XV Congreso Español de Sociología
#SociologíaParaLaSociedadDigital

Understanding consumer preferences and willingness to pay for honey: A comparative analysis of Choice Experiments.

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TECHONEY PRIMA PARTNERSHIP FOR RESEARCH AND INNOVATION IN THE MEDITERRANEAN AREA European Commission GOBIERNO DE ARAGON cita CENTRO DE INVESTIGACIÓN Y TECNOLOGÍA AGROALIMENTARIA DE ARAGÓN Universidad Zaragoza 1542 ucrania Centro Universitario de la Defensa Zaragoza UNIVERSITÀ DEGLI STUDI DI NAPOLI FEDERICO II

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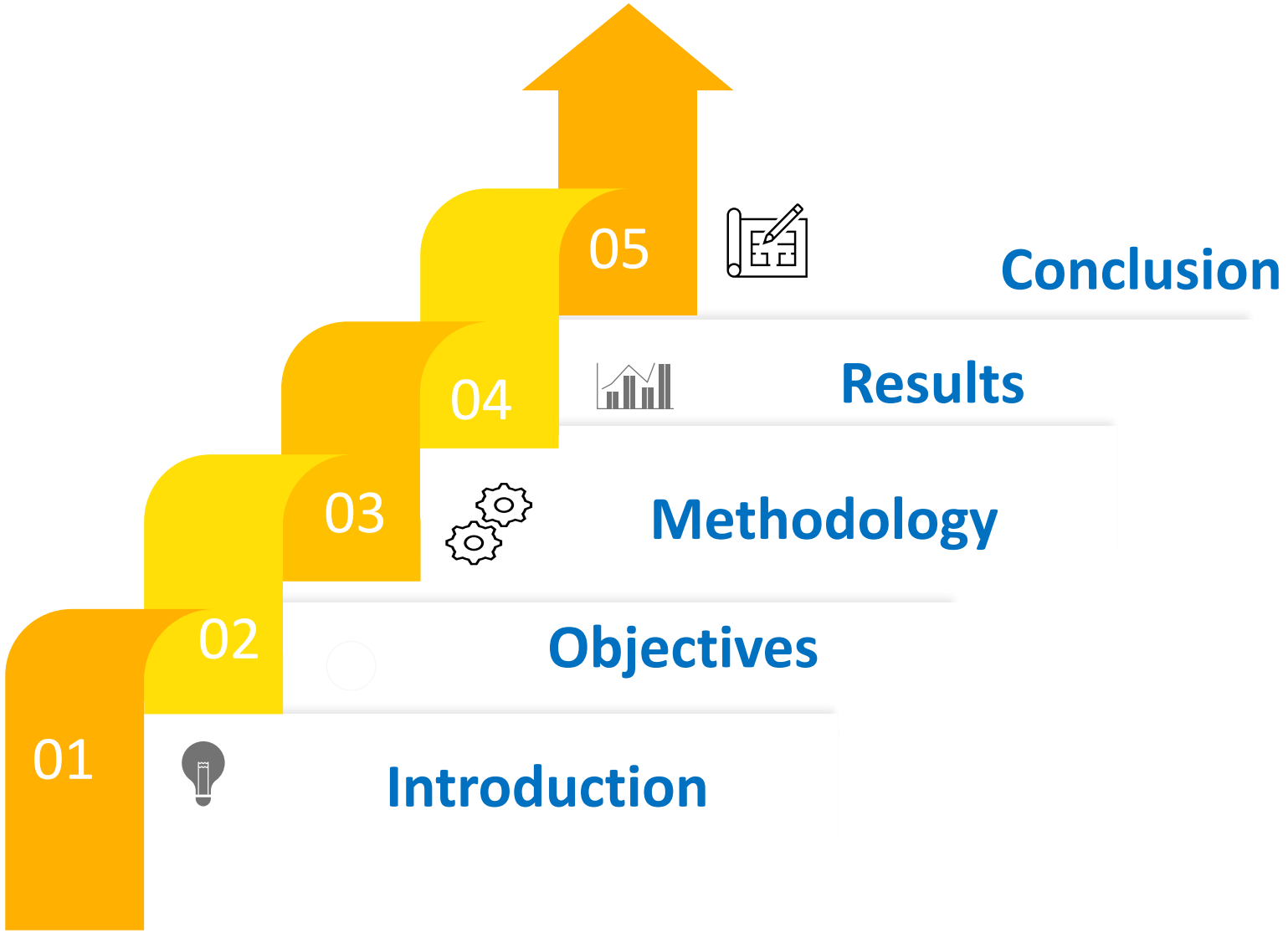
