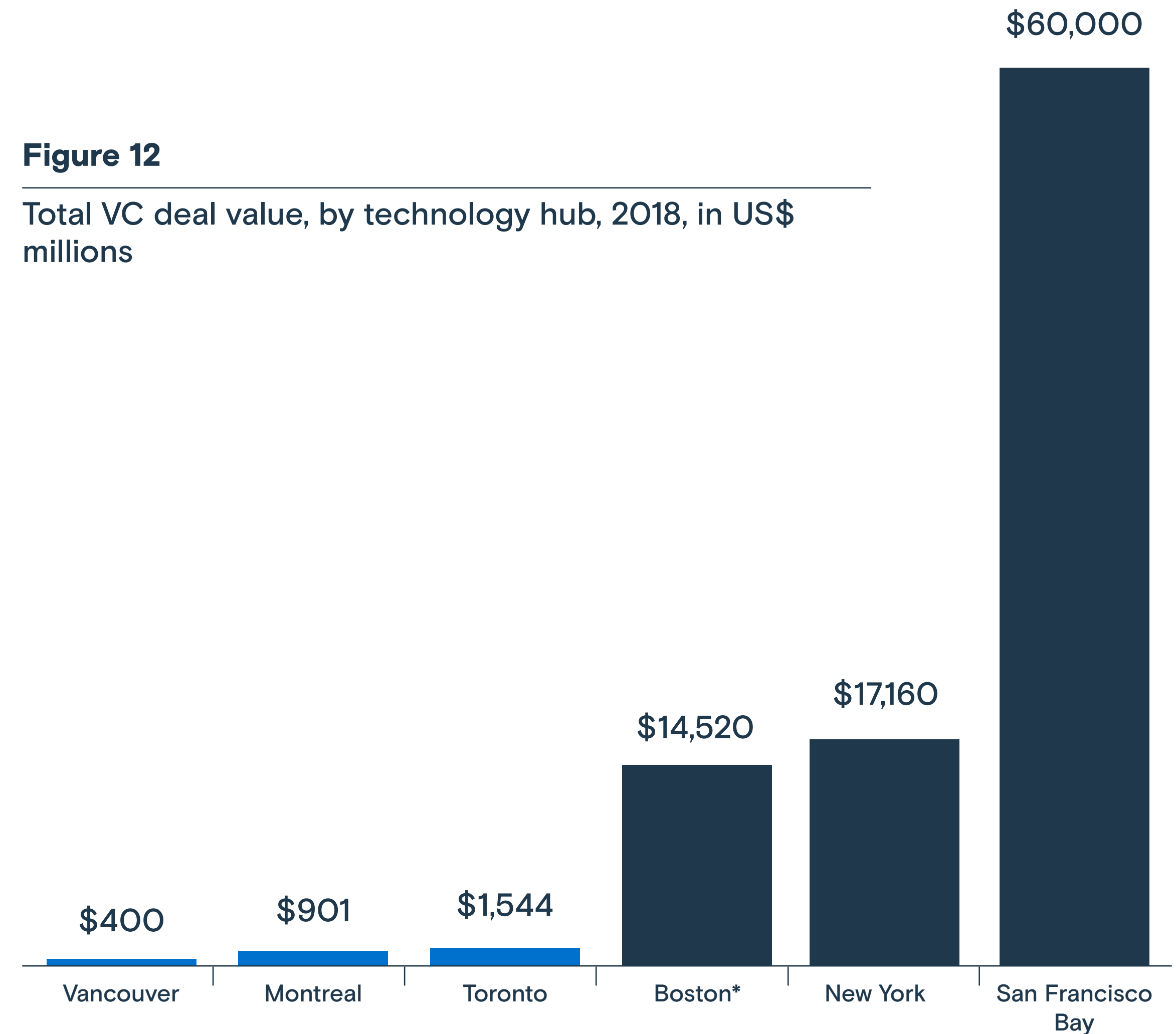
## ② Company efficiency

### American tech hubs raise substantially more VC dollars than Canadian ones do

As previously discussed, start-ups that raise more VC dollars tend to offer higher executive salaries. A quick glance at the data shows that major American technology hubs have much higher total VC deal values than Canadian hubs do (Figure 12).

**Figure 12**

Total VC deal value, by technology hub, 2018, in US\$ millions



**Source:** PwC, PwC/CB Insights MoneyTree report, Q4 2018 (New York: PwC, n.d.), <https://www.cbinsights.com/research/report/venture-capital-q4-2018/>; and Canadian Venture Capital Association, VC & PE Canadian Market Overview, 2018 (Toronto: CVCA, n.d.), <https://www.cvca.ca/reports/vc-pe-canadian-market-overview-q4-2018/>.

