

# The Impact of Loyalty Points on Canadian Consumers' Preferences for Low Sodium Bread

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## Background

- Three out five Canadians are surpassing the recommended daily sodium intake, with bakery products being the top contributor of sodium in the Canadian diet (Health Canada, 2018).
- In 2021, Canadians spent \$8.27B on bakery products with bread accounting for \$5.1B (Agriculture and Agri-Food Canada, 2023).
- One in four Canadians was affected by high blood pressure, resulting in an economic burden of \$13.9 billion in 2022 (Heart and Stroke Foundation of Canada, 2022).
- In 2021, the average Canadian was actively engaging with 6.7 loyalty programs (Statista, 2023).
- In 2020, Loblaw tied loyalty points to wellness goals encouraging healthier eating through its Optimum PC loyalty program (Canadian Grocer, 2020).

## Literature Review

- Consumers react to warning FOP labels and health and nutritional claims, as these labels aid them in identifying healthier food choices (Egnell et al., 2018; Lee et al., 2023).
- Consumers perceive low sodium products negatively thinking it impacts the flavor, sensory attributes, and overall taste (Liem et al., 2011; Gorman et al., 2023).
- Mixed findings regarding the influence of loyalty programs on consumer behaviour:
  - Loyalty programs have led to an increased frequency of visits and a higher share of expenditure among consumers (Florez-Acosta, 2021; Gopalakrishnan et al., 2020; Nessel et al., 2021; Rossi & Chintagunta, 2022).
  - Loyalty programs do not increase overall expenditure or generate more sales for retailers (Dorotić et al., 2011; Villacé-Molinero et al., 2016).

## Research Questions

Do Canadians prefer low sodium bread?

What is the impact of loyalty points and a low sodium label on their choice of bread?

## Experimental Design

	Control Group	Treatment 1 (LP Random)	Treatment 2 (LP Healthier)	Treatment 3 (LSL)	Treatment 4 (LSL & LP)
Loyalty Points (LP)	No Treatment	Yes (randomly)	Yes (low sodium)	No Treatment	Yes (low sodium)
Low Sodium Label (LSL)	No Treatment	No Treatment	No Treatment	Yes	Yes

Attributes	Levels
Sodium Level	290mg 13% of DV
	120 mg 5% of DV
Price	\$2.99
	\$3.58
	\$4.12
Loyalty Points	0
	250
	500
	1000
Low Sodium Label	No label
	Label

Please select the product you would most likely purchase.

Attribute	Product 1	Product 2
White Bread		
Price	\$3.58	\$2.99
Loyalty Points	500	0

