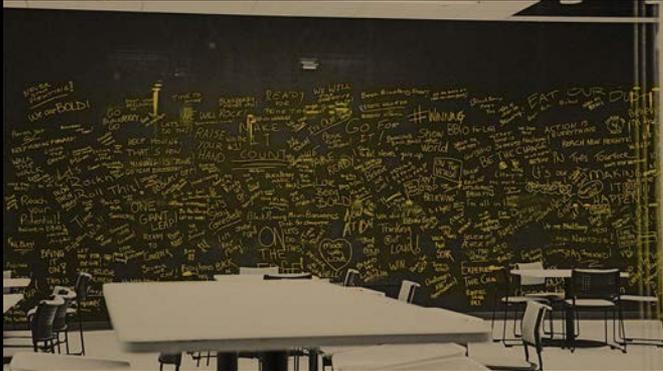


# MEETING ITS WATERLOO?

## Digital opportunity in the wake of anchor firm demise



Creating Digital Opportunity – 4<sup>th</sup> Annual Meeting, Montreal, Quebec – May 2, 2017

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# MEETING ITS WATERLOO?

1. Waterloo: Competing stories
2. Regional resilience and entrepreneurial recycling
3. Research approach: Novel social media dataset
4. In what sense a digital opportunity?
  - a. Entrepreneur recycling
  - b. Talent mobility
5. Regional resilience and entrepreneurial recycling revisited

# 2017 Global Startup Ecosystem Ranking



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**THE FIRM IN THE REGION, THE REGION IN THE FIRM**

- “Recently, a New York Times reporter asked the president of Y Combinator, a major Silicon Valley startup funder, if any one school stood out as a source of graduates with sparkling new ideas ... There’s one: It’s the University of Waterloo. Canada’s University of Waterloo.”

– Prime Minister Justin Trudeau,  
World Economic Forum, Davos,  
January 2016



Bloomberg via Getty Images



Source: Huffington Post 2016; University of Waterloo 2015

**THE FIRM IN THE REGION, THE REGION IN THE FIRM**

- Strong local leadership and civic capital (Wolfe 2010; Nelles 2014)
- University role - IP policy, co-op program (Bramwell & Wolfe 2008)
- Regionally-specific entrepreneurial culture (Spigel 2016)
- Local industrial structure and agile firms (Vinodrai 2015)

KLUGMAN AND LYNCH

## Toronto-Waterloo corridor could be Canada's own Silicon Valley

IAIN KLUGMAN AND KEVIN LYNCH

Contributed to The Globe and Mail

Published Wednesday, Aug. 19, 2015 3:00AM EDT

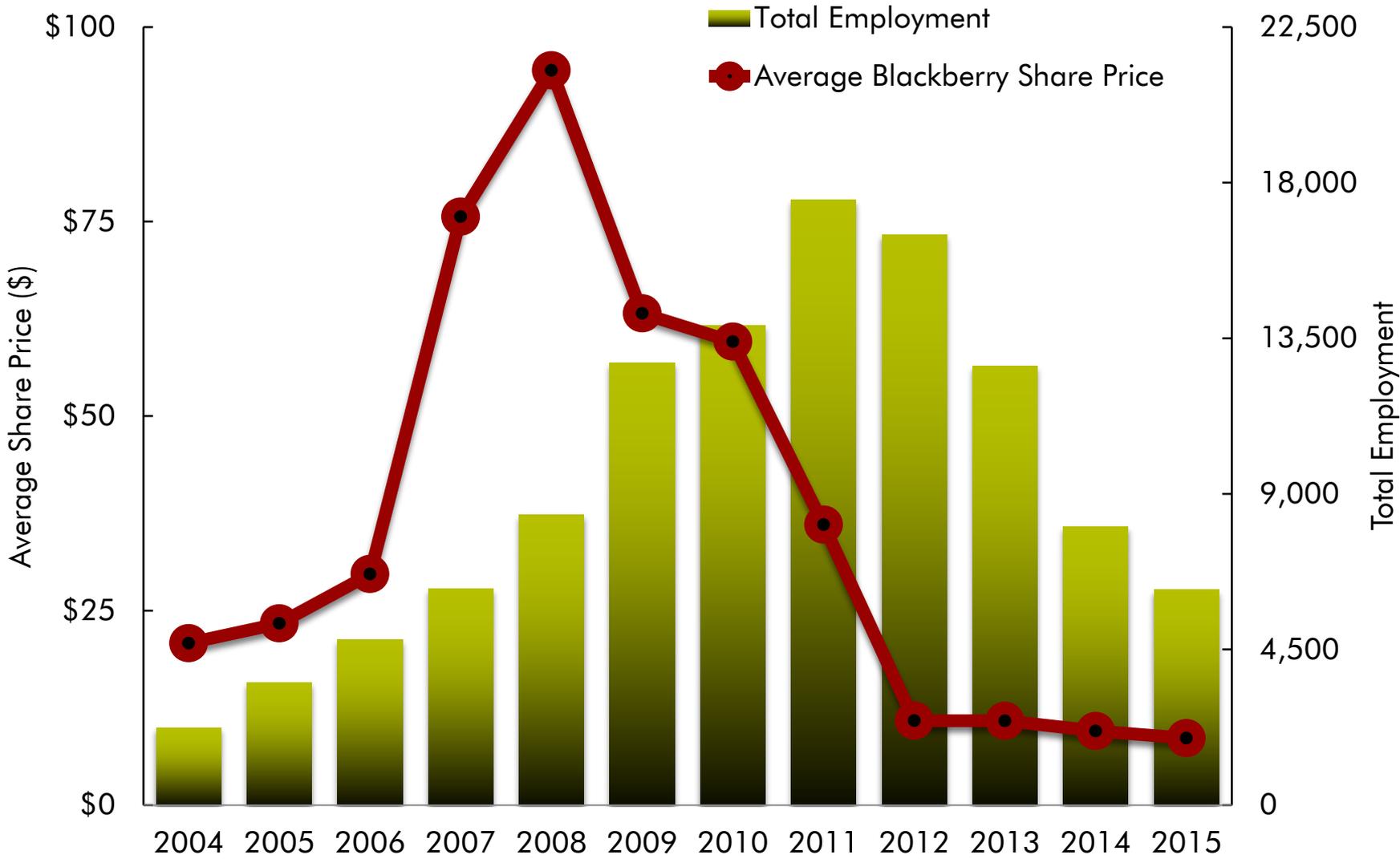
Last updated Wednesday, Aug. 19, 2015 11:16AM EDT



