



Impact of perception and assessment of consumers on willingness to pay for pork from upgraded shops: An experimental approach

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Outline



1. Introduction

- High prevalence of microbial contamination in retailed pork in Vietnam
 - Most pork sold from traditional sector
 - Consumers prefer and trust this VC
- **Research question: can consumer WTP drive an intervention to improve pork safety in the informal sector**



Figure 1&2: Traditional pork shops in Vietnam







2. Methods

Conventional approach to assessing WTP

- Ask consumers directly
- Conjoint valuation
- Over-estimate

Newer, experimental approach

- Real life experiment
- Mock-up with real money
- Experimental Auctions
- Individual Experiments
 - Becker-DeGroot-Marshack

<p>1. Official abattoir stamp present</p>	<p>Clean premises</p> 	<p>Low/marbled fat</p> 	<p>Fresh red meat</p> 	<p>Price ETB/kg 38</p>
<p>2. Official abattoir stamp present</p>	<p>Unclean premises</p> 	<p>High fat meat</p> 	<p>Non-fresh pale meat</p> 	<p>Price ETB/kg 34</p>

2. Methodology

- *Study location:* Hung Yen province and Thai Nguyen province (Northern Vietnam)
- *Participants:*
 - 152 consumers at 3 markets
 - Interviewed via questionnaire
- *Pork shop:*
 - Conventional shop: equipped with selling tools
 - Upgraded shop: equipped with hygienic tools (cloths, disinfection liquid, sprayer) and selling tools, posters
 - One in two consumers got food safety message

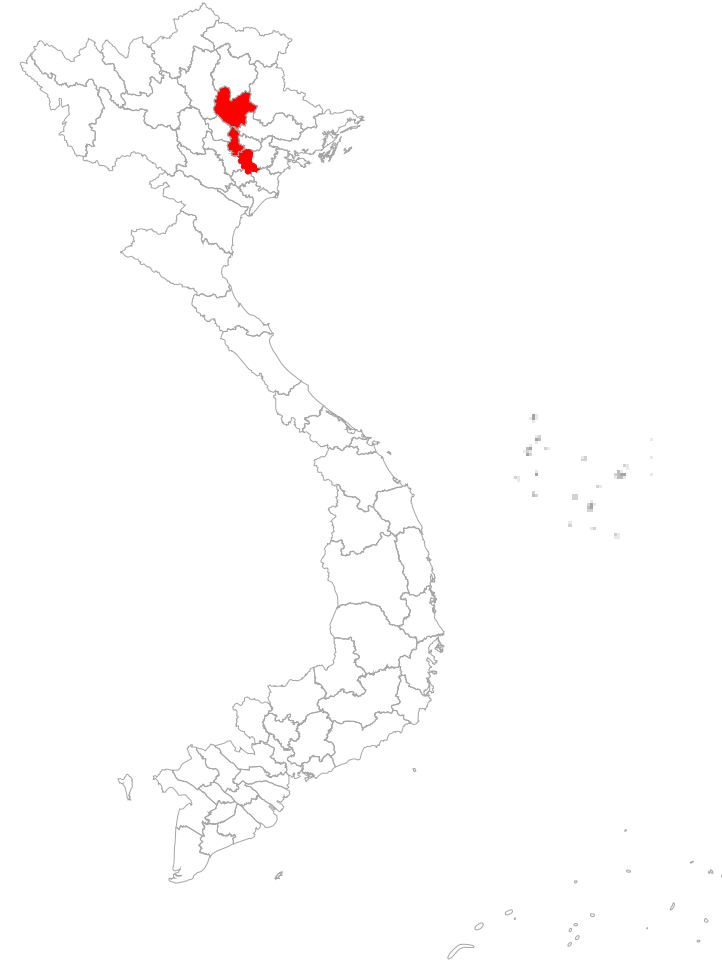


Figure 3: Study sites

2. Methodology

Experimental Auction

- Create market environment
- Present alternative ways to sell product
- Auction product: 0.5 kg shoulder pork