Product 1  
 Product 2  
 Prefer not to choose

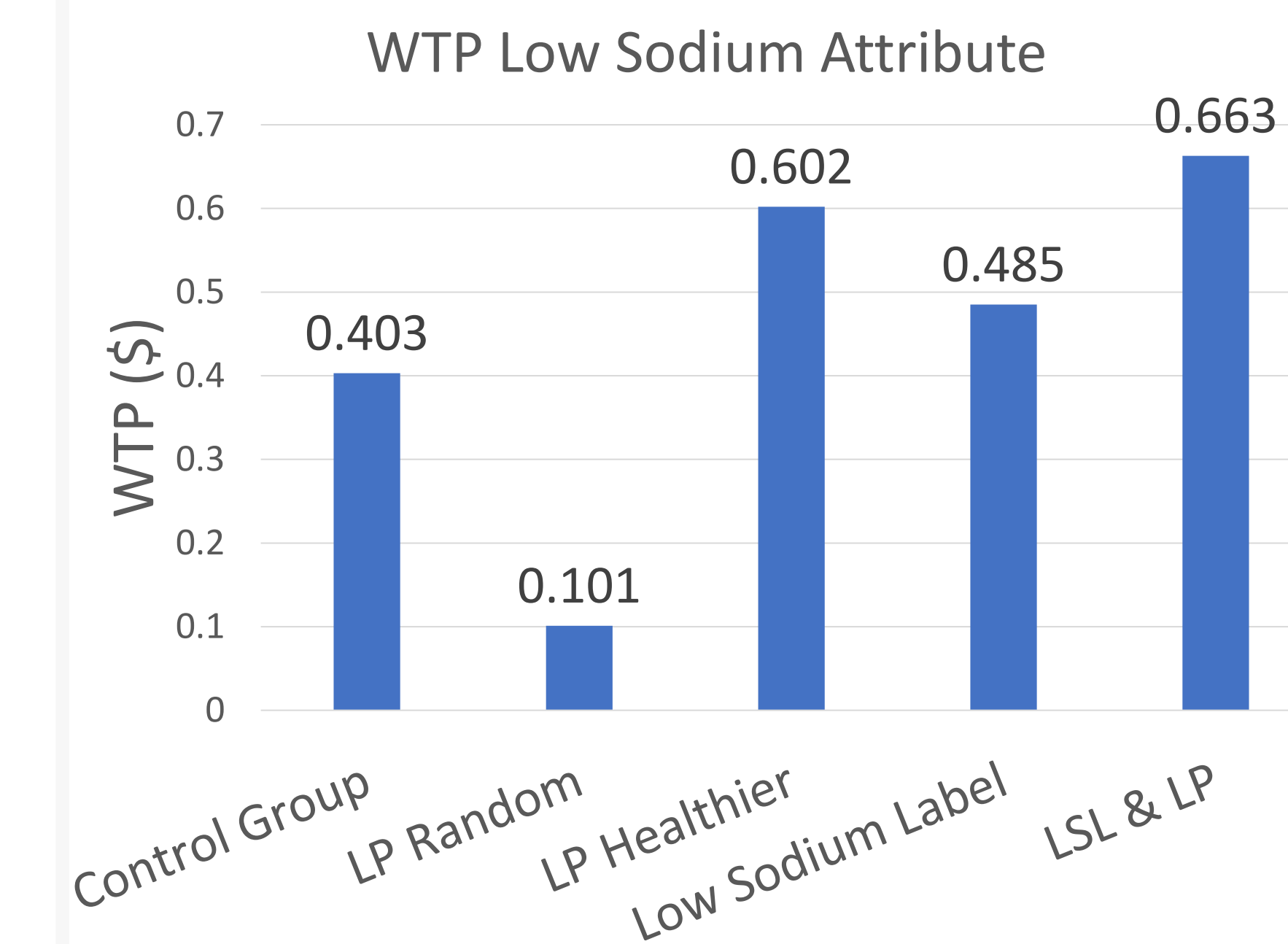
## Data & Results

Variables y=Choice	Mixed Logit Model Treatments Coefficients				
	(1) Control Group	(2) LP Random	(3) LP Healthier	(4) Low Sodium Label (LSL)	(5) LSL & LP
ASC	11.21*** (0.616)	12.36*** (0.724)	17.76*** (1.054)	12.15*** (0.668)	12.57*** (0.731)
Price	-2.108*** (0.153)	-2.457*** (0.177)	-3.380*** (0.239)	-2.112*** (0.160)	-2.127*** (0.161)
Sodium level	-0.106*** (0.0108)	-0.0356*** (0.0113)	-0.212*** (0.0282)	-0.128*** (0.0110)	-0.159*** (0.0228)
Loyalty points	-	0.00207*** (0.000172)	0.000553* (0.000324)	-	0.000241 (0.000272)
Observations	3,255	3,162	3,141	3,378	3,369
Model chi-square	483.6	389.2	397.8	464.7	464.3
Log likelihood	-679.6	-515.4	-433	-620	-594.4

Standard errors in parentheses  
\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

- Data was collected through an online survey administered by Qualtrics in November of 2023, with a representative sample of the Canadian population.
- A total of 1249 surveys were completed across Canada.
- There is a preference amongst Canadians for low sodium bread.
- Loyalty points are valued by Canadians, especially among female consumers.
- Low-income (earning below \$50,000) and Gen Z (18 to 24 years old) participants chose less low sodium bread when a low sodium label was used to indicate them.
- Seniors (65+) prefer low sodium bread and are less responsive to loyalty points.
- Combining loyalty points and low sodium label hindered the impact of both attributes, repelling consumers from the low sodium bread.