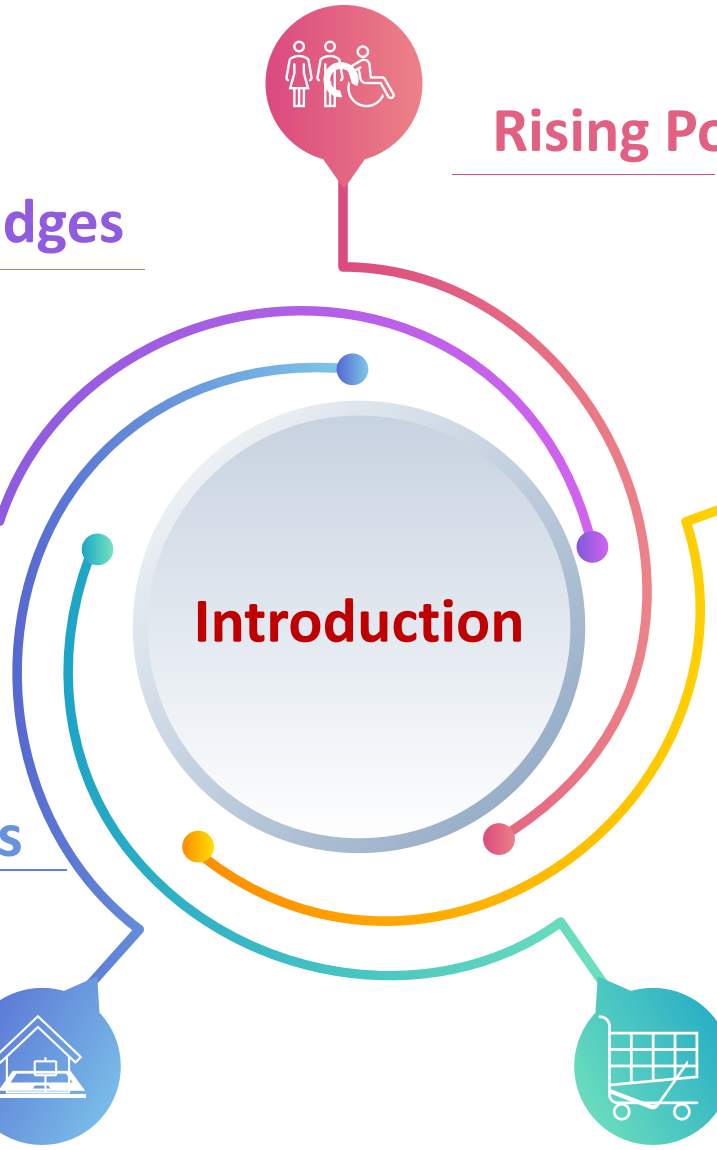


Introduction



Rising Popularity

Driven by healthier lifestyles, honey has gained global popularity as a nutrient-rich, functional food.

Market Impact

Increased demand for natural and wholesome products is influencing food market dynamics.

Consumer Insights

Key factors affecting honey purchases include health benefits, product quality, brand reputation, and price, with preferences varying by region.

Direct sales

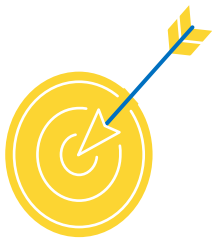
Increasing popularity of direct sales and home delivery to ensure product authenticity and convenience.

