# Quack Markets: Limited Rationality and Market Dynamics

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# Research Background and Importance

- A hypothetical market with quacks and patients engaging in price competition.
- Quacks provide treatments with no actual help for patient recovery.
- Patients' rational choice would eliminate the market.
- Limited rationality influences market dynamics, leading to active markets and welfare losses for patients.

# Research Questions and Hypotheses

- Can market competition mitigate the negative impact of quacks on patient welfare?
- A theoretical model is constructed assuming quacks are profit maximizers and patients follow limited rationality decision rules.
- Patients rely on anecdotal reasoning based on random stories about treatment quality.

## Model Derivation and Formula Interpretation

- Patients make choices based on the S(1) procedure.
- For each alternative, patients sample once and choose the one that maximizes the difference between success and price.
- Quacks consider patient choice procedures when determining pricing strategies.
- The Nash equilibrium is unique, symmetric, and mixed-strategy.
- As  decreases, the likelihood of success in patient samples decreases, leading to higher prices.

- Quack markets are active, with positive prices for worthless treatments.
- Patient welfare losses are non-monotonic with respect to the number of market participants and recovery probability.
- In the extended model, quacks minimize price competition by offering treatments with the greatest differentiation.

- Patient welfare losses are robust to market interventions that may not be effective in standard models. t

## Practical Significance

- Understanding market interactions in "soft skill" industries where skill and luck are difficult to separate.
- Consumers often rely on anecdotes in the face of unexpected problems.
- Insights into designing more effective market interventions.

## Conclusion

- Non-intuitive phenomena can occur in markets with limited rationality consumers and rational firms.
- Traditional competition policies may not improve consumer welfare even when services are entirely worthless.
- The findings are significant for understanding and designing more effective market interventions.