

Winning the Lottery and Entrepreneurial Outcomes

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Disclaimer

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Background: Lottery Winners in Gambling Literature

- Most of gambling literature examines harms from gambling losses
- Much smaller literature examines outcomes from gambling winners (both positive and negative)
- Growing literature in Economics examines lottery winners - advantage is randomization of win amount which is used for **causal inference**.

Using Lottery Winning Amount in Economics Research

- Conditional on winning - the winning amount is random.
- Random amount of income or wealth shock
- **Randomization** is critical for statistical causal inference - amount is "exogenous" (i.e. not related to other individual level characteristics)
- Large literature examines lottery winning amount in MANY contexts
- Usual Explanation: If can only do something AFTER a lottery win - implies could not do it BEFORE the lottery win
- This paper - Examines how lottery winning amount impacts entrepreneurship

Lottery Winner Literature

- Imbens, Rubin, and Sacerdote (2001) on labor supply, earnings, savings, and consumption;
- Lindahl (2005) on health and mortality;
- Gardner and Oswald (2007) on psychological well-being;
- Apouey and Clark (2015) on physical and mental health;
- Hankins and Hoekstra (2011) on marriage and divorce;
- Bagues and Esteve-Volart (2016) on election outcomes;
- Briggs et al. (2015) on stock market participation;
- Cesarini et al. (2016) on health and child development;
- Cesarini et al. (2017) on household labor supply.

Our Ongoing Research Agenda Using Lottery Winner Amounts

- Link New Data to Lottery Winner Data by Name and Post Code
 - ① This paper: Lottery Winners and Corporate Registry Data
 - ② Published: Lottery Winners and Bankruptcy Filers, *Review of Financial Studies*, 2020
 - ③ Data Collection Stage: Lottery Winners and Credit Outcomes - Credit Bureau Data
 - ④ Data Collection Stage: Lottery Winners and Tax Filings - Statistics Canada Data

Motivation: Financial constraints for entrepreneurs

- Business starts in decline for last two decades.
 - possibly due to financial constraints
- Most employment growth in US from small businesses.
- Only 7.5% of small businesses responsible for the growth.
 - high-impact “entrepreneurs”

Do financial constraints affect entrepreneurial and other self-employed small businesses differently?

What do we do?

We separate entrepreneurs and other self-employed...

- based on owner's choice of **legal structure**
 - entrepreneurs: incorporation
 - other self-employed: registration
 - following Levine & Rubinstein (2017)

Registrations versus incorporations

Business registrations are less costly (dollar- and effort-wise).

Entrepreneurial projects are *high risk, high return*.

- More likely to seek external financing.
- Risky projects → legal protections in case of default worthwhile.
- Entrepreneurial businesses more likely to be **incorporated**.
- e.g., real estate developer

Other self-employed businesses are *low risk, low return*.

- Less likely to seek external financing.
- Low return projects → prefer low cost of operations.
- Low risk projects → default less likely.
- Other self-employed businesses more likely to **register**.
- e.g., handyman

Following Levine & Rubinstein (2017)

Corporate registry in a Canadian province

Corporate registry records all “events” for businesses in province.

Including:

- **business name registrations** for:
 - sole proprietorships
 - unlimited partnerships
- **incorporations** for corporations
- **closures** for corporations

For each event, possess:

- date
- registrants/incorporators **name(s)**
- registrants/incorporators **addresses(s)**

Lotteries in a Canadian province

Possess data on universe of lottery wins in a Canadian province:

- April 2004 – March 2014
- Lottery game played
- Winners' **names** and **postcodes**
- Amount won (> CA\$1,000 only)

Match corporate registry data and lottery data using:

- postcode (13 HHs per median postcode)
- owner/lottery winner name

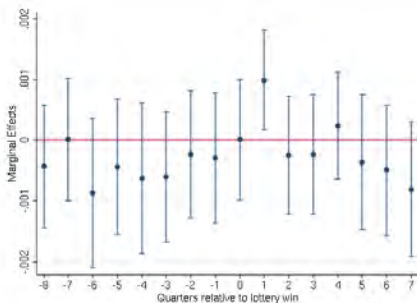
Lotteries in Canada:

- Canada **does not tax** lottery winnings (unlike US).
- Two-thirds of Canadians buy 1+ lottery tickets per year.

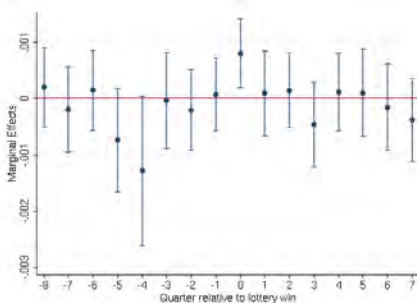
Lottery Wins increase both Incorporation and Registration

- Financial Constraints Matter for both Entrepreneurs and Self-Employed

Incorporations



Registrations



Note: Dots represent marginal effects from logit regressions. Bands show 95 % confidence intervals.

When (and How) do Financial Constraints Matter?

- Characteristics of **Individual** Entrepreneur
 - Gender (Use Algorithm based on First Name)
 - Individual Business History (From Corporate Registry Data)
- Characteristics of **Neighborhood**
 - Neighbors (Link Post Code to Census Data)
 - Neighborhood Banks (Link Post Code to Bank Branch Location Data)
- Characteristics of **Macro** Environment
 - Boom and Bust (year of lottery win - 2004-2014)

Business Exit after the Lottery Win

- For Incorporation - we can observe if exit incorporation after a lottery win
- Does owner use the lottery money in the business, or to leave the business?
- Do lottery financed business last longer or shorter than other business (i.e. measures quality of lottery financed business)

What do we find?

Immediately after a win, lottery winners' receiving **more winnings**:
(comparing **within** lottery winners)

	Incorporation	Registration
Likelihood of business start		
Overall	↑	—
<i>Boom versus bust periods</i>		
Boom	↑	—
Bust	—	↑
<i>Winners with/without business experience</i>		
Experienced	↑	↓
Inexperienced	—	↑
<i>Winners near/far from banks</i>		
Near banks	—	—
Far from banks	↑	—
Quarterly likelihood of closure		
Existing business	↓	
New business	—	

What does it mean?

Business starts:

Entrepreneurs and other self-employed face diff financial constraints, overall.

In booms, entrepreneurs constrained but other self-employed not.

In busts, entrepreneurs not constrained but other self-employed are.

Business experience may affect choice of business type.

Local lenders reduce financial constraints for entrepreneurs.

Business closures:

Operating entrepreneurial businesses are financially constrained.

Lottery-financed entrepreneurial businesses are not worse quality.

Thank You