

# Thinking about real-time data: Lessons from Indeed job postings

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# Game plan

- **Goals of real-time, platform-generated data**
- **Background on Indeed job postings, examples of value-add**
- **Best practices and looking ahead**

# What makes for useful real-time data (for economists)?

1. Tracks something we care about (and not what we don't care about)
2. Data has a comparative advantage
3. Comparable benchmarks – internal and external

# Job postings have the potential to hit all three goals

- Proxy of job vacancies – “unmet labour demand”
  - Online job boards a recruitment method for +75% of job vacancies since 2019
  - Postings-vacancies not necessarily 1-to-1
- Available in near real-time, at daily frequency
- Granularity from “big data”: each posting an individual data point
- Job descriptions contain both standard and novel information
- Can compare to aggregate levels and composition of Job Vacancy & Wage Survey (JVWS)

# Background on Indeed job postings

- Indeed is Canada's #1 job site, 9.5 M unique visitors in March 2022 (ComScore)
- Data structured to help minimize impact of changing market share/business
  - Employers can post job ads directly to Indeed, both free & sponsored
  - Many postings also picked up from other sources around the internet
- Focus specifically on employer job postings
- De-duplication of postings improves job seeker experience/accuracy

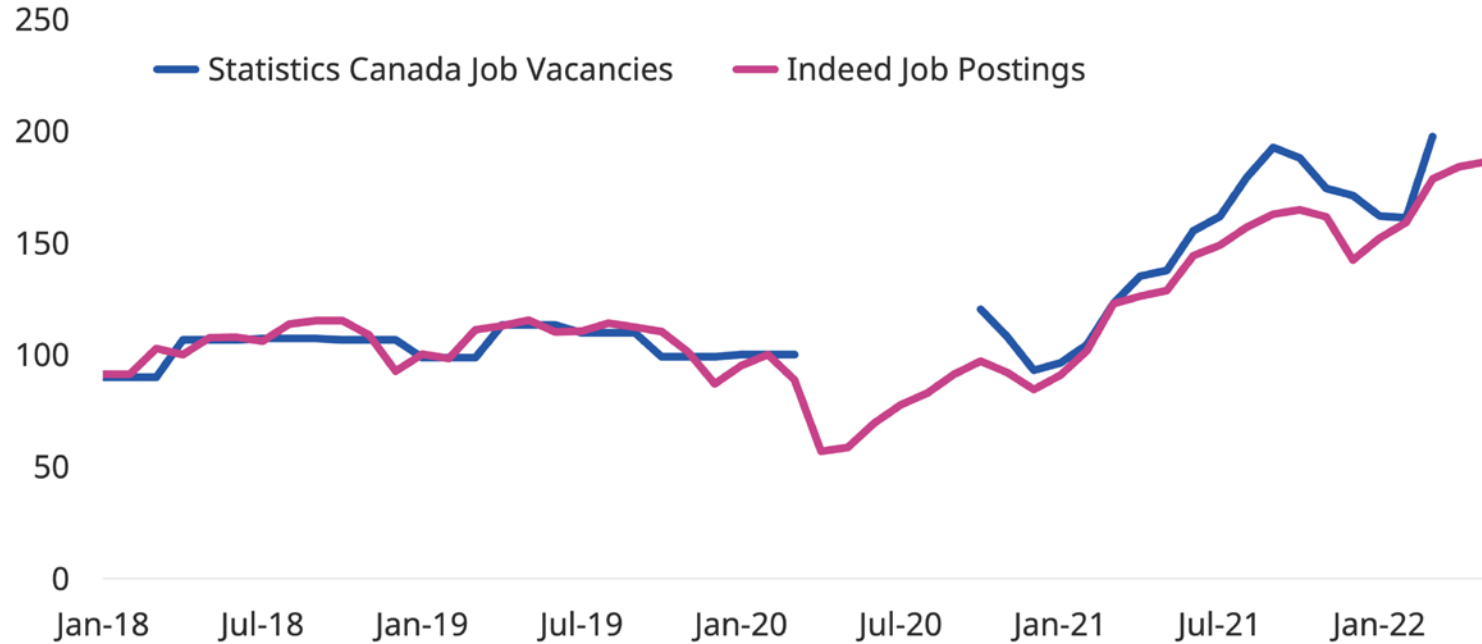
# Comparing Indeed postings to StatCan's JVWS

