

Quack Markets: Limited Rationality and Market Dynamics

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April 29, 2024

Research Background and Importance

- A hypothetical market with quacks and patients competing on prices.
- Quacks provide treatments with no actual help for recovery.
- Recovery probability α is fixed, regardless of treatment.
- Market should not exist if patients are rational.
- Patients' decisions are influenced by limited rationality and anecdotal reasoning.
- Limited rationality significantly impacts the market, leading to active markets, welfare losses for patients, and a non-monotonic relationship between market participants n and recovery probability α .

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 random, anecdotal stories about treatment quality as complete information.

Model Derivation and Formula Interpretation

- Patients make choices based on the $S(1)$ procedure.
- For each alternative i , patients sample once and get result x_i , where $x_i = 1$ for success and $x_i = 0$ for failure.
- Patients choose alternative i that maximizes $x_i - p_i$ in their sample.
- Quacks consider patient choice procedures when determining pricing strategies.
- The Nash equilibrium is unique, symmetric, and mixed-strategy.
- Quacks act as "cheaters," charging positive prices for worthless treatments.
- There is a negative correlation between α and expected prices.

Main Results

- 1 Quack markets are active, with positive prices for worthless treatments.
- 2 Patient welfare losses are non-monotonic in relation to n and α .
- 3 In an extended model, quacks minimize price competition pressure by providing treatments with the greatest differentiation.
- 4 Patient welfare losses are robust to market interventions that would eliminate low-quality firms in standard models but may be ineffective here.

Practical Significance

- Understanding market interactions in "soft skill" industries like psychotherapy, management consulting, forecasting, and alternative medicine.
- Consumers often rely on anecdotes when facing unexpected issues and entering the market without a long learning phase.
- Examples of anecdotal reasoning: "A friend took this medicine and feels much better now," or "We should trust this political analyst because he foresaw the collapse of the Soviet Union."

Conclusion

- Theoretical models show non-intuitive phenomena in market interactions between limited rationality consumers and rational firms.
- Markets can be active even with completely worthless services, and traditional competition policies may not improve consumer welfare.
- Findings are significant for understanding and designing more effective market interventions.