Consumer Knowledges

Food safety concerns and scandals have raised doubts among consumers, highlighting the need for better understanding and communication about food fraud and technology by affecting purchasing decisions.

Objectives

Our Objective



Analyse the significance of environmental and origin related labelling on consumer decision-making

Explore consumer acceptance of digitalization tools to enhance trust and transparency in the honey industry.

Methodology

Methodology

Survey

Choice experiment

Regional survey

Origin

Sustainability logos

Digital tool used for traceability

Price

Four(4) levels/ jar of honey of 500 grams:

6,50€ 7,00€ 7,50€ 8,00€.

CHOICE EXPERIMENT

NATIONAL SURVEY

Origin

Blend mixt of Foreign honey

National honey

Sustainability logos

Traceability tool

Blockchain

Price

Four(4) levels/ jar of honey of 500 grams:

National survey: 3,50 € 5,00€ 6,50€ 8,00€

Choice experiment

Example from a National survey

Alternative 1	Alternative 2	Alternative 3	Alternative 4
			I prefer not to buy
○	○	○	○

Example from the regional survey

Alternative 1	Alternative 2	Alternative 3
		I prefere not to buy
7,50 €	8,00 €	
☐	☐	

Methodology

Choice experiment

- For the estimation of the choice experiment we use the utility function, in our experiment is the following:

$$U_{njt} = NONE + \beta_{ORIGIN} \cdot ORIGIN_{njt} + \beta_{LOGO} \cdot LOGO_{njt} + \beta_{QR\ CODE} \cdot QR\ CODE_{njt} + \beta_{PRICE} \cdot PRICE_{njt} + \varepsilon_{njt}$$

- With this function we can determinate the results of the choice experiment with the alternative-specific Random Parameter (RPL) model in Stata.
- Also we can determinate the Willingness to Pay (WTP), which measures how much the individual is willing to pay for a product characteristic, keeping his utility constant.

$$WTP_i = -\left(\frac{\beta_i}{\beta_{PRICE}}\right) \quad i=\text{ORIGIN, LOGO, QR CODE}$$

Results

SAMPLE DESCRIPTION

	1st Regional survey	2nd Regional survey	National survey
Gender		%	
Female	47,5	51	50,49
Male	52,5	49	49,51
Age range	%		
18-35 years old	33,6	38	20,87
36-54 years old	49,6	28	36,89
>54 years old	16,8	34	42,24
Education	%		
No formal education	1	4	0
Elementary education or equivalent	23,8	13	2,43
Secondary education (baccalaureate..)	48,5	40	47,09
Higher education (university degree …)	26,7	43	50,49
Income	%		
900 €/mes	35,6	12	8,26
900-2500 €/mes	27,7	80	44,17
more than 2500€/mes	30,7	8	47,57
Total sample size (people)	101	100	206

