

Shiny Happy People: Are Cryptocurrency Owners Optimistic People?*

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Abstract

This research paper investigates the relationship between dispositional optimism and financial expectations in the context of Bitcoin ownership. Previous studies have shown that optimism levels can influence economic behavior and outcomes. We utilize a novel measure of optimism developed by Puri and Robinson (2007) and apply it to the Bank of Canada's Bitcoin Omnibus Survey (BTCOS), which collects data on Canadians' awareness, ownership, and use of Bitcoin. By matching respondents' self-reported life expectancy with objective life expectancy based on demographic factors, we derive an objective measure of optimism. These findings suggest a potential association between individuals' positive outlook on life, their price expectations, and their ownership of cryptocurrencies. This research contributes to understanding the complex relationship between optimism and financial expectations in the context of Bitcoin ownership in Canada.

Key Words: Consumer Expectations, Digital Currencies and FinTech, Survey Data.

JEL Code: D12, D14, E4, G11, O51.

*The views expressed in this article are those of the authors. The Bank of Canada is not responsible for any views expressed in the paper. All remaining errors are the authors' responsibility.

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Extended Abstract

Level of *optimism* can affect economic behavior/outcomes of agents ([Brunnermeir and Parker, 2005](#)). Recently, a novel measure of optimism was developed in [Puri and Robinson \(2007\)](#) and shown to be empirically relevant using data from the U.S. Federal Reserve Bank's [Survey of Consumer Finance](#). In particular, they find that “moderate optimists display reasonable financial behavior, whereas extreme optimists display financial habits and behavior that are generally not considered prudent.”

Since 2016 the [Bank of Canada](#) has conducted the Bitcoin Omnibus Survey (BTCOS) to monitor trends in Canadians' awareness, ownership, and use of Bitcoin. In recent versions, a question was added to measure respondents subjective life expectancy—i.e., how long they think they will live. [Balutel et al. \(2022\)](#) provides the key results, survey instrument and methodological details for the 2021 version; a report on the 2022 BTCOS is forthcoming. The total sample size of the survey is approximately 2,000 individuals with over 200 Bitcoin owners.

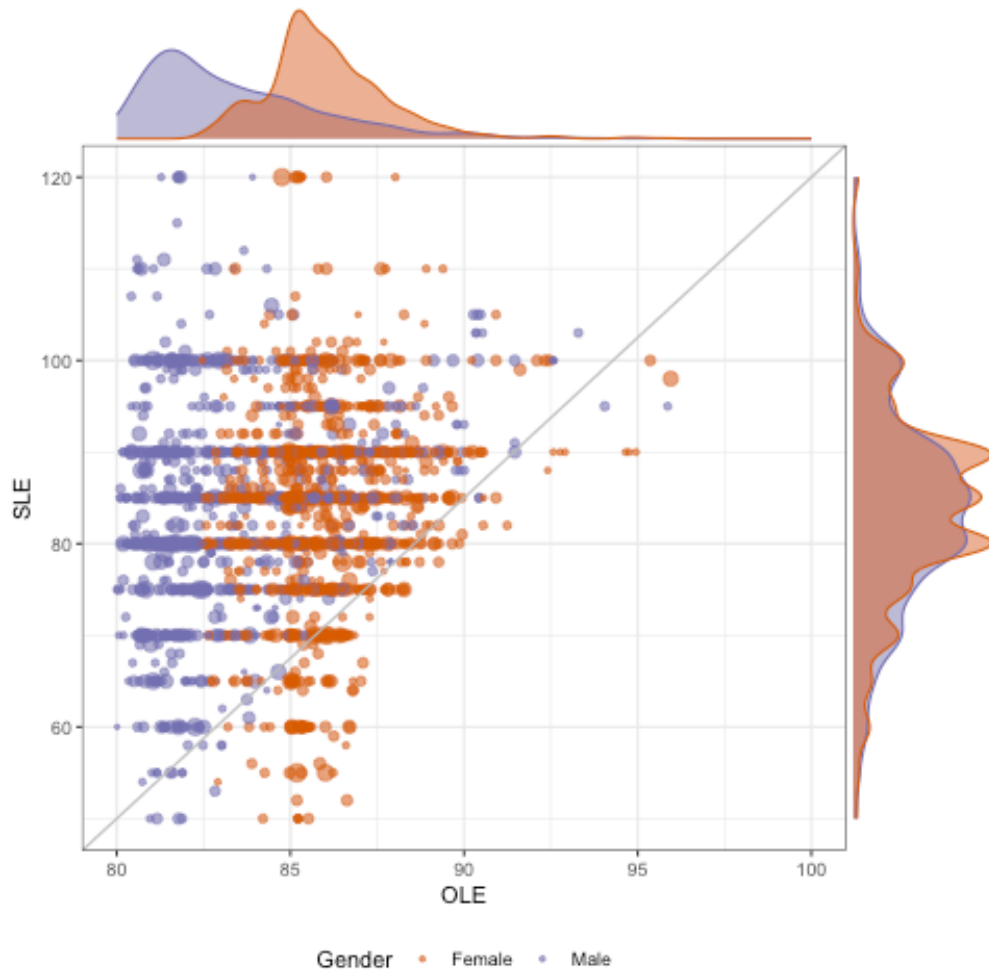
Besides self-reported life expectancy (SLE hereafter), the BTCOS also contains information on ownership of Bitcoin and altcoins, price expectations of Bitcoin, duration of Bitcoin ownership, etc., in addition to socio-demographic information and financial literacy measures of the respondents.