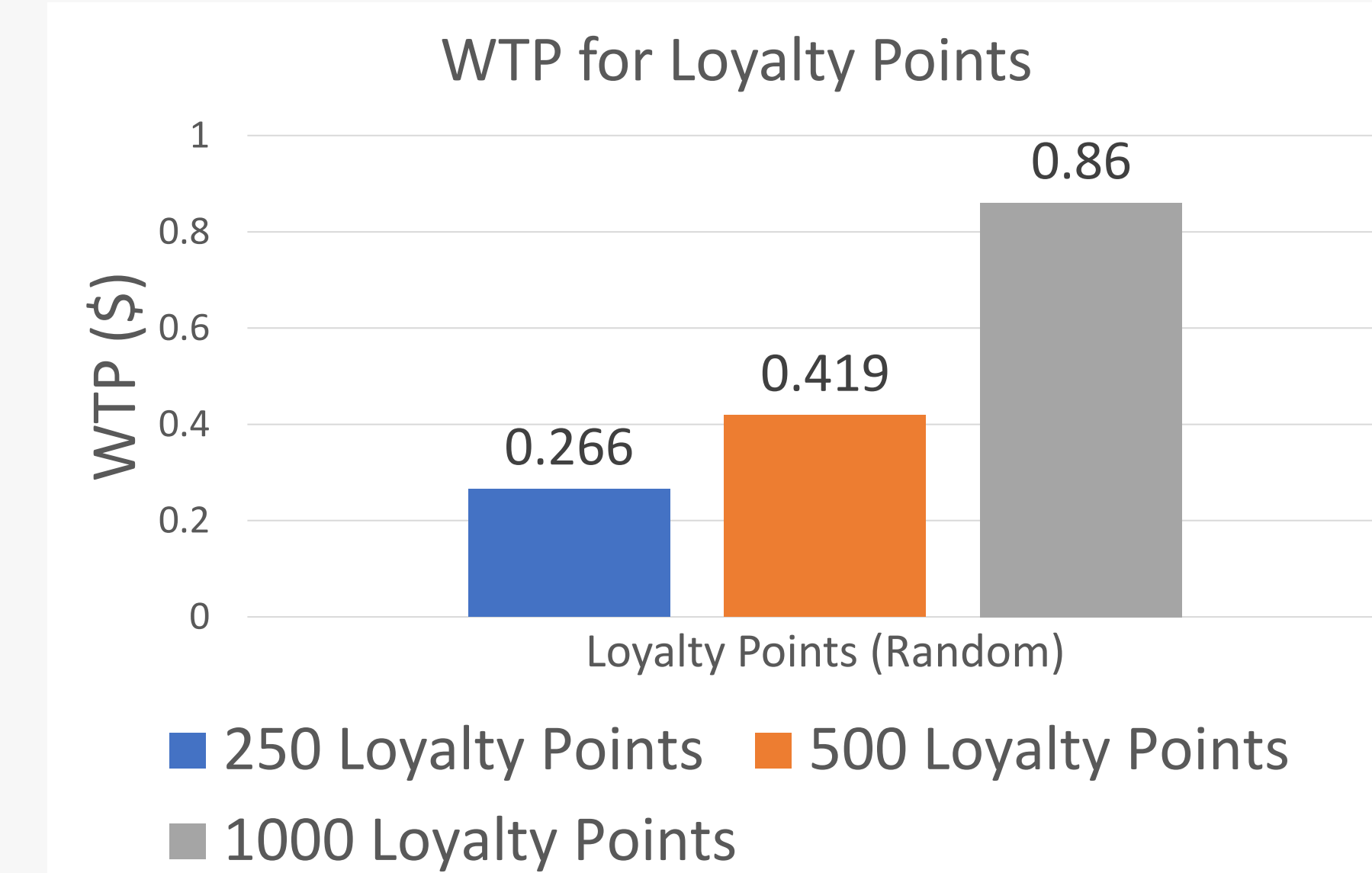
## Results (cont.)



- In the *Control Group*, consumers are willing to pay a 40¢ premium for low sodium bread to the \$3.58 base price for regular bread.
- The drop in consumers WTP for *LP Random* can be attributed to the impact of loyalty points on consumers behaviour.

- When loyalty points are randomly assigned, consumers' WTP for loyalty points is close to the actual valuation of the loyalty points.

1000 loyalty points = \$1



## Policy Implications

- The industry needs to pay attention to the population's preference changes and provide low sodium bread alternatives for its consumers.
- Loyalty points can be utilized as an innovative mechanism to promote healthy eating.
- Implementing multiple policies to achieve a common goal may lead to one crowding out the other potentially impeding their intended results, especially for low-income individuals and younger generations.

Advisors: Michael von Massow, Yu Na Lee