MASTER'S THESIS EXAMINER REPORT

IEPS – International Economic and Political Studies

Faculty of Social Sciences, Charles University

Thesis title:	**The Trade between the Czech Republic and China: An Investigation of Comparative Advantages**
Student's name:	**Jiali Huang**
Referee's name:	**Vilém Semerák, Ph.D.**

Criteria	Definition	Maximum	Points
Major Criteria			
	Contribution and argument (quality of research and analysis, originality)	**50**	25
	Research question (definition of objectives, plausibility of hypotheses)	**15**	13
	Theoretical framework (methods relevant to the research question)	**15**	10
Total		***80***	48
Minor Criteria			
	Sources, literature	**10**	7
	Presentation (language, style, cohesion)	**5**	3
	Manuscript form (structure, logical coherence, layout, tables, figures)	**5**	3
Total		***20***	13
TOTAL		***100***	61

Plagiarism-check (URKUND) match score:
Turnitin score 14%, the text appears to be original.

Reviewer's commentary according to the above criteria:

General evaluation:

Ms Huang's thesis focuses on trade between the Czech Republic and China and specifically on the pattern and the development of the comparative advantages in this trade. The objective of her research is formulated in an understandable and logical way.

The author discusses quite a high number of sources in her literature review. The literature review is divided into three sections (comparative advantages, intra-industry trade, gravity models). When discussing previous research, Huang Jiali focuses more on results but typically does not discuss the methodology behind the results. A more critical approach to some of the cited papers might have been advisable.

As far as the methodology is concerned, the student decided to use three different levels of approach:

(i) Simple description of available trade data.
(ii) Descriptive analysis based on RCA and Grubel-Llyod (GL) indices.
(iii) Gravity model and additional simpler time-series-based models which appear to have been derived from gravity.

The descriptive part is based on standard cross-border merchandise trade statistics and provides a basic overview of the dimension of mutual trade relations. Even though the author noted that the Czech Republic can use imports from China in exports to EU markets, she decided not to focus on newer types of trade statistics (TiVA) that would allow her to analyze this kind of relationship.

The use of RCA and GL is an accessible methodology often found in undergraduate texts; it matches the objective of the paper quite well. The author decided to apply the indices on moderately aggregated data (both in HS and SITC) classifications. These methods appear to be implemented and interpreted correctly, although it might have been logical to complement the discussion and analysis of intra-industry trade with an attempt to further decompose Intra-industry trade into a trade based on horizontal and vertical specialization, respectively.

Gravity models are a very appropriate and popular method in the analysis of trade flows and they have been used in countless Master and Bachelor theses. However, the form of application of the models by Ms Huang is a bit specific, which reduces their contribution significantly. It is also not quite clear, how the presented results correspond with the original research questions.

Detailed comments:

The section of the literature review dedicated to literature on comparative advantages in relations between CEE and China could be better written and clearer. Some claims are a bit too general (e.g. the interpretation of Jiang (2020) on p. 17), or not supported by data, e.g. the claim about satisfying results of BRI and “16+1” - so why do so many countries express their disenchantment with the initiatives? The author also does not differentiate between more serious attempts at research (and data-supported results) and optimistic or diplomatically formulated claims based on optimistic expectations (e.g. the claims on the possibility of exporting agri-food products to China - p. 17), or less detailed analysis (e.g. the cited claims that Czech Republic has comparative advantages in tobacco products, p. 18). Similarly, the section of the literature review which deals with gravity models does not clearly differentiate between more or less cited sources - some of the most-cited references are not mentioned (and similar claims are supported by less elaborate sources). The discussion of the methodology of trade potential estimation is also not too deep - critical opinions which describe some of the weaker features of such approaches are not discussed. Most importantly, some crucial features of the application of gravity models (the need to deal with the implications of the features multilateral trade resistance terms) are not mentioned in the literature review.

Gravity model implementation (chapter 5) completely ignores the existence of modern micro-founded models and related literature, and their implications. The estimated gravity specification can be thus described as very traditional; the issues with possible biases due to the presence of MTR are not addressed specifically. The author also calculates the sample size very specifically = she claims to have a “sample size of 9792” as she multiplied the number of years not only by the number of trade partners but also apparently by the number of right-hand side variables. This is quite unusual, in fact, she has only some 1224 observations which is quite modest if compared with full-sized gravity samples.