This research conducts an empirical analysis of optimism and cryptocurrency ownership. Since people are asked to self-report how long they think they will live and the survey contains their socio-demographic information, we match an objective life expectancy (OLE hereafter) to each respondent in the survey after matching their gender, age, and geographic location to the corresponding values in the [Actuarial Life Tables](#). This gives us an objective measure of how optimistic they are, as in [Puri and Robinson \(2007\)](#).

Optimism (OPT) is defined as the difference between self-reported and objectively measured life expectancy, i.e., $OPT = SLE - OLE$. The more negative this measure, the least optimistic a person is considered. A breakdown by geographic location and gender is presented in the following table:

Overall, one observes that about 13% of those surveyed own Bitcoin (Ownership), and about three quarters of them are men. Bitcoin holdings of men are, on average, valued at larger amounts of Canadian Dollars (Holdings) than the holdings of women. Women do not only hold less Bitcoin but they are also less optimistic (OPT) than men and less optimistic than those who do not own any Bitcoin. This statistical observation suggests that individuals' positive outlook on life may be associated with their price expectations and ownership of cryptocurrency.

Figure 1: Optimism and Gender differences



Note: OLE stands for objective Life Expectancy (as matched by gender, age, and Canadian region from Statistics Canada's [Actuarial Life Tables](#)). SLE stands for Self-reported Life Expectancy.

Region	Ownership	OPT (owns)	OPT (doesn't own)	CAD
B.C.				
Male	0.78	-0.2340	-0.1441	51,345.65
Female	0.22	-3.6178	-2.6527	23,218.92
Doesn't Own	0.83			
Prairies				
Male	0.68	-0.6071	-0.0049	30,535.47
Female	0.32	-3.8045	-2.4724	1,027.42
Doesn't Own	0.87			
Ontario				
Male	0.66	0.4397	-0.2789	50,397.37
Female	0.34	-2.7493	-2.8105	27,472.66
Doesn't Own	0.86			
Quebec				
Male	0.81	-0.7182	-0.3431	41,7014.80
Female	0.18	-4.6949	-2.8959	95,714.21
Doesn't Own	0.88			
Atlantic				
Male	0.66	0.0879	-0.0019	31,276.21
Female	0.33	-4.0489	-2.5491	227.25
Doesn't Own	0.92			

Note: B.C. stands for the British Columbia province, the Prairie provinces are Manitoba, Saskatchewan, and Alberta. The provinces of New Brunswick, Nova Scotia, Prince Edward Island, and Newfoundland and Labrador are considered the Atlantic region.

Figure 1 showcases the striking differences between SLE reported by the surveyed individuals and their matched OLE. Women are objectively expected to live longer than men in Canada, yet their self-reported life expectancy distributions are very similar. Having constructed this measure of optimism in Canada, this research aims at disentangling the intricate relationship between dispositional optimism and financial expectations in the context of Bitcoin ownership.

References

- BALUTEL, D., W. ENGERT, C. S. HENRY, K. P. HUYNH, AND M. VOIA (2022): “Private digital cryptoassets as investment? Bitcoin ownership and use in Canada, 2016-2021,” Staff Working Paper 2022-44, Bank of Canada.
- BRUNNERMEIR, M. K. AND J. A. PARKER (2005): “Optimal Expectations,” *American Economic Review*, 95, 1092–1118.

PURI, M. AND D. ROBINSON (2007): "Optimism and Economic Choice," *Journal of Financial Economics*.