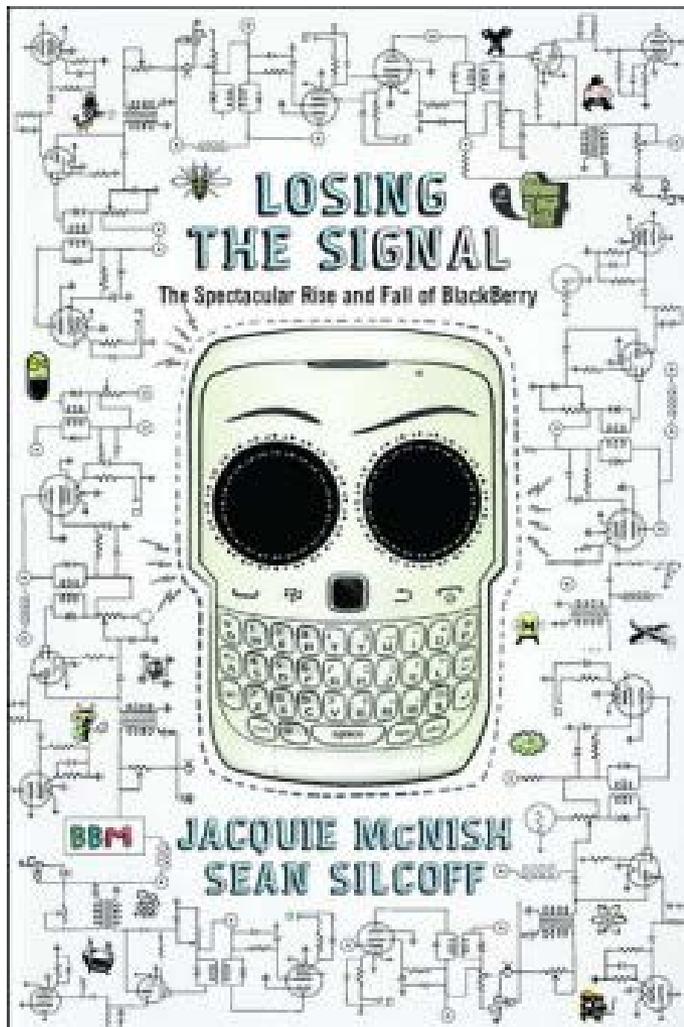
Sources: University of Waterloo 2008; Bramwell and Wolfe, 2008; Bramwell, Nelles and Wolfe 2008; Gertler 2008; Johnson 2001

**THE FIRM IN THE REGION, THE REGION IN THE FIRM**

# BLACKBERRY - EMPLOYMENT & SHARE PRICE



Source: Blackberry Annual Reports (various years), Yahoo Finance



**INNOVATE OR DIE**

## The end of BlackBerry as we know it

**RYAN CALIGIURI**

Special to The Globe and Mail

Published Tuesday, Feb. 03 2015, 5:00 AM EST

Last updated Wednesday, Feb. 04 2015, 10:45 AM EST

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## Inside the fall of BlackBerry: How the smartphone inventor failed to adapt

**SEAN SILCOFF, JACQUIE MCNISH AND STEVE LADURANTAYE**

The Globe and Mail

Published Friday, Sep. 27 2013, 7:03 AM EDT

Last updated Wednesday, Nov. 06 2013, 10:09 AM EST

**THE FIRM IN THE REGION, THE REGION IN THE FIRM**

- What is the impact of the demise/restructuring of a local anchor firm on the regional economy?
- And, how does this relate to the local tech start-up ecosystem?
- Is there empirical evidence of local entrepreneurial recycling?
  - Influence of local actors and institutions?

- “BlackBerry cast a huge shadow, ... When that started to shrink, it **opened things up for everyone.**”  
- Michael Litt, Vidyard<sup>1</sup>
- “You literally can’t walk around here without finding some RIM or BlackBerry experience in a company, ... The struggles are over. **It’s a very resilient city.**”  
– Mayor Dave Jaworsky<sup>1</sup>

## Google reaches out as Waterloo area laments BlackBerry

STEVE LADURANTAYE

The Globe and Mail

Published Wednesday, Sep. 25, 2013 10:03AM EDT

Last updated Wednesday, Sep. 25, 2013 11:18AM EDT

### SECOND ACTS

## Former BlackBerry employees start their own companies

BRENDA BOUW

Special to The Globe and Mail

Published Monday, Aug. 11, 2014 5:00AM EDT

Last updated Monday, Aug. 11, 2014 1:52PM EDT

### DEBATE THIS: INNOVATION IN EDUCATION

## Innovation in Waterloo won’t die with BlackBerry

FERIDUN HAMDULLAHPUR

Contributed to The Globe and Mail

Published Tuesday, Oct. 08 2013, 7:00 AM EDT

Last updated Wednesday, Oct. 09 2013, 11:19 AM EDT

<sup>1</sup> <http://fusion.net/the-life-death-and-rebirth-of-blackberrys-hometown-1793845127>

