Global insights into consumer willingness to pay for US beef: Case studies from China and Mexico

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Example: China – Relevance

Beef consumption in China:

1. Important emerging animal-protein source

2. Increased by 11% in 2019, and reached over 8 million metric tons, ranking 2nd after the U.S. (USDA, 2021)

3. COVID-19 and African Swine Fever (ASF)-related pork shortages have increased both quantity and quality demand for beef

U.S. beef exports to China have grown significantly, making the U.S. the third largest beef exporter to China, following Brazil and Argentina

Chinese beef quality grading system

- 2012: First release of beef grading system

- 2020: Second update of beef grading system

- New system was approved and will be released soon

- New system grades beef based on eating quality attributes, e.g., marbling, muscle meat color, and fat color

- **Grades:**
  - A, B, C, S: used to grade striploin, rib eye, high rib, tenderloin, etc.
  - Regular and Premium: used to grade brisket, flank, shank, etc.

Research questions

How do Chinese consumers value the new quality grades?

Are Chinese consumers willing to pay more for U.S. beef carrying a higher quality grade?

Analyze willingness to pay using consumer choice experiments
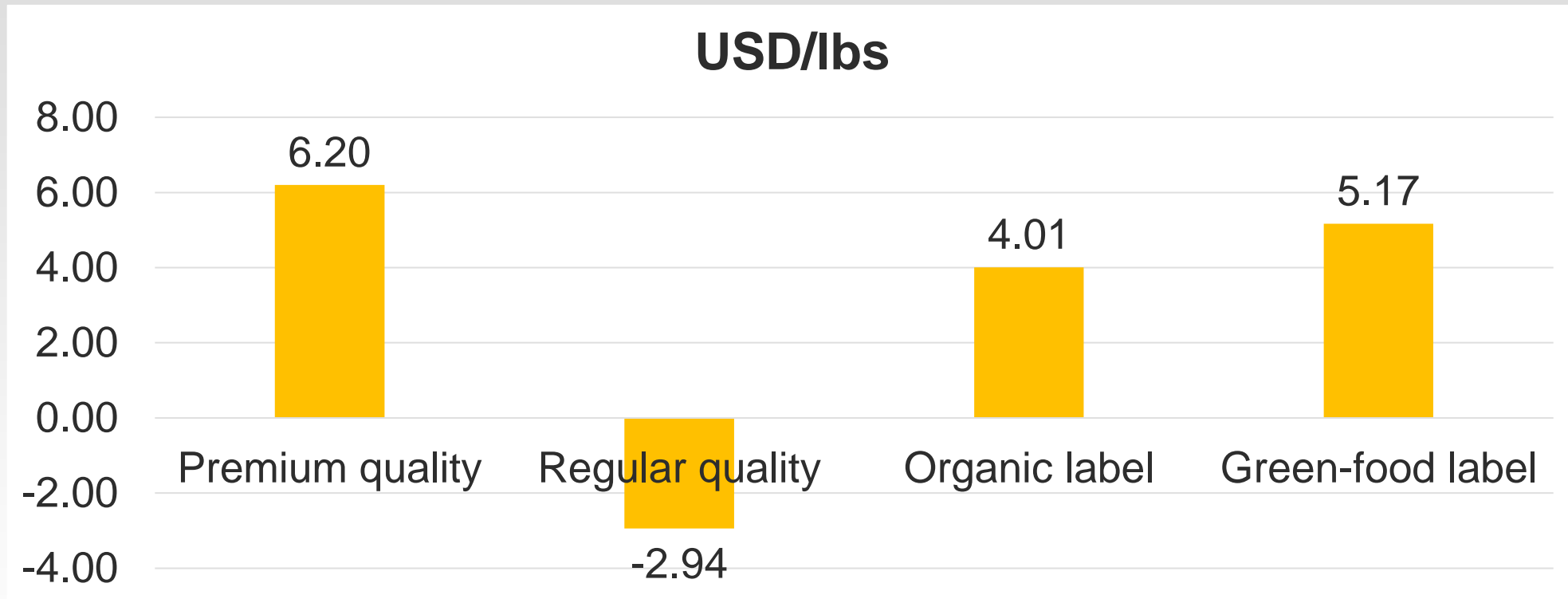
Examples of choice sets

Willingness to pay for quality grades and organic in China

USD/lbs

Category	Value
Premium quality	6.20
Regular quality	-2.94
Organic label	4.01
Green-food label	5.17

Gao, S., C. Grebitus, and K.L. DeLong. 2023. Chinese Consumer Preferences for Beef Quality Grades on Imported and Domestic Beef. *European Review of Agricultural Economics*, 50(3):1064–1102.