Awareness of traceability & Sustainability tools

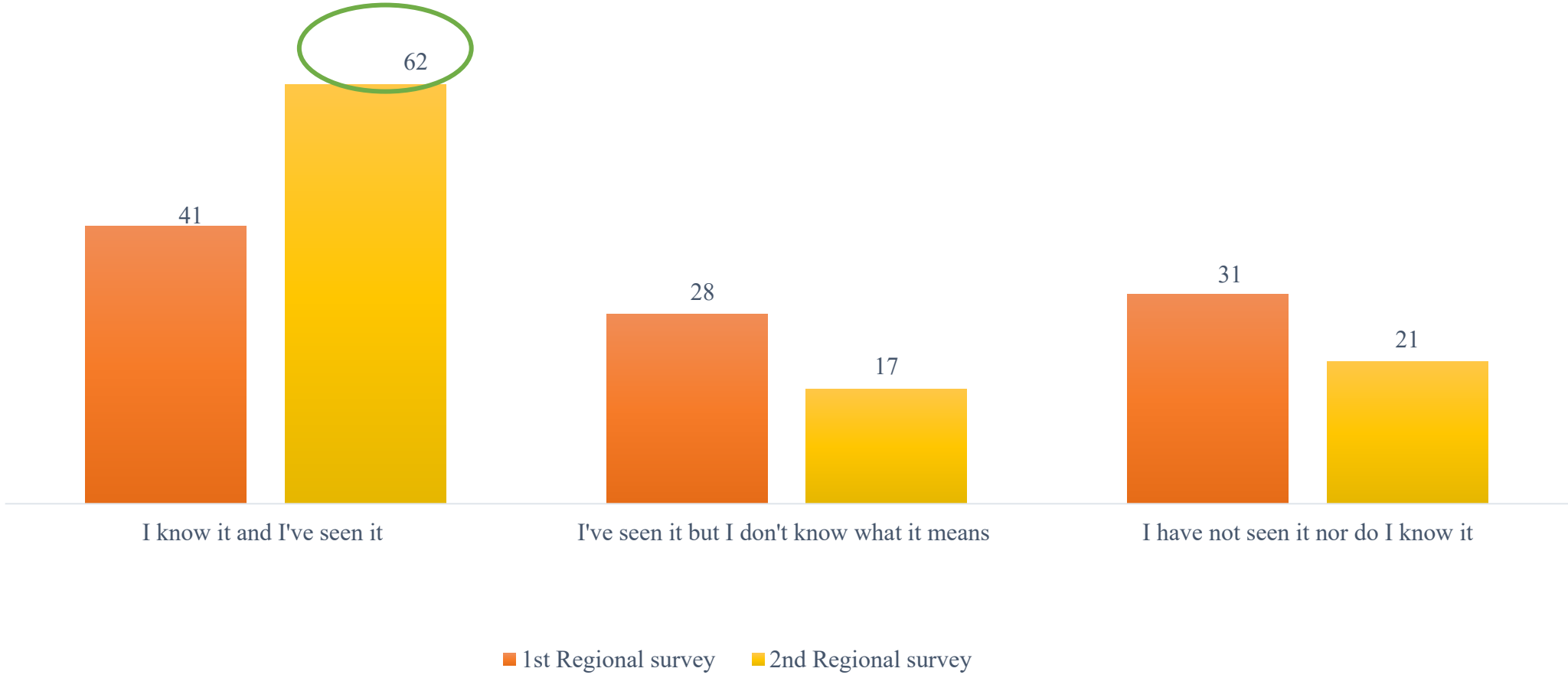


Figure1 . Consumers' knowledge of QR code