- Entrepreneurial resources (talent, ideas, capital) recycle back into entrepreneurial ecosystems after success or failure (Bahrami and Evans 1995; Mason and Harrison 2006; DeTienne 2010; Spigel 2017)
  - Resilient regions can re-integrate talent into local labour market rather than lose it to out-migration
- Longstanding debate about regional resilience (Christopherson et al. 2010, Martin and Sunley 2012; Boschma 2015; Brooks et al. 2016)
  - Evolutionary approaches to change equilibria
  - Institutions, civic leadership and other local conditions
  - Focus on large-scale analysis (e.g. Chapple and Lester 2010; Davies 2011) or in-depth case studies (e.g. Wolfe 2010)
  - Less known about effect of economic shocks from collapsing anchor firms or resilience in knowledge-based economies

# REGIONAL RESILIENCE & ENTREPRENEURIAL RECYCLING

- Social media job/career platforms offer a unique and potentially rich source of data
  - Individual-level data high geographic/sectoral resolution (information on location, employer, job titles and histories, educational attainment)
  - Individuals incentivized to keep data accurate and up to date, especially in occupations / industries with high labour mobility
  - Challenges (bias, data cleaning, completeness, etc.)
- Few existing studies exploit similar data:
  - Feldman and Lowe 2015 (founder career history and education)
  - Jiang et al 2014 (career paths of credit analysts)
  - State et al 2014 (migration of highly skilled workers)
  - Ng and Stuart 2016 (career paths of tech entrepreneurs)
  - Mendel 2014 (regional 'connectedness' and growth)

**DIGITAL OPPORTUNITY: NOVEL DATASET**

- Full data set:
  - Individuals employed by Blackberry / Research in Motion (n = 5,292)
- Regional data set:
  - Individuals who worked at Blackberry in Waterloo (n=1,166)
    - Exited pre-2008 (137)
    - **Exited post-2008 (759)**
    - Still at Blackberry (182)
    - Missing/unknown (37)

- Key analytical variables – derived through a mix of semi-automated/machine learning and hand coding processes
  - **Employer (current)** – firm size, location, industry/sector, length of tenure, part of Waterloo tech start-up ecosystem
  - **Previous employers (5)** – firm size, location, industry sector, length of tenure
  - **Experience** - # of months at Blackberry
  - **Education** - University of Waterloo (Y/N)
  - **Entrepreneur** – based on job titles (CEO, President, (Co)Founder, Owner (Y/N)
  - **Ecosystem** – based on presence of firm in Crunchbase, founded post-2006 in Waterloo region (Y/N)

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Years of experience	#	%
Coop term	138	18.9
New to firm (<2 years)	241	33.1
Some firm experience (2-5 years)	124	17.0
Established in firm (5-10 years)	173	23.7
Embedded in firm (>10 years)	53	7.3
<b>Total</b>	<b>759</b>	<b>100.0</b>

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## YEARS OF EXPERIENCE @ BLACKBERRY

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Sector	#	%
Financial services	41	5.4
Healthcare/medical services	16	2.1
Technology	594	78.3
Other	83	10.9
Unknown/not specified	25	3.3
<b>Total</b>	<b>759</b>	<b>100.0</b>

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**CURRENT EMPLOYER - SECTOR**

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<b>Firm size</b>	<b>#</b>	<b>%</b>
Micro	28	3.7
Small	118	15.5
Medium	163	21.5
Large	424	55.9
Unknown/not specified	26	3.5
<b>Total</b>	<b>759</b>	<b>100.0</b>

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**CURRENT EMPLOYER - FIRM SIZE**

---

Ownership	#	%
Waterloo	240	31.6
Elsewhere in Canada	133	17.5
International	361	47.6
Unknown / not specified	25	3.3
<b>Total</b>	<b>759</b>	<b>100.0</b>

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## CURRENT EMPLOYER - OWNERSHIP

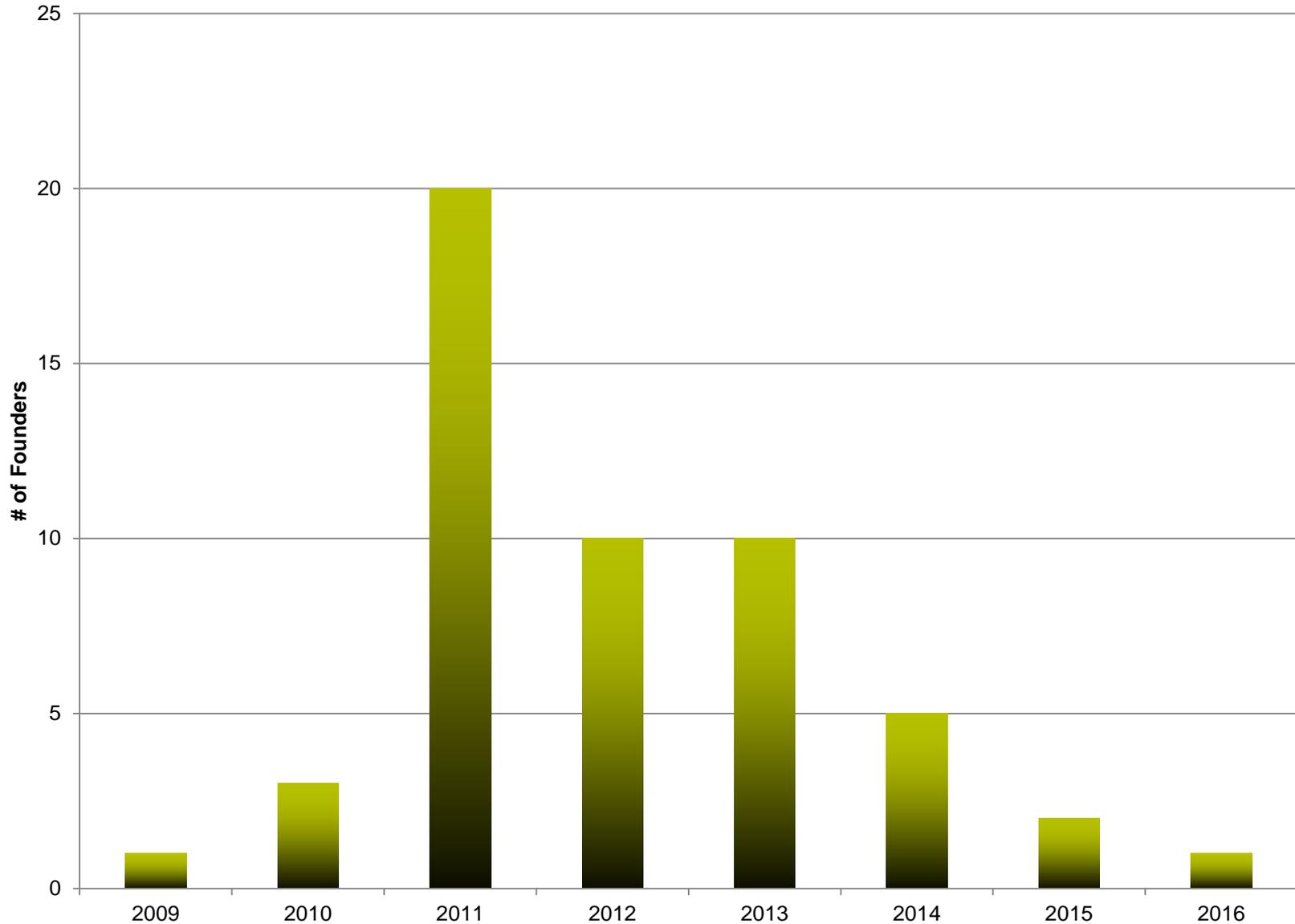
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Variable	%
Attended local university?	39.1
Local start-up eco-system?	25.4
Identified as a founder?	6.9

