

Report on Bachelor / Master Thesis

Institute of Economic Studies, Faculty of Social Sciences, Charles University

Student:	Kristián Koliáš
Advisor:	prof. PhDr. Ladislav Křišťoufek, Ph.D
Title of the thesis:	The Impact of Counter Strike 2 Release on the Intra-Game Item Prices

OVERALL ASSESSMENT (provided in English, Czech, or Slovak):

Short summary

The thesis aims to examine the impact of the release of Counter Strike 2 (CS2) and other item characteristics on the prices of in-game items from Counter Strike: Global Offensive (CS:GO). The study uses datasets downloaded from the trading website SkinBaron over four different time periods. The Tobit model is employed to explain item prices as a function of item characteristics and a binary variable indicating whether CS2 had been released. Despite the mistake in interpreting the key results and other criticisms listed below, I appreciate that the author explores an unexplored niche area related to collectibles pricing literature. Furthermore, I also appreciate that the author shared his code and the data used.

Contribution

I see the main contribution of the submitted manuscript in the exploration of the relatively unexplored area of Counter Strike in-game item price development. This contribution, however, is limited as the results are interpreted incorrectly. The author documents a negative effect of the CS2 release on prices. However, the author claims that the CS2 release decreases the price by -131.1%. This is economically nonsensical (as the author himself mentions the requirement of a positive price multiple times). The interpretation is incorrect because it misinterprets the log coefficient directly as a percentage change without applying the exponential transformation necessary for a log-linear model. The correct interpretation would be $\% \Delta y = (e^{\beta_i} - 1) \times 100$, leading to an expected decrease in price by -73.1%. This mistake is repeated for other coefficients and regressions multiple times. The author also speculates about the role of players cheating in the discussion and conclusion, but no analysis on this topic is actually conducted in the thesis. I also fail to see the motivation for studying the minimum price over a certain period instead of just focusing on prices directly, as done in the main results of the paper.

Methods

The author uses the Tobit model. Given the repeated incorrect interpretation of the estimated model, it is hard to believe that the provided methodology description serves as evidence of the author's understanding of the methodology. There are also various inaccuracies, such as stating that an assumption on the independent variable being normally distributed with a mean of 0 and a variance of 2 is necessary.

It is also unclear why the regression setup was chosen as presented in the thesis. What is the purpose of re-estimating the same (up to the CS coefficient) regression in four different months (October, November, February, and March)? A panel regression setting would be much more suitable if there is also an interest in the time dimension beyond the cross-sectional dimension.

Literature

The author acknowledges that CS items are collectibles, but the literature review on pricing collectibles is entirely missing. Adding half a page about NFTs is insufficient. I see no added value in using outdated survey references (e.g., 2003 Goldman Sachs and Frank Russell surveys, and describing expectations for 2003). Spending half a page on hedge funds (as a form of alternative investment) also does not seem relevant and does not add value for the reader.

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On the contrary, the literature review in the section called Market for Video Game Items and Counter Strike Market is very relevant and well-written.

Manuscript form

The manuscript form of the submitted thesis is lacking in various aspects. The thesis is written in multiple tenses and includes a mix of passive and active styles. There are also numerous grammar errors. There are no captions for tables and figures, making it difficult to understand the corresponding context. The introduction provides a lot of useful information but is difficult to read due to multiple significant topic jumps from sentence to sentence without an obvious connection to the previously provided context. The text covering Counter Strike as a game and the role of items is written in a very engaging and informative manner, which contrasts heavily with the rest.

Overall evaluation and suggested questions for the discussion during the defense

During the defense, the author should discuss:

- Interpretation of the main results, with explicit focus on coefficients smaller than -1.0 and the log-level aspect.
- Why was the Tobit model chosen? Did you consider other models? Would censoring really be an issue in the modeling exercise?
- The relationship of this thesis with collectibles pricing literature.

In my view, the thesis fulfills the requirements for a bachelor thesis at IES, Faculty of Social Sciences, Charles University, I recommend it for the defense and suggest a grade E. The results of the Turnitin analysis do not indicate significant text similarity with other available sources.

SUMMARY OF POINTS AWARDED (for details, see below):

CATEGORY	POINTS
<i>Contribution (max. 30 points)</i>	15
<i>Methods (max. 30 points)</i>	13
<i>Literature (max. 20 points)</i>	10
<i>Manuscript Form (max. 20 points)</i>	16
TOTAL POINTS (max. 100 points)	54
GRADE (A – B – C – D – E – F)	E

NAME OF THE REFEREE: Martin Hronec

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DATE OF EVALUATION: 2024-05-18

Digitally signed Martin Hronec

Referee Signature

EXPLANATION OF CATEGORIES AND SCALE:

CONTRIBUTION: *The author presents original ideas on the topic demonstrating critical thinking and ability to draw conclusions based on the knowledge of relevant theory and empirics. There is a distinct value added of the thesis.*

METHODS: *The tools used are relevant to the research question being investigated, and adequate to the author's level of studies. The thesis topic is comprehensively analyzed.*

LITERATURE REVIEW: *The thesis demonstrates author's full understanding and command of recent literature. The author quotes relevant literature in a proper way.*

MANUSCRIPT FORM: *The thesis is well structured. The student uses appropriate language and style, including academic format for graphs and tables. The text effectively refers to graphs and tables and disposes with a complete bibliography.*

Overall grading:

TOTAL	GRADE
91 – 100	A
81 - 90	B
71 - 80	C
61 – 70	D
51 – 60	E
0 – 50	F