\*Represents total deal value for New England as a whole

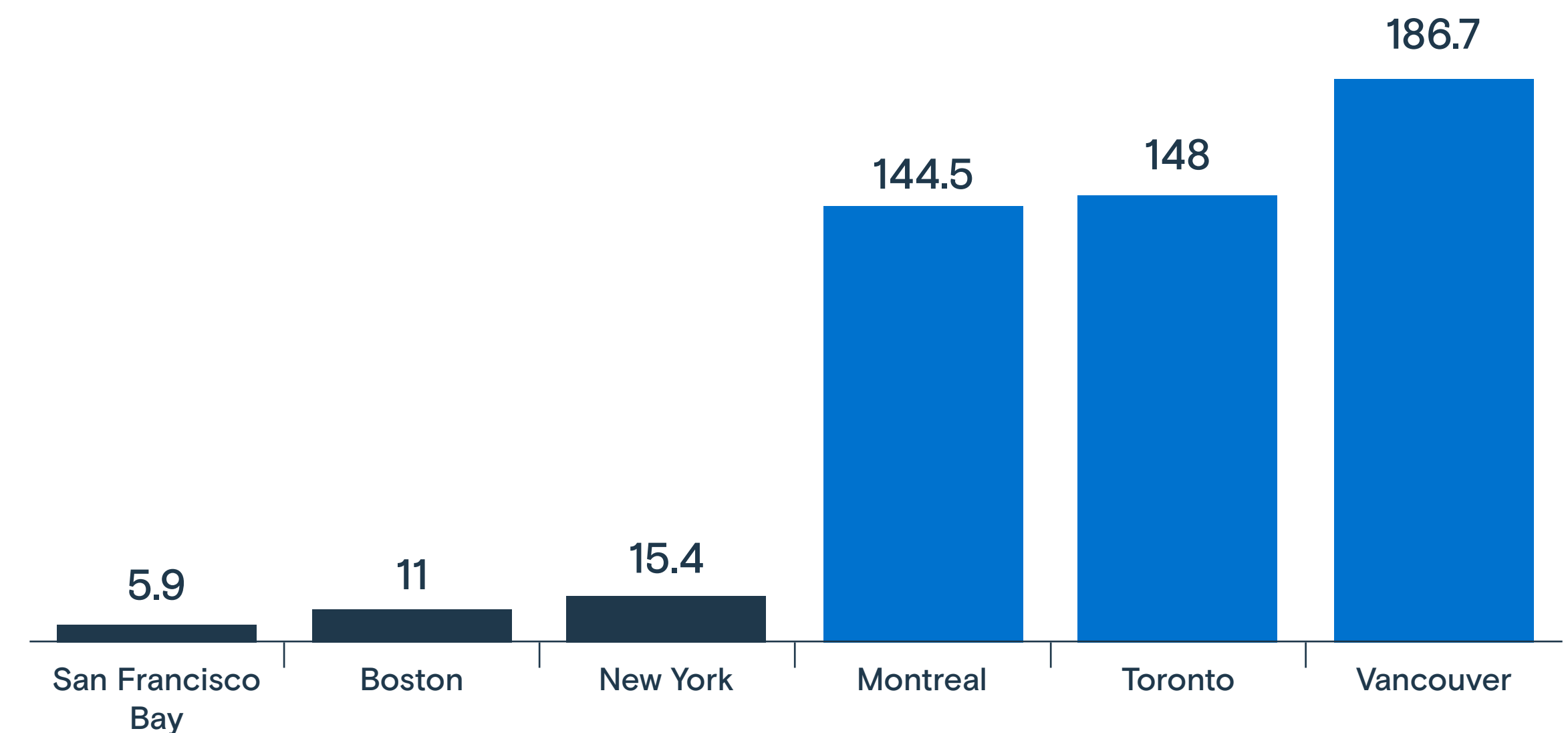
## Canadian cities have more technology workers relative to VC dollars raised

The ratio of local tech employees to VC dollars raised is much higher in Canada than in American tech hubs (Figure 13).<sup>11</sup> Employees per VC dollar raised could be viewed as a key performance indicator that measures a company's efficiency. Indeed, the lower the ratio, the more efficient the company is at allocating resources, which in turn could make more money available for executive compensation or performance-based bonuses.

<sup>11</sup> Total technology workers per city is an aggregate of all workers, including those who work for established non-VC-backed companies. As a result, the employees-per-VC-investment data we are showing here are skewed upward. We believe that U.S. cities would still have a lower ratio of employees to VC dollars raised if we only looked at employees of VC-backed firms, as U.S. cities are home to a greater number of large, established technology firms that employ many workers. Source: PitchBook.com, accessed November 2019.

**Figure 13**

Available technology workers per millions raised in major tech hubs, 2018



Source: CBRE Research, 2019 Scoring Tech Talent; PwC/CB Insights, MoneyTree report, Q4 2018; and CVCA, VC & PE Canadian Market Overview, 2018.