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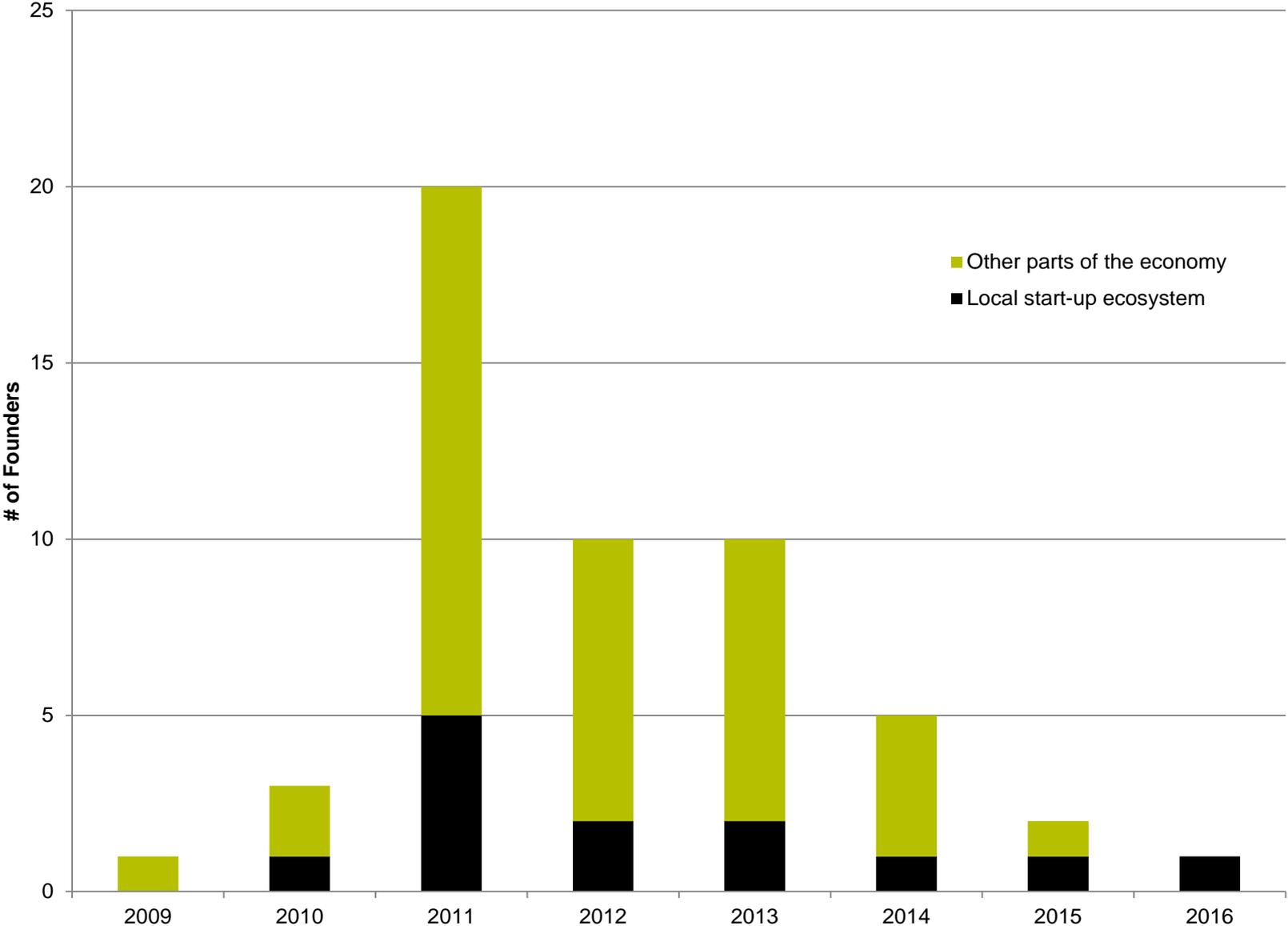
## LOCAL EMBEDDEDNESS & ENTREPRENEURIALISM