Figure 4: Conventional shop

Conventional vs upgraded shop

Receiving vs not receiving food safety message

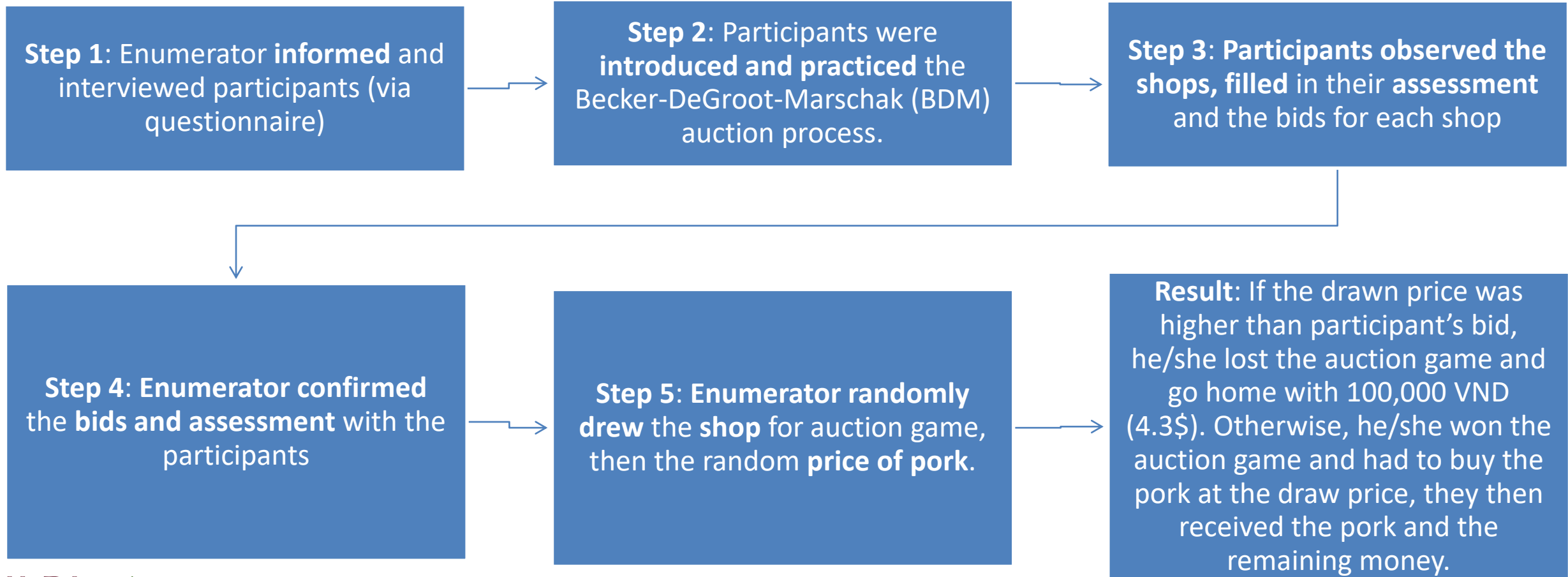


Figure 5: Upgraded shop

2. Methodology

Auction procedure

- Customers make bid.
- Bid is compared to a price determined by a random number generator.
- If bid > price, customer pays price and gets pork.
- If bid is < price, pay nothing and receive nothing.



3. Result

Participants characteristics (N=152):

Characteristics	Mean	SD
Age	51.9	11.8
Food expenditure (thousand VND/day)	102	68
Household size	3.98	1.71
Number of children in HH	0.35	0.6
Number of elderly people in HH	0.73	0.8
Number of pork dishes eaten /week	6.44	5.43
Amount of pork bought per shop (kg)	1.08	1.05
Gender	Frequency	Percentage
Male	15	9.9
Female	137	90.1
The most consumed type of pork	Frequency	Percentage
Bacon	99	65.1
Shoulder	33	21.7
Others	20	12.2



3. Result

Experience with pork-borne diseases and concern about contaminated pork (N=152)

Items	Frequency	Percentage
Experience with potential pork-borne disease symptoms ever		
Stomach ache	24	15.8
Diarrhea	16	10.5
Nausea	12	7.9
Vomit	7	4.6
No symptoms observed	93	61.2
Concerns about eating contaminated pork		
Not worried	2	1.3
A bit worried	8	5.3
Worried	36	23.7
Very worried	38	25
Extremely worried	68	44.7



3. Result

Perception and assessment about the pork shop

- **80%** participants **believed** practices at **upgraded shop** would **improve pork safety**
- **Upgraded shop** (9.3/10) score **was significantly higher rated** than conventional shop (7.6/10) in food safety condition using an objective checklist

Item	Mean	Min	Max	Median
Willingness to pay for pork (Thousand VND/kg & \$)				
From upgraded shop (1)	78 (3.4\$)	50 (2.2\$)	140 (6\$)	80* (3.5\$)
From typical shop (2)	65 (2.8\$)	40 (1.7\$)	120 (5.2\$)	60* (2.6\$)
Difference in WTP ((1) minus (2))	13** (0.6\$)	-10 (-0.4\$)	60 (2.6)	10 (0.4\$)

*: Significantly different ($p < 0.01$) with Wilcoxon signed rank test

** : Significantly different from 0 ($p < 0.01$) with t-test

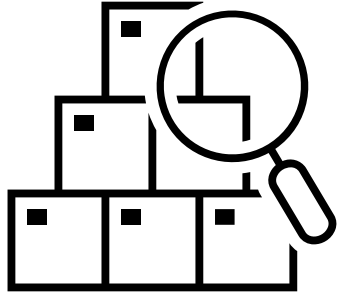


3. Result

Regression results:

- Shop perceived as clean **increased the WTP for pork from upgraded shop** but did not affect WTP for pork from conventional shop;
- The **more frequent the pork consumption the higher WTP for upgraded pork**
- **Perception** (e.g., more worried) **about food safety decreased WTPs** for all pork **but increased the difference in WTP** (i.e., more worried more WTP for upgraded pork)
- **Risk message** showed **no impact on WTP** for both products (one in five get sick from eating pork from traditional, not upgraded shop)

4. Conclusion – in traditional VN pork VC



- Consumer will pay **20% more** for pork from an upgraded pork shop compared to conventional one.
- The premium paid is enough to cover the cost of upgrading and generate a small profit (paper under submission).
- The more a shop is perceived clean, the more the consumer will pay.
- Fear-based food safety messages may not be effective.

Acknowledgements




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