## ③ Skills and education

The U.S. has historically been more tolerant than Canada of income inequality, especially if the inequality is driven by differences in skills, talent or performance outcomes.<sup>12</sup> In this light, highly skilled and educated U.S. executives command a pay premium on the claim of performance.

Skills, education and experience are key determinants of compensation.<sup>13, 14, 15</sup> Skilled individuals are more productive and should therefore be paid more. We cannot say for certain, however, whether compensation is lower in Canada because these traits are weaker or whether those

with the most skills, education and experience go south of the border in search of higher compensation.

Unfortunately, information related to executive age, education, experience or performance is not available in our dataset. For this study, we assumed these individual characteristics were similar in the two countries. These data would allow us to control for it, which could help explain an additional part of the compensation gap.

12. Martin J. Conyon and Kevin J. Murphy, "The Prince and the Pauper? CEO Pay in the United States and United Kingdom," *The Economic Journal* 110, no. 467, features (November 2000), F640–F671.

13. Jacob Mincer, *Schooling, Experience, and Earnings* (New York: NBER Press, 1974).

14. Stephen G. Donald, David Green and Harry Paarsch, "Differences in wage distributions between Canada and the United States: An application of a flexible estimator of distribution functions in the presence of covariates," *The Review of Economic Studies* 67, no. 4 (2000): 609–633.

15. Doris Weichselbaumer and Rudolf Winter Ebmer, "A meta analysis of the international gender wage gap," *Journal of Economic Surveys* 19, no. 3 (2005): 479–511.



# An emerging global technology leader

We found that the average Canadian tech executive is paid US\$87,000 less than their American counterpart. After controlling for firm and executive characteristics, the gap between Canadian and American tech executive compensation decreases to US\$60,579.

We believe three factors can explain the difference between the two countries. First, with more tech workers per start-up, the labour market is less tight in Canada, in part because of the country's more open immigration policies. Second, U.S. firms raise more VC dollars on average, which contributes to higher compensation. Third, U.S. tech workers may have developed more skills and be more experienced, but a lack of data is limiting our ability to research this further.

Previous BDC studies have shown that Canadian businesses are

facing serious talent-related challenges, which we do not deny. Rather, this analysis highlights that American technology start-ups may have been facing even greater hiring challenges before the COVID-19 crisis destabilized the world economy. This report also assesses the state of compensation in the U.S. and Canada at the ecosystem's peak. While we do not know what the future holds, we hope this document can be a useful tool to benchmark the VC sector's recovery.

As the world emerges from the crisis, we want to highlight the fact that less generous wages should not discount the Canadian technology sector as an emerging global leader. If anything, the abundance of skilled tech workers and the ability to scale at a lower cost should call attention to the opportunities for entrepreneurs and investors.

# Data and methodology

**This report provides a comprehensive comparison of compensation practices in the Canada and the U.S. before the COVID-19 pandemic.**

Our results are based on comparable measures of executive pay and bonus-based incentives. We used detailed microdata for 2018 from Shareworks Compensation, a leading provider of pre-IPO compensation data and planning tools. It partners with more than 180 investors and more than 3,000 private

companies to produce Option Impact, the world's largest corporate-sourced compensation database specific to private, VC-backed companies.<sup>16</sup> Much of the underlying data concerning the Canadian VC sector was provided by the Canadian Venture Capital & Private Equity Association. We are thankful for their help and support with this project.

BDC Capital analyzed differences in compensation using logit regressions while controlling for factors such as company

size, industry, revenue, stage of development, and other firm and executive characteristics.<sup>17</sup> The nature of the dataset prevented us from controlling for individual characteristics, such as age, experience and education. Therefore, a key assumption of this analysis was that individual characteristics are identically distributed in the U.S. and Canada. We defined total compensation as the sum of base salary and bonus-based incentives. All earnings are shown in U.S. dollars. We converted Canadian amounts

using the purchasing power parity exchange rate to control for the cost of the living. To prevent outlier-related issues, we removed the top 0.1% of earners from the dataset.<sup>18</sup>

<sup>16</sup>. Option Impact is a rolling cash and equity survey that gives companies full database access for free in exchange for maintaining current information in the system. To learn more, please visit [www.advanced-hr.com](http://www.advanced-hr.com) or email Advanced-HR at [customersupport@advanced-hr.com](mailto:customersupport@advanced-hr.com).

<sup>17</sup>. The control variables included sector, capital raised, rounds of funding, revenue, head count, development stage, maturity of the firm, productivity, percentage of diluted shares, position level, full-time/part-time status and founder status.

<sup>18</sup>. The sample size was U.S. n=8,913 and Canada n=649.



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BDC Capital is a founding partner of Prospect, Canada's largest start-up job board. Prospect issues quarterly reports on the state of talent demand and supply in Canada.

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