# BECOMING ENTREPRENEURS?



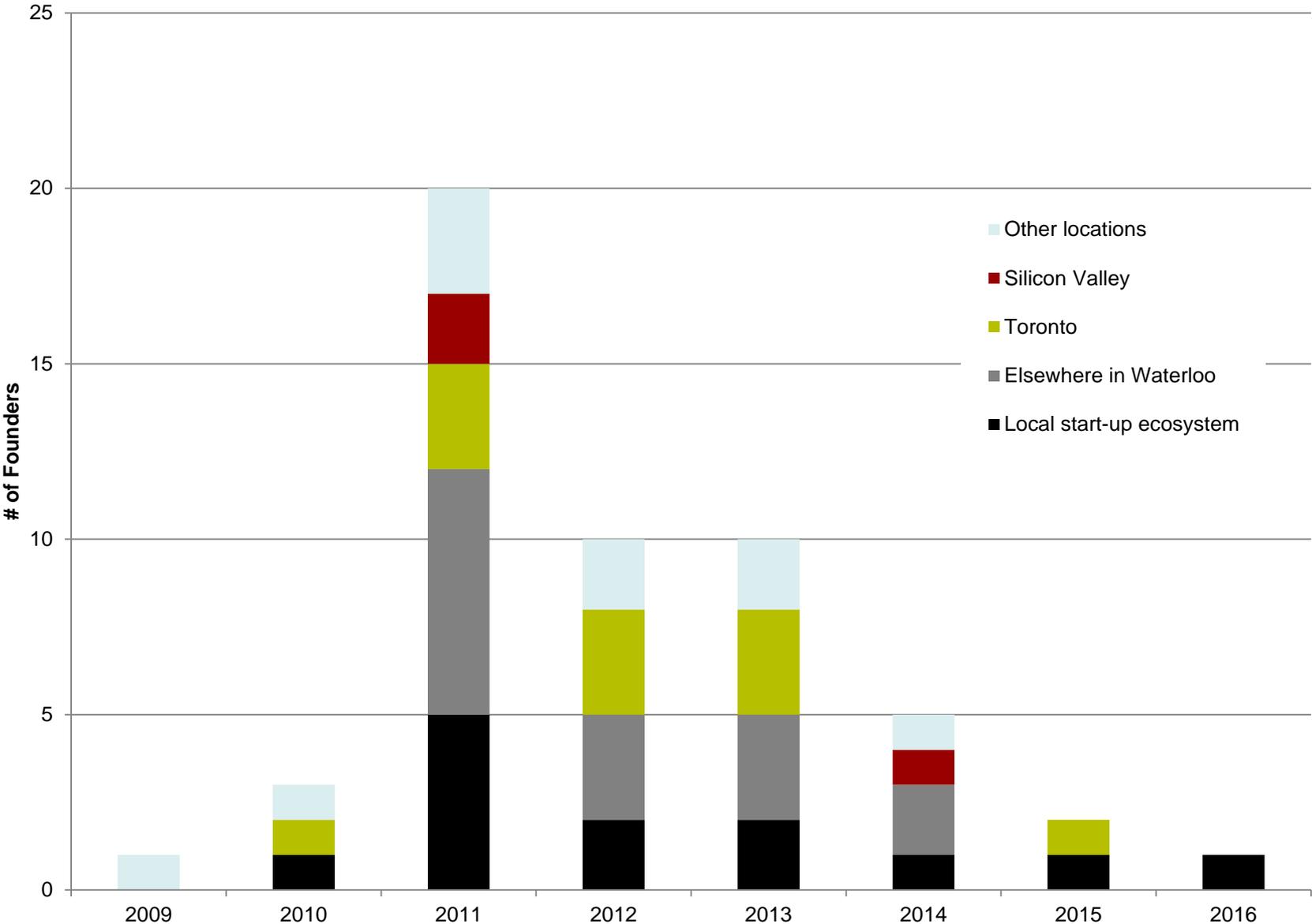
Source: Authors' calculations

# BECOMING ENTREPRENEURS?



Source: Authors' calculations

# BECOMING ENTREPRENEURS?



Source: Authors' calculations

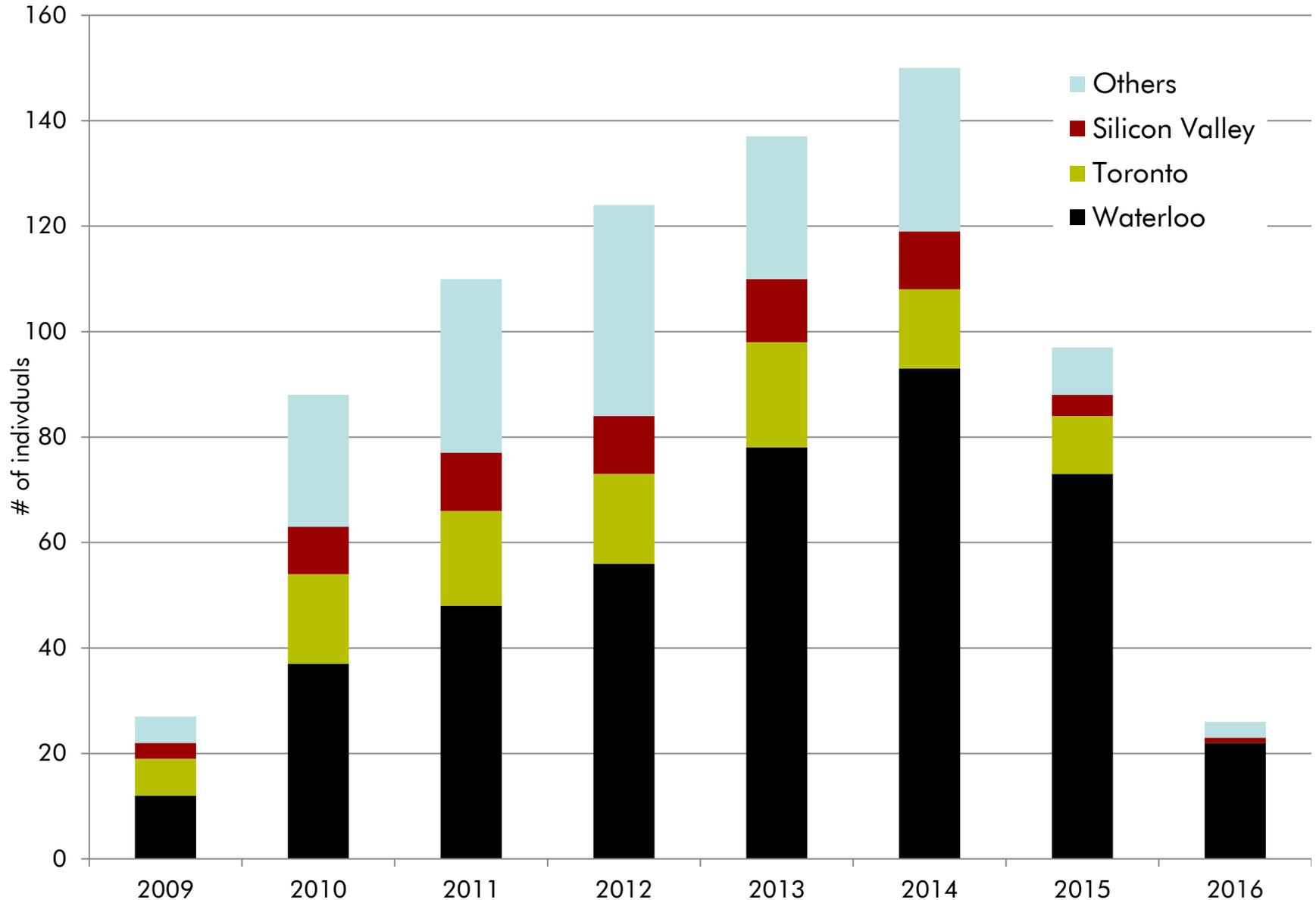
# WHERE DID THE TALENT GO?

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Current location	#	%
