## Impact of voluntary bankruptcy on the economic agents' level of effort

# Научный руководитель – Усвицкий Александр Вадимович

## Воронцова Арина Андреевна

Acпирант

Национальный исследовательский университет «Высшая школа экономики»,  $\Phi$ акультет экономических наук, Москва, Россия E-mail: fomina.a.a@hse.ru

#### Abstract

The concept of voluntary bankruptcy, a legal framework allowing individuals to discharge their debts and start afresh, represents a crucial tool in modern economies for mitigating the financial distress of economic agents. However, this mechanism also raises important questions about its potential unintended consequences. Specifically, while voluntary bankruptcy provides a safety net for those facing severe financial hardship, it may also generate negative incentives, particularly for individuals who have the financial capacity to repay their debts but choose not to. This paper explores the economic consequences of such voluntary bankruptcy schemes by examining how they influence economic agents' behavior, specifically their willingness to exert effort and their propensity to pay for avoiding penalties. This issue is of critical importance because the unintended effects of these mechanisms can shift the burden onto honest borrowers and distort market incentives, potentially undermining the stability of the financial system.

The central research question of this study is whether individuals, when faced with the option to avoid penalties—specifically in the context of voluntary bankruptcy—are willing to pay a price to escape punishment, and how their willingness to do so depends on the size and perceived fairness of the penalties. The paper examines the balance between providing individuals with a chance to correct their financial mistakes and the risks of moral hazard, where individuals may strategically exploit the system to avoid repaying their debts.

The study begins by presenting a theoretical framework that models economic agents' decision-making processes in a situation of voluntary bankruptcy. The model assumes that individuals act to maximize their utility, taking into account the benefits of avoiding punishment versus the costs of doing so. It is posited that individuals' willingness to pay to avoid punishment is influenced by the size of the penalty (its severity) and the degree of unfairness in its imposition. A key hypothesis of this research is that higher penalties and perceived unfairness will increase agents' willingness to pay to avoid the penalties.

Building on the moral hazard framework from studies in financial crises [2] and insurance markets [3], the study employs a behavioral experiment. In the laboratory experiment participants were asked to perform a series of simple tasks under time constraints. For each correct answer, participants earned rewards, and for each incorrect answer, they incurred penalties. The experiment was structured to create an environment where the severity of penalties [6] and the fairness of their imposition [8] could be manipulated to observe their effects on participants' decision-making. In the first round of the experiment, participants received an initial endowment of experimental currency, which could be augmented by solving tasks correctly or reduced by incurring penalties for errors. In the second round, participants had the option to pay a fee to avoid the penalties they had incurred, simulating a scenario in which they could avoid financial consequences by "buying" their way out of punishment.

Two key variables were manipulated in the experiment: the size of the penalty (low vs. high) and the degree of unfairness in the penalty calculation (fair vs. artificially inflated). In the control group, penalties were set at a moderate level and participants' errors were

counted accurately. In the treatment groups, penalties were set higher to simulate a more severe punishment, and in the unfair treatment groups, the number of errors was artificially inflated by 40%, creating a scenario in which participants were penalized for errors they did not make.

The results of the experiment confirm several important insights into how penalty size and fairness influence agents' willingness to pay to avoid punishment.

As hypothesized, the size of the penalty had a significant impact on participants' willingness to pay to avoid punishment (consistent with prior research [5]): individuals are more likely to pay to avoid larger penalties, which mirrors real-world behavior where individuals are more inclined to avoid higher financial costs.

Also when participants perceived the punishment to be unfair their willingness to pay to avoid the penalty increased. In the unfair penalty groups, the mean willingness to pay was 2 times higher compared to the control group.

The combined effect of both large penalties and perceived unfairness was even more pronounced. When participants faced both high penalties and inflated error counts, their willingness to pay to avoid the penalty was significantly higher than when either factor was absent. This result suggests that both the size of the penalty and its perceived unfairness interact to increase individuals' efforts to avoid punishment, highlighting the importance of both factors in shaping economic agents' behavior.

This study provides valuable insights into the behavioral economics of voluntary bankruptcy and debt forgiveness programs. It demonstrates that the size of penalties and their perceived fairness significantly influence economic agents' willingness to avoid punishment. In particular, the results show that individuals are more likely to resort to paying to avoid penalties when those penalties are high and perceived as unfair. The findings align with prior work on financial crisis interventions [4], moral hazard in credit markets [1], and bankruptcy design [7].

#### Источники и литература

- 1) Annan, F. (2022). "Moral hazard in insurance: Theory and evidence from a credit reform in Ghana". "Journal of Public Economics", 209, 104633.
- 2) Chang, H. J. (2000). "The hazard of moral hazard: untangling the Asian crisis". "World Development", 28(4), 775-788.
- 3) Cohen, A., & Einav, L. (2007). "Testing for adverse selection in insurance markets". "Journal of Risk and Insurance", 74(1), 1-28.
- 4) Frankel, J. (1998). "International capital flows and moral hazard: a proposal". "Institute for International Economics".
- 5) Grochulski, B. (2010). "Optimal personal bankruptcy design under moral hazard". "Review of Economic Dynamics", 13(2), 350-378.
- 6) McKinnon, R., & Pill, H. (1998). "International overborrowing: A decomposition of credit and currency risks". "World Development", 26(7), 1267-1282.
- 7) Merton, R. C., & Thakor, R. T. (2022). "No-fault default, Chapter 11 bankruptcy, and financial institutions". "Journal of Banking & Finance", 140, 106066.
- 8) Vukina, T., & Nestić, D. (2015). "Do people drive safer when accidents are more expensive? Testing for moral hazard in experience rating schemes". "Transportation Research Part A: Policy and Practice", 71, 46-58.