Report on **Bachelor / Master Thesis**

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

Student:	Lukáš Novotný
Advisor:	Mgr. Petr Polák, MSc. Ph.D.
Title of the thesis:	Second-hand Board Game Price Analysis

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

Please provide a short summary of the thesis, your assessment of each of the four key categories, and an overall evaluation and suggested questions for the discussion. The minimum length of the report is 300 words.

Short summary

This bachelor thesis features an analysis of second-hand board game pricing. The author downloads data on for-sale listings from a Geekmarket at the boardgamegeek.com portal. Downloading the data, which involved Python programming, web-scraping and manual cleaning, seems to be the largest task in preparation of this thesis. The data is next analysed using a simple linear regression framework to find out which game charactersitics correlate with (1) price and (2) percentage difference between the listing price and new game price.

Contribution

The author writes that this is the first hedonic price analysis of the second-hand market of board games. The question is what is the real value added of such analysi. Does it provide useful information for he sellers, buyers or investors (i.e. those who buy games for investment purposes)?

Methods

Analytical mehtods used in this thesis are simple (multiple OLS regression), but adequate to study the chosen topic. The author does a good job preparing data for analysis, making sure that the dependent variable is normally (or almost-normally) distribured, and that explanatory variables are infomative and well-defined.

What is missing in the thesis is a deeper discussion of potential relationships between game characteristics and game price. Why does the author consider the chosen variables as relevant? What shape of a relationship is expected? Are some charactristics expected to interact? Why would that be the case?

In the presented thesis one interation is included in the model (age of the game and rating of the game) and it seems to be included to the model ad hoc with the only argumentation being that a similar interaction is used in the analysis by Cox (2017), who models price of used video games. What about, for example, interacting age of the game with its condition (new, line new, etc.?) to reveal potential gain in price for vintage items?

In robustness analysis the author removes insignificant variables from the model. These include dummy variables that together with other dummies describe one feature of a game (e.g. its condition). This should be avoided, because it changes the composition of the comparison group and makes estimates in the robustness check incomparable to the original estimates.

Finally, there is evident misunderstanding of the zero conditional mean assumption (one of the MLR assumptions). The author writes that it is satisfied, because the mean of the residual is zero. It is not true. First, this assumption is about the disturbance and not about the residuals. Second, it is not about the simple mean, but about the CONDITIONAL mean, which means that the expected value of the disturbance should be zero no matter what the values of the explanatory variables. This latter part is not discussed at all, while this is this part of the assumpion that is the most important.

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Literature

The literature review is rather modest. This might be given by the fact that there are no previous works modeling price of used board games. However, one could use scholary work analyzing prices of similar goods, for example of second-hand Lego sets or other toys, of second-hand books, etc. as working examples that might serve as a source of inspiration. Similairly, more could have been written on hedonic price theory.

Manuscript form

The manuscript is well structured and written in relatively good English. However, it makes impression of being written in hurry, as it lacks in-depth analysis.

Overall evaluation and suggested questions for the discussion during the defense

The presented thesis is a coherent piece of work, which however leaves the reader with some unanswered questions. First and fofemost, why is it relevant/important to conduct a hedonic price model for board games? Who might benefit from such analysis. It is not written in the thesis. Second, the empirical analysis itself is not well prepared. It seems that the author took all the available variables and run a regression model on them without first considering what, why, and how might be relevant in determinig price of a game (see my earlier comment).
The strongest side of the presented thesis is data retreival and manipulation, which must have been a tifficult and time-consuming task.
All in all, this thesis is rather simple and trraightworward, but it still 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 C.

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
Contribution (max. 30 points)	15
Methods (max. 30 points)	21
Literature (max. 20 points)	15
Manuscript Form (max. 20 points)	18
TOTAL POINTS (max. 100 points)	**71**
GRADE (A – B – C – D – E – F)	C

NAME OF THE REFEREE:

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DATE OF EVALUATION: *1.6.2022*

digitally signed (01.06.2022)
Barbara Pertold-Gebicka

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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