Waterloo	419	55.2
Toronto	105	13.8
Rest of Canada	111	14.6
Silicon Valley	62	8.2
Seattle	9	1.2
Rest of United States	49	6.5
Rest of World	4	0.5
<b>Total</b>	<b>759</b>	<b>100.0</b>

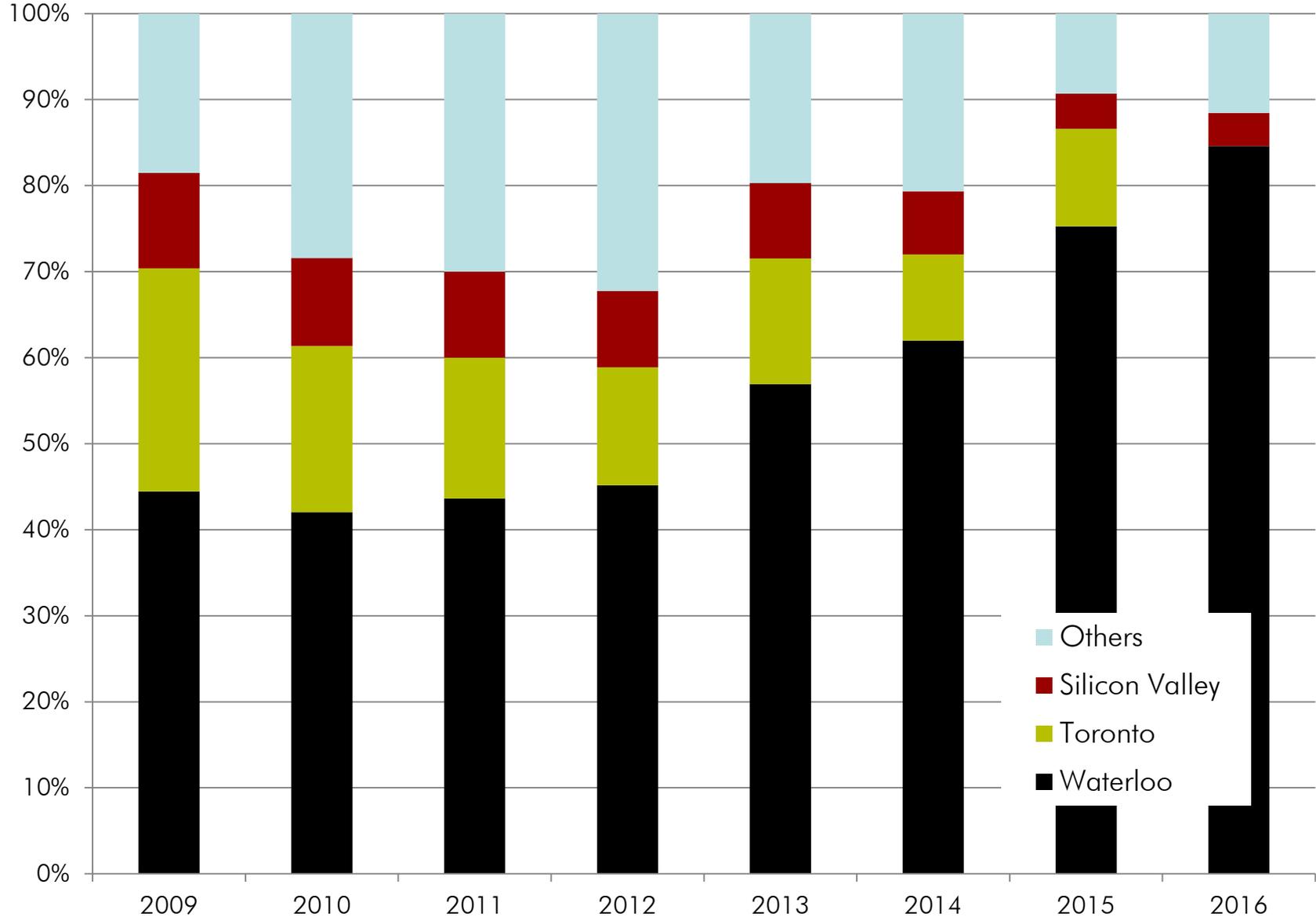
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# WHERE DID THE TALENT GO?