Willingness to pay for origin and quality in China
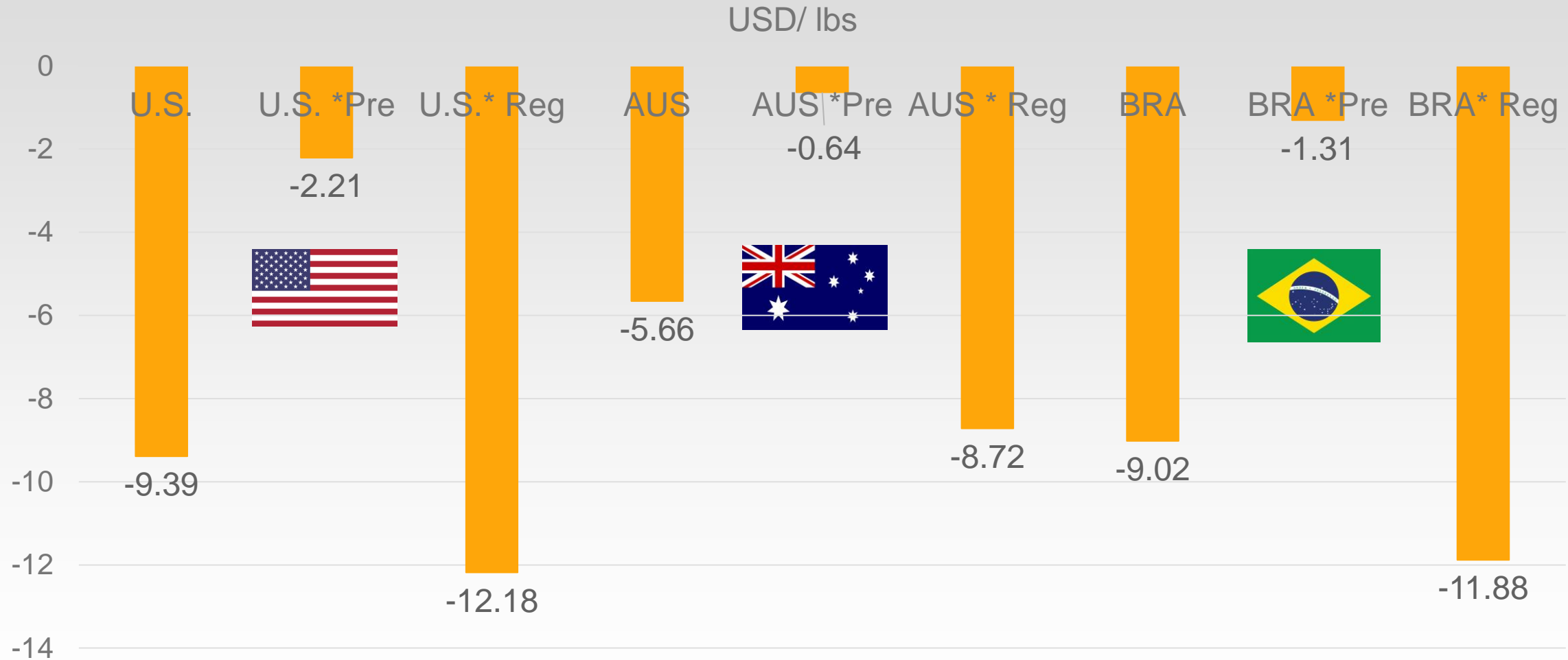
AUS=Australia, BRA=Brazil, Pre=Premium, Reg=Regular

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Example: Mexico – Relevance

1. Beef is the most important industry within livestock sector (Canales, Andrango & Williams, 2019)

2. Beef consumption slightly increased from 1.797 million metric tons in 2017 to 1.990 million metric tons in 2021 (USDA, 2021)

3. Increasing demand for high-quality beef (USDA-FAS, 2009; Huerta-Leidenz et al. 2014)

- Mexico is 4th largest export market for U.S. beef (after Japan, South Korea, China)

- U.S.-Mexico beef trade is largest livestock import-export relationship in North America

Mexican beef grading system

- First proposed in 2017

- US beef industry raised concerns because interchangeable names between English and Spanish → may create confusion and diminish value from USDA grading

- New system addresses concerns and will be released soon

- New system-graded beef has 4 classifications: "Premium", "Suprema", "Selecta", and "Estandar" → no longer uses the English translations

Research questions

1. What is Mexican consumers' willingness to pay for U.S. beef?

2. How do Mexican consumers value quality grades?

3. Are Mexican consumers willing to pay more for imported beef that carries a quality grade from its own country?

Study design: Choice experiment

- Research product: Beef steak (Bistec de res in Spanish)

Attributes	Price (Pesos / kg)	Country of origin	Quality grade	Feed type
Level	140	Mexico	Suprema, Selecta	Grass fed
	170	Canada	AAA, AA	Grain fed
	200	U.S.	Choice, Select	No label
	230		No label	

