

# Bandwagon effect : an experimental study

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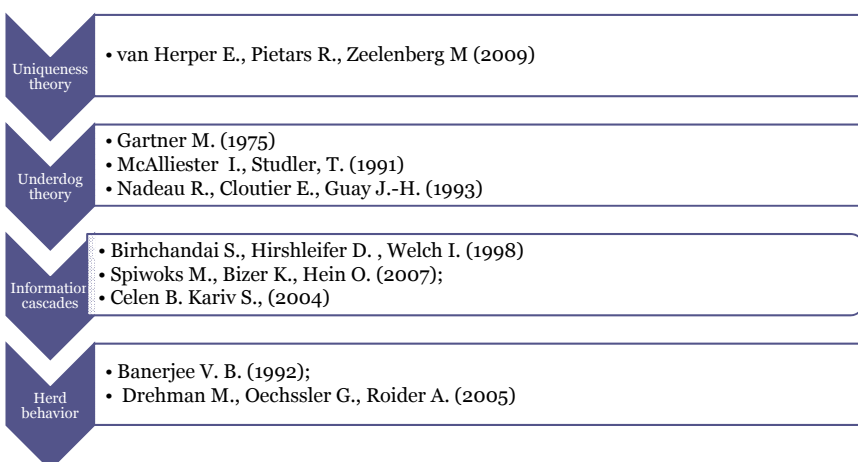
## Introduction

- As defined by H. Leibenstein (1950) the bandwagon effect is "the extent to which the demand for a commodity is increased due to the fact that others are also consuming the same product" (p. 189).
- This could be observe on phenomenon like buying under time constraint or on political vote decision.
- Usually, markets, products and topic might influence results experiment in marketing and policy. This experiment tries to avoid this.
- The goal is to demonstrate the way bandwagon effect manifests itself inside rational decision making.

## Bandwagon from two perspectives

- **H. Leibenstein (1950)**
- Non functional demand;
- "the extent to which the demand for a commodity is increased due to the fact that others are also consuming the same product" (p. 189);
- Diagrammatical method.
- **G. S. Becker (1991)**
- People consume product together and partly public;
- Bandwagon and prices;
- Supply-demand diagram;
- Critics (Gisser M., McClure J., Ökten G., Santoni G. (2009)).

## Bandwagon effect: connected notions



## Resume

	Binary choice	Methods
Economics	Social learning models , expectations, information	Laboratory experiment
Marketing	+Endogenous social effects	Desk research, computer modeling
Political science	+ Endogenous social effects	Questionnaires

## The model

- With our model we will test bandwagon effect
- We set 3 groups of 4 players. Each player has to choose individually and simultaneously with the other members of her group to buy or not a product
- Group 1 starts to play, then group 2 receives information about group 1's decisions then plays, then group 3 receives information about group 1 and 2's decisions then plays.

## Payoff functions

- $\pi_1 = 20 - a$  ;
- $\pi_2 = 15 - a$  ;
- $\pi_3 = 10 - a$  ;
- With a  $C(20, 10, 5)$  and be chosen randomly with equal probability of  $1/3$  .
- Payoff functions are private information

## Our experiment

- Conducted on HSE Moscow, thanks to Alexis Belianin
- Paper and pen experiment
- 15 students with higher education in economics
- 4 treatments :
  - Treatment 1 : Gr 1 -> Gr 2 (info Gr 1) -> Gr 3 (info Gr 1 + Gr 2)
  - Treatment 2: Gr 3 -> Gr 2 (info Gr 3) -> Gr 1 (info Gr 3 + Gr 2)
  - Treatment 3: Gr 1 -> Gr 2 (info Gr 1) -> Gr 3 (info Gr 2)
  - Treatment 4: Gr 3 -> Gr 2 (info Gr 3) -> Gr 1 (info Gr 2)

## Our experiment (2)

- Value of  $a$  randomly selected at the end of the experiment
- For one of the players (randomly selected), payoff was  $100\$ * \text{points gained during one of the treatment (randomly selected)} * \text{coefficient (made differently for each group in order maximum payoff would be } 100\$)$
- We expect to observe bandwagon effect, i.e. a player who decides to not buy in treatment 2 (or 4) while she has decided to buy in treatment 1 (or 3)

## Our results

- Though we do not have enough data to say that our results are significant, we found do observe some non-rational behaviour (from an economic point of view!) that could be explained by bandwagon effect
- Results confirmed by questionnaire. Players did admit that they followed others !!

## Results (2)

Players' decisions by experiment x

	Group	Experiment 1	Experiment 2	Experiment 3	Experiment 4
1	1	1	1	0	1
2	1	1	1	1	1
3	1	1	1	1	1
4	1	1	1	1	1
5	1	1	1	1	1
6	2	1	1	1	1
7	2	1	1	1	1
8	2	1	1	1	1
9	2	1	1	1	1
10	2	0	1	1	1
11	3	1	0	0	0
12	3	0	0	1	0
13	3	1	1	1	0
14	3	0	1	1	0
15	3	1	0	1	0

In red : « non-rational » behavior

## Conclusion

- Even under situations where people have to maximize their payoff rationally, they can take non rational decisions (from an economic point of view) probably due to bandwagon effect.
- Bandwagon effect appears to be part of a decision rule for agents.
- However it would be interesting to conduct more sessions to be able to do a more relevant statistical analysis.

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