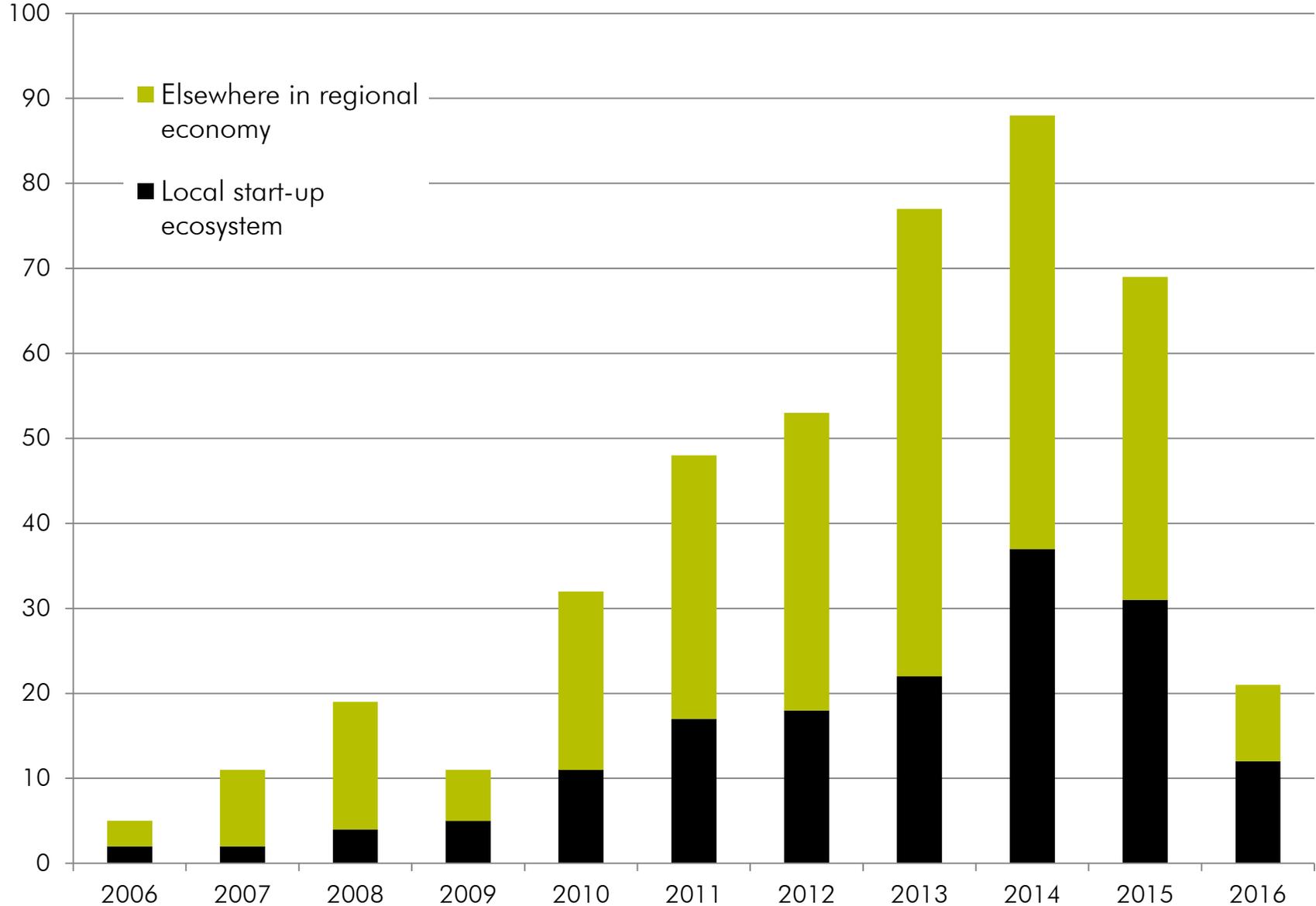
Source: Authors' calculations

# WHERE DID THE TALENT GO?



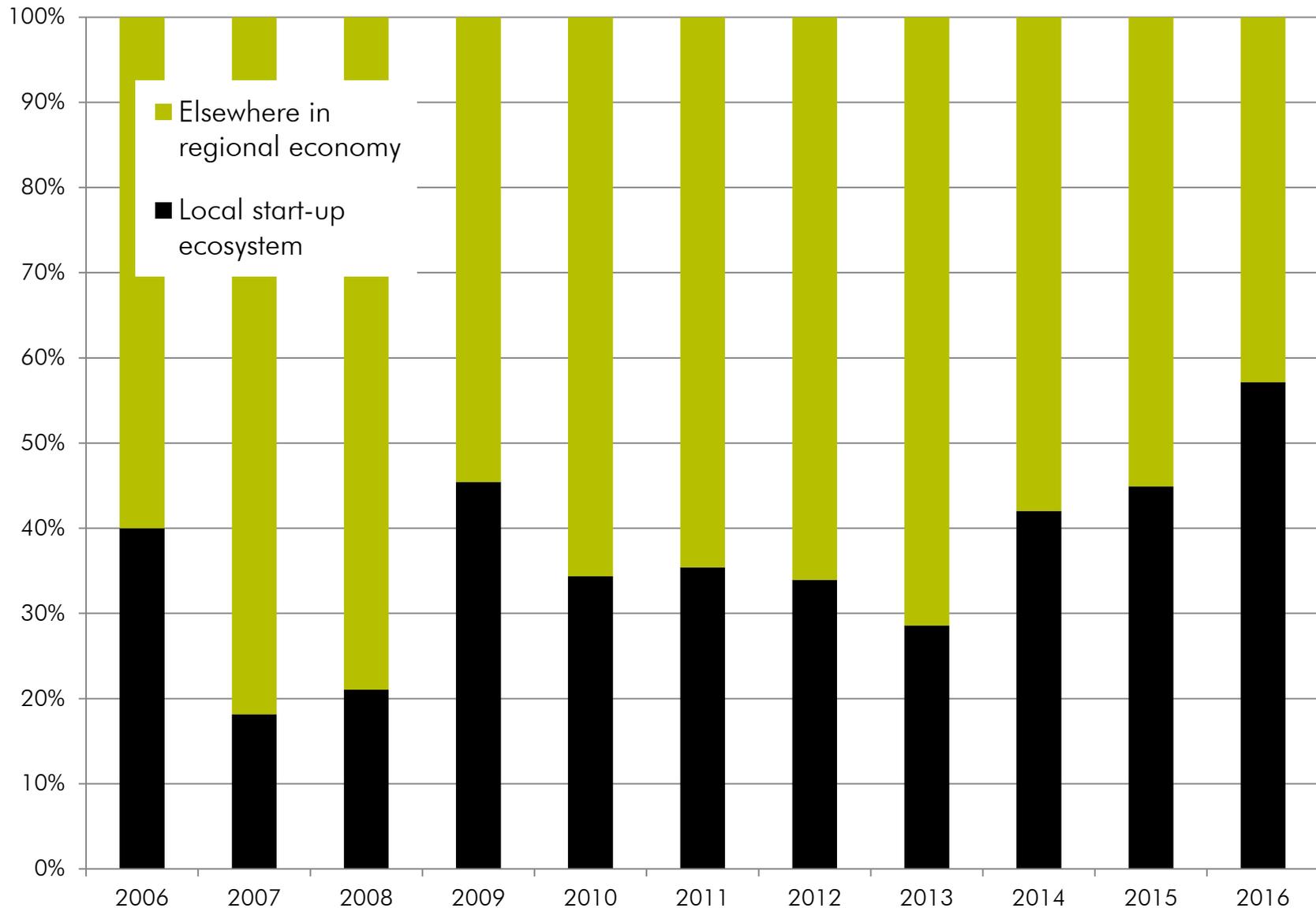
Source: Authors' calculations

# WATERLOO: PARTICIPATION IN LOCAL ECO-SYSTEM



Source: Authors' calculations

# WATERLOO: PARTICIPATION IN LOCAL ECO-SYSTEM



Source: Authors' calculations

- Responds to call to embrace alternative data sources in economic geography and regional studies (Kitchin 2013; Feldman 2015; Feldman and Lowe 2015)
- Offers novel empirical evidence on regional resilience and entrepreneurial recycling in the face of anchor firm decline
- Evidence suggests competing narratives about resilience of regional economies offering a more nuanced view
  - Sticky place – embedded, experienced talent remains
  - Leaky place – young mobile talent exiting the regional ecosystem

## REGIONAL RESILIENCE & RECYCLING REDUX

- New firm formation and entrepreneurship?
  - Some local firm formation, but firms no longer exist
  - But, subsequent deployment to local start-up ecosystem
- Highly mobile talent recycled/redeployed into the regional economy or exits the region?
  - More talent remaining in the region over time, suggesting strong role of local institutions and actors
  - Evidence of local institution building and developing local capacity of ecosystem to absorb talent

- Paper 1: Entrepreneurial recycling for special issue of *Industrial and Corporate Change*