Based on current recommendations and gravity theory, it might have been logical to include a time dummy in the specification. Interestingly enough, the gravity model does not

actually say much about trade between Czechia and China (other than that the author identified a positive level effect by testing the role of a China dummy). It also might have been interesting to use the gravity model and test e.g. the role of the 16+1 initiative. Of course, more interesting opportunities for analysis and tests would loom had the author used a bigger sample (with more exporters than just Czechia). On the other hand – and a bit unusually - the student also attempted unit root tests. These are usually not required for gravity models (esp. if the panel is so short) and only few details on the tests are provided (they are not included in the shared do-file either).

The time-series-based regressions (p. 65-66) might been better specified (and estimated) with growth rates (rather than levels) or as a kind of VAR or VECM model. Interestingly enough, these time series regressions would be the type of approach where the unit root tests would be fairly logical to use. The author does not attempt to test for either unit roots or cointegration here.

Some historical imprecisions and omissions in the introductory sections of the text (esp. p. 14):

- Trade relations between China and Central Europe (incl. the territory of the current Czech Republic) are definitely older than 1949. For example, Bata had stores in Shanghai and Hong Kong since 1933. Even textbooks of business Chinese for Czechs exist which were published before the WWII. Similarly, diplomatic relations pre-date 1949.
- When mentioning the history, the period of 1950s, the time when Czechoslovak exports to China reached the highest share in total exports ever, might have been mentioned too.
- BRI can hardly be called a complement to the 16+1; BRI was typically seen as the main “signature” plan (and quite a few experts wondered what role was really left for the 16+1).

Technical errors:

- Both the interpretation of coefficients on dummy variables and their conversions to elasticities are wrong: the author treats the dummies as the other variables (in logs) and the coefficients as elasticities. Instead, exp(b) - 1 should have been used (e.g. p. 64)
- Incorrect explanation of the implications of the comparison of mean and standard deviation for the concentration and volatility of data (p. 58-59).

Imprecisions in the empirical part:

- In general, it is not a good idea to use a time series of nominal values of trade to demonstrate the growing intensity of mutual trade relations (p. 24-25). Instead, the author might have used the share of China in Czech exports and imports.
- Interestingly enough, the author does not discuss the very interesting discrepancies in mirror trade statistics of Chinese and Czech authorities.
- It is a bit imprecise to describe 6 and 8 as labour-intensive products (p. 26). These categories are very broad and include products with very diverse labour intensities.

Formal issues:

- Occasionally a bit non-standard formatting of references appears in the text.
- Inclusion of charts with similar information (compare figures 1, 2, and 3) or of a table with basic data in the main text (e.g. table on p. 32). Similarly, trade patterns are shown both in SITC and HS classification (perhaps one of them might have been selected as the main one, and the rest presented in an appendix)

- On the other hand, I appreciate that the author uploaded her do-files and data files as a special appendix.

Conclusion:
Although a number of issues were identified especially in the econometrics-related sections of the text, my final evaluation is based on the fact that the text also includes extensive descriptive analysis based on the RCA and GL indices and on the fact that the IEPS is an interdisciplinary (rather than narrowly focused economics or econometrics) program.

I therefore recommend the thesis for the final defence.

Proposed grade (A-B-C-D-E-F): D-E

Suggested questions for the defence are:

1. What is the share of China in Czech exports? How much has this share changed since 2012?
2. Outline current mainstream recommendations for the specification of gravity models. What to they say about dummies and their role? What can it make sense to include time dummies into your model?
3. Is there any significant difference between the volume of Czech imports from China and Chinese exports to Czechia? If yes, how can we explain the difference?
4. I did not quite understand the conclusion that the increasing demand for electric vehicles might lead to higher competitiveness of Czech car manufacturers in future (p. 49). Can you briefly explain this conclusion?

Digitally signed (September 10th, 2023):
Vilém Semerák

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Referee Signature

Overall grading scheme at FSV UK:

TOTAL POINTS	**GRADE**	Quality standard
91 – 100	**A**	= outstanding (high honor)
81 – 90	**B**	= superior (honor)
71 – 80	**C**	= good
61 – 70	**D**	= satisfactory
51 – 60	**E**	= low pass at a margin of failure
0 – 50	**F**	= failing. The thesis is not recommended for defence.