Awareness of traceability & Sustainability tools

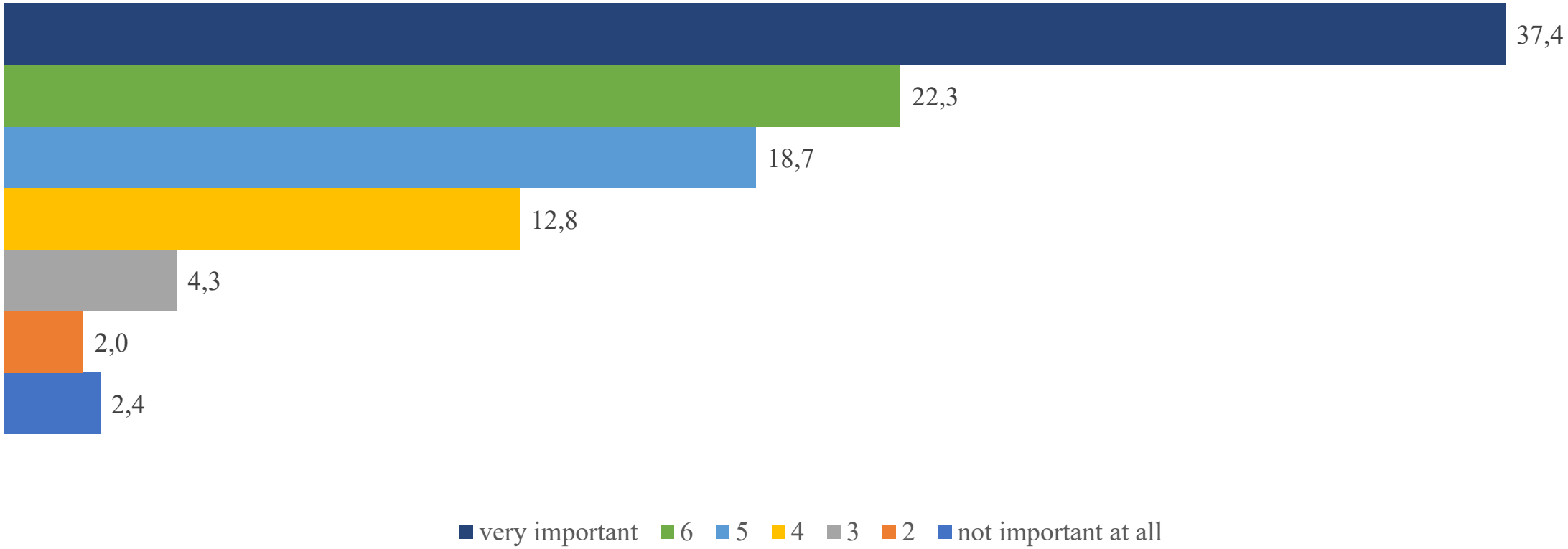
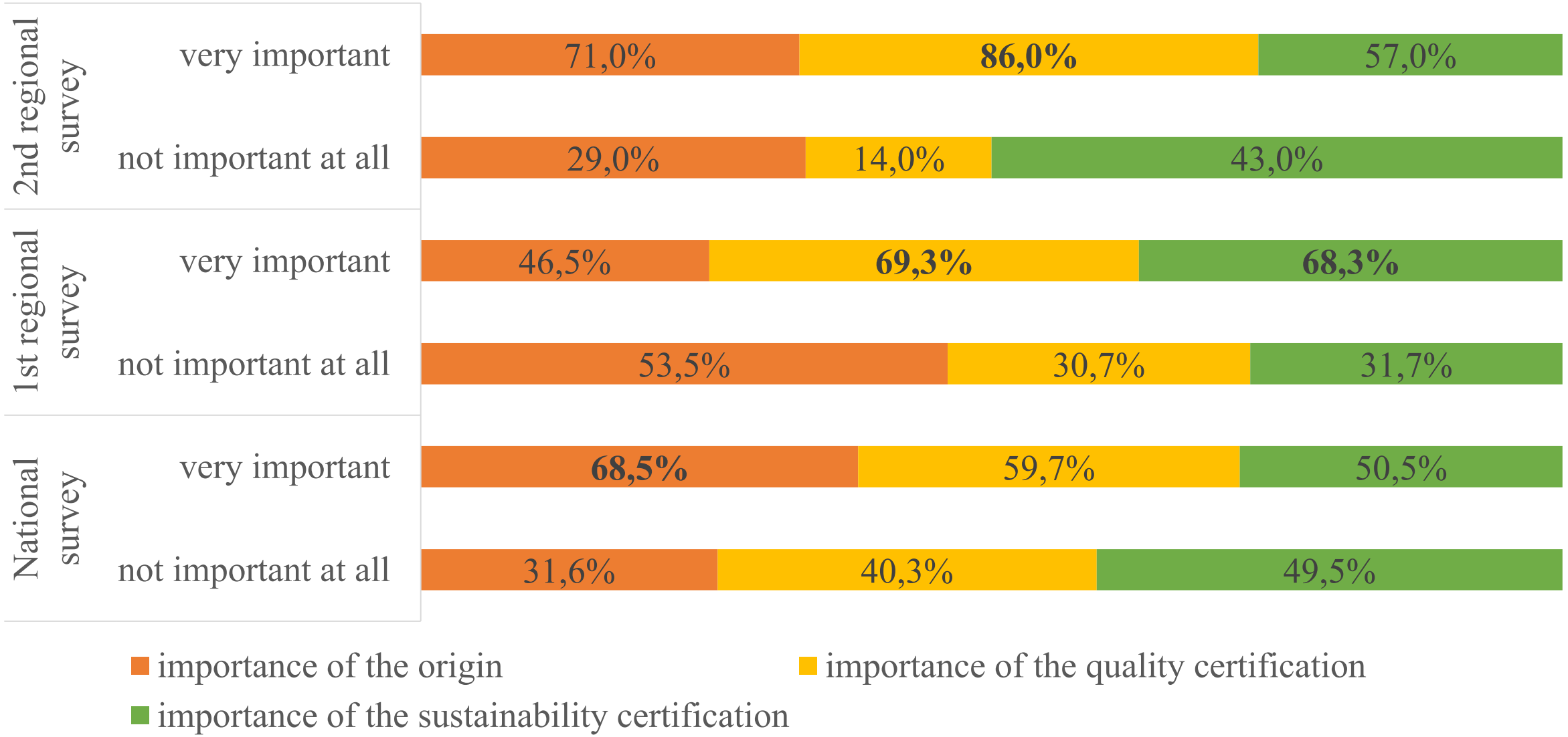