- Paper 2: Global networks of former Blackberry workers for *Economic Geography*
  - Corporate acquisition (e.g., TAT (Malmö, Sweden), movement of internal teams, chain migration)
- Paper 3: Novel job history data and *avante garde* datasets for *Research Policy*
  - Cluster analysis, Entrepreneurs vs. other tech talent

- Thanks to:
  - John Barber (UWaterloo) and Ondrej Bohdal (Edinburgh)
  - Social Sciences and Humanities Research Council (SSHRC)
  - Innovation Policy Lab, Munk School of Global Affairs, University of Toronto
  - Participants and organizers of AAG special session on 'Geographies of resilience and entrepreneurial cultures'
- Contact us:
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  - [ben.spigel@ed.ac.uk](mailto:ben.spigel@ed.ac.uk)
- Cover photo source
  - <http://fusion.net/story/45438/the-life-death-and-rebirth-of-blackberrys-hometown/>

**QUESTIONS?**

# WHERE DID THE TALENT GO?

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Current location	Coop	<2 yrs	2-5 yrs	5-10 Yrs	>10 yrs
Waterloo	67 (48.6)	120 (49.8)	71 (57.3)	105 (60.7)	36 (67.9)
Toronto	25 (18.1)	39 (16.2)	14 (11.3)	19 (11.0)	5 (9.4)
Silicon Valley	19 (13.8)	17 (7.1)	8 (6.5)	12 (6.9)	3 (5.7)
Rest of Canada	14 (10.1)	44 (18.3)	24 (19.4)	20 (11.6)	4 (7.5)
Rest of World	13 (9.4)	21 (8.7)	7 (5.6)	17 (9.8)	5 (9.4)
<b>Total</b>	<b>138</b>	<b>241</b>	<b>124</b>	<b>173</b>	<b>53</b>

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