## Disclaimer

*The number of job postings on Indeed, whether related to paid or unpaid job solicitations, is not indicative of potential revenue or earnings of Indeed, which comprises a significant percentage of the HR Technology segment of its parent company, Recruit Holdings Co., Ltd. Job posting numbers are provided for information purposes only and should not be viewed as an indicator of performance of Indeed or Recruit. Please refer to the Recruit Holdings investor relations website and regulatory filings in Japan for more detailed information on revenue generation by Recruit's HR Technology segment.*

# Job postings have tracked job vacancies fairly well

## Canadian monthly job vacancy estimates (nsa Index, Feb-2020 = 100)x

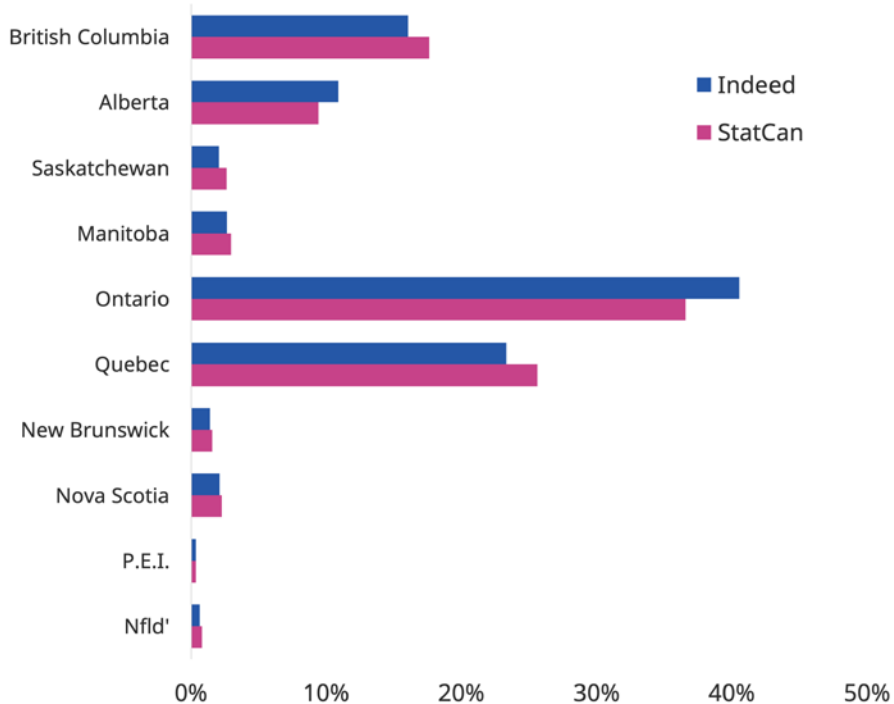


Sources: Indeed, last data point: May 2022,  
Statistics Canada, last data point: March 2022



# Posting and vacancy composition similar, with a few differences

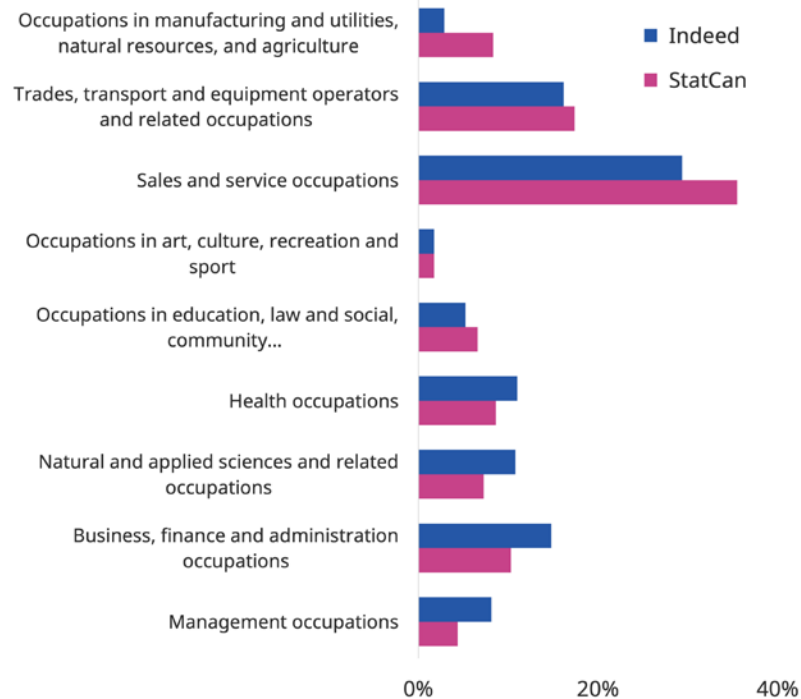
## Share by Province (March 2022)