Figure 2 . Consumers' awareness of blockchain

Figure3 . Consumers' views on factors affecting the evaluation of honey quality.



CHOICE EXPERIMENT

Results

Price increases led to lower perceived utility, aligning with economic demand theory. These fluctuations in price coefficients underscore the intricate relationship between price sensitivity and consumer behavior.

Consumers' willingness to pay for traceability tools is slightly higher for national honey than blend mixt honey

Consumers' willingness to pay for traceability tools is slightly higher for blockchain than QR code.

	National survey	1st regional survey	2nd Regional survey
Sustainability logo	0.07	0.69***	1.68***
	(0.77)	(0.06)	(0.11)
Technological tool used for traceability		0.26**	0.25**
		(0.07)	(0.09)
Sustainability & traceability tool	0.47***		
	(0.09)		
Aragon logo		0.67***	1.21***
		(0.71)	(0.08)
National origin	3.70***		
	(0.20)		
Foreign origin	1.75***		
	(0.17)		
Price	-0.28***	-0.15***	-0.75***
	(0.01)		(0.04)
Log-likelihood	-2474.73	-3710.93	-2561.41
Wald chi2 (pvalue)	753.53 (0.0000)	1617.52 (0.0000)	1766.6 (0.0000)
N choices	9888	14535	14400

*** significant at 1% ; standard errors in parentheses calculated with *nlcom* in Stata.

Results

Consumers' willingness to pay

	Sustainability & traceability tool	National origin	Foreign origin	sustainability logo
National survey	1.65***	13.04***	6.17***	0.26
	(0.35)	(0.73)	(0.52)	(0.27)
1st Regional survey	1.66***	4.28***		4.43***
	(0.624)	(-1.16)		(-1.19)
2nd Regional survey	0.33***	1.60***		2.22***
	(0.12)	(0.13)		(0.18)

*** significant at 1% ; standard errors in parentheses calculated with *nlcom* in Stata.

Conclusion

Conclusion

Although the importance of origin, quality, and sustainability certifications varies among respondents, quality certification consistently remains highly significant. Sustainability certification is also valued, albeit with slightly less uniform importance across different surveys.

Traceability tools significantly influence consumer choices. However, consumers prefer honey with **digitalisation tool labels**, highlighting the value of traceability for trust and transparency in the honey market.

Consumers exhibit **the highest utility for domestically produced honey**, strongly preferring locally sourced products due to their perceived authenticity and trustworthiness. This preference is reflected in a **higher willingness to pay for local honey**.

Consumers **trust traceability tools for authenticity and transparency**, leading to a premium price for digitalisation tools used for traceability

Recommendations

Honey producers should emphasize their local origin through marketing campaigns that showcase the authenticity and trustworthiness of domestically produced goods.

customizing marketing strategies to regional preferences can boost consumer trust and willingness to pay by understanding and addressing the importance of origin, quality, and sustainability certifications.

THANK YOU FOR YOUR ATTENTION

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