Examples of choice sets and alternatives
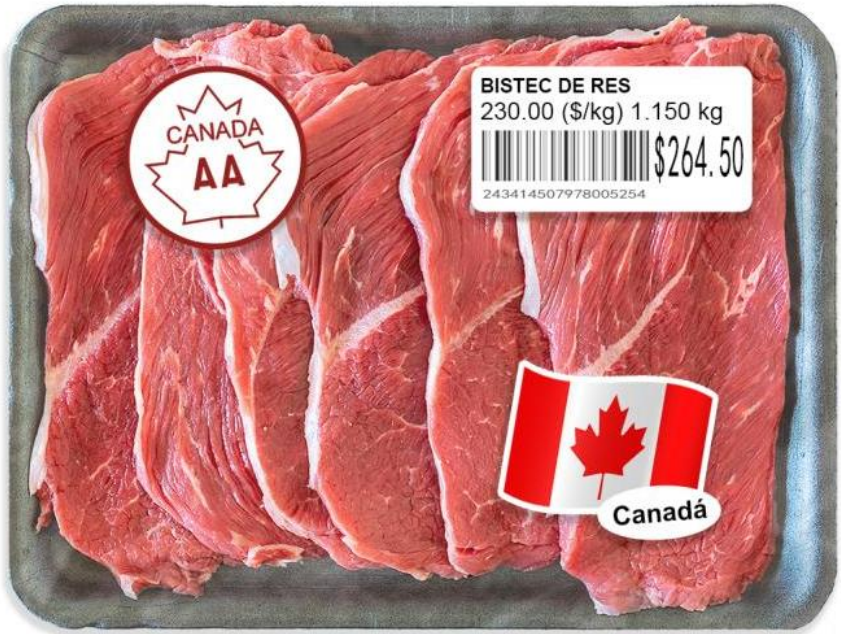
Willingness to pay for country-of-origin and quality in Mexico

USD/ lbs

US: -1.74
US_Choice: 0.85
US_Select: 0.81
Canada: -2.02
Canada_AAA: 1.16
Canada_AA: 0.33
Mexico_Suprema: 0.93
Mexico_Selecta: 0.51

Gao, S., C. Grebitus, and K.L. DeLong. 2024. Consumer valuation of quality-graded domestic and imported beef in developing countries: The case of Mexico. Mimeo.
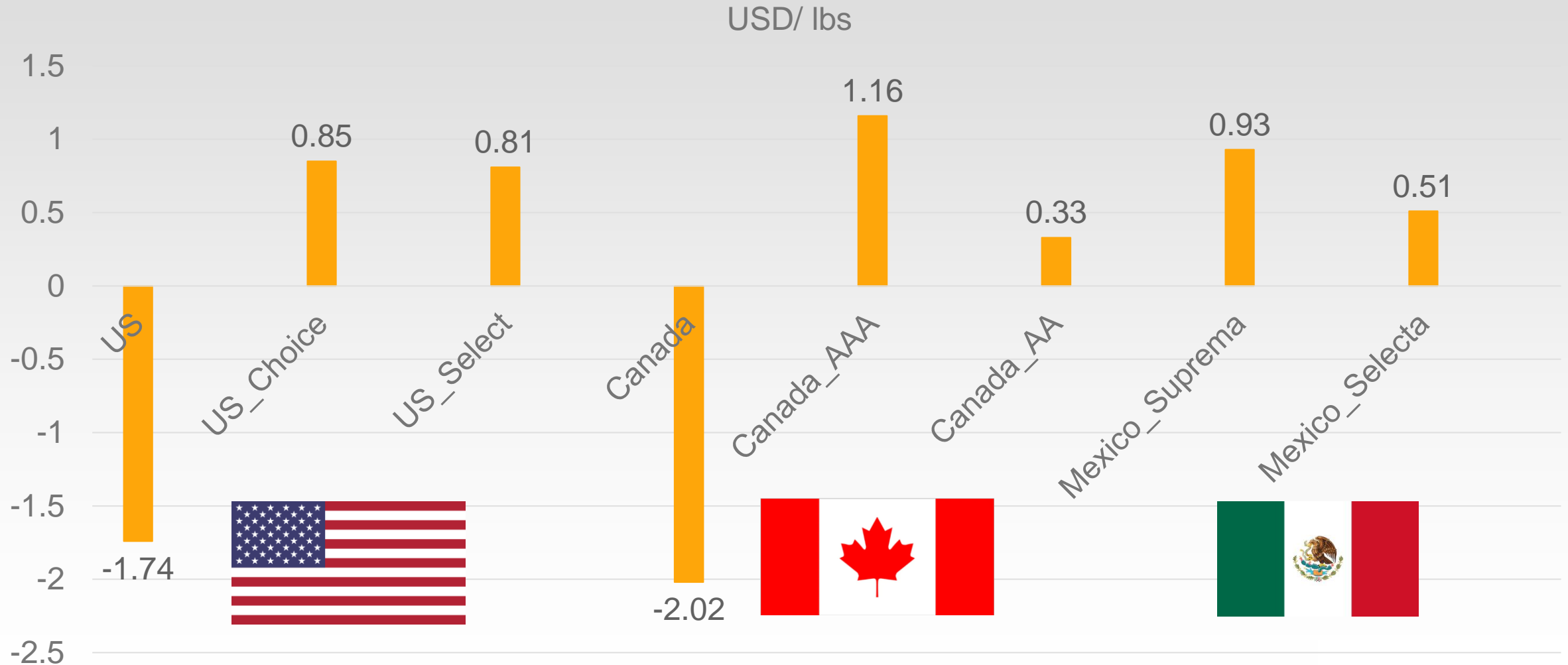
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