Source: Indeed, Statistics Canada

Indeed data mapped from job-title categories to NOC 1-digit groups, excluding unclassified occupations

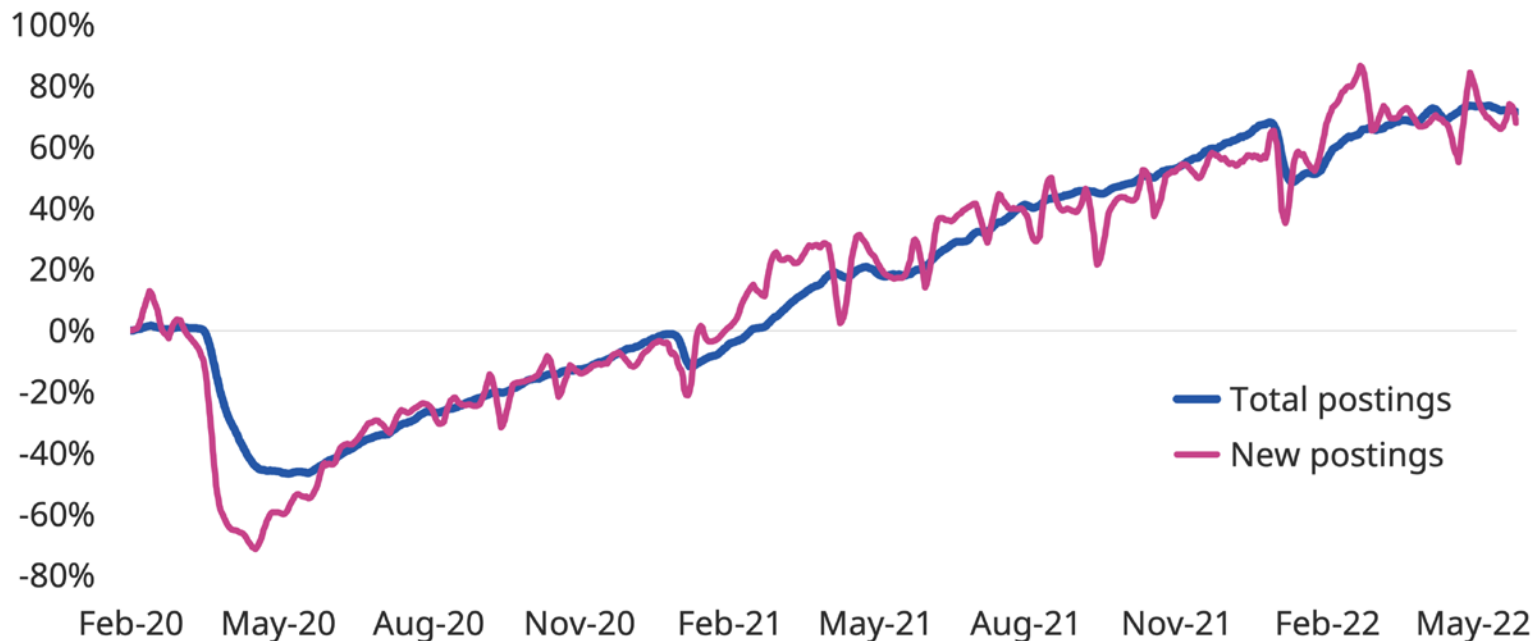
## Share by major occupation-group (2021Q4)



## **Job postings value-add (3 examples)**

# 1. Timeliness: data through last Friday

% change in Canadian job postings since Feb-01, 2020 (seasonally-adj.)



Source: Indeed, 7-day avg., last data point: May-27, 2022  
New postings are those on Indeed 7 days or left

## 2. Granularity: tracking individual job titles

“Recruiter” postings per 1000 Canadian job postings (not seasonally adjusted)



Source: Indeed, 28-day avg., last data point: May-27, 2022

### 3. Novel insights: what's included (or not) in job descriptions?

Share of Canadian job postings mentioning hiring incentives (% , not seasonally adjusted)



Source: Indeed, 7-day avg., last data point: May-27, 2022

**Best practices and looking ahead**

# Dealing Real-time challenges

- **Noise and random shifts**
  - With more granular data, a greater chance large employers cause swings
- **Dealing with seasonality when data has limited history**
- **Pressure testing the data: need to rule out platform/business changes when investigating a new trend**

# Looking ahead

- **Real-time data increasingly entrenched in the economic landscape (including academic literature)**
  - **Important to recognize strengths & weaknesses**
  - **Complement, not replacement, of more traditional data**
- **Already being used by more than just economists:**
  - **Employers, career practitioners, financial traders, policy makers, etc., etc.**





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