Report on **Bachelor Thesis**

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

Student:	**Impact of Trade Policies on Pakistan's Economy: A Sector-Level Analysis**
Advisor:	**Ing. Boris Fišera**
Title of the thesis:	**Syed Zaki Khalid**

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
The thesis focuses on trade policy and an analysis of its sector-level effects, as shown on the example of Pakistan. The author provides a selective literature review that, on the one hand, starts with a lengthy exposé of historical (pre-scientific) contributions to international trade policies such as mercantilism but then avoids discussing other, more relevant and more recent, contributions.

The empirical section of the paper is based on two econometric models, one for exports and the other for imports of Pakistan, estimated on panel data. Unfortunately, the specification of the model is a bit ad-hockish and simplified and appears to ignore much of what we have learnt about the modelling of international flows during the last 20 years. This, together with some unclear issues in the specification of the data, means that there is a significant danger that the presented econometric results are spurious or biased.

Contribution
As explained below, both the empirical analysis and the literature review leave significant space for improvement. Therefore, I would describe the overview of Pakistan's trade policy (section 2.3) as the main positive contribution of the thesis. However, even this section could go a bit deeper – especially with respect to the discussion of e.g. attitudes to FTAs or disputes that it faces (or launched) in the WTO.

Methods
The econometric analysis was clearly intended to be the main contribution of the thesis. Its specification sounds quite good at first sight (sector-level analysis of the effects of trade policies), but the implementation not so much.
There are two main types of problems with the specification and its implementation:
1. The author decided to collect a set of variables and enter them into the model without providing deeper theoretical reasons why and in which form (logs or other transformations) they should be included. In such cases, there is no guarantee that an important variable is not missing (omitted variable bias) while others are not really needed or are included in a less useful form (for example, it is not not really explained why the author used nominal exchange rate instead of real exchange rate which might better capture price competitiveness).
When we model export or import flows, we typically use gravity-based specifications. Not only do they provide us with the benefits of having a specification derived from micro-foundations, but they are also rather logical in their choice of variables. The author, for some reason, decided to avoid this class of models (without really explaining why and without describing their possible problems in the literature review), and it seems that the ad hoc collection of variables used in his model might not be complete. Most importantly, the author uses logs of the levels of exports (or imports) as the left-hand side variable. However, on the right-hand side, there is no variable that would capture the size of the export market. Gravity models would typically use the log of GDP of the export market or a similar variable for this purpose; the GDP growth variable used by the author does not provide the same information. It is,

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therefore, quite well possible that some of the relationships identified the author might be spurious – trends in the variables provided (e.g. the tariff rates decreasing time) replace the trends in the variables not included in the model (such as the changes in the size of the export markets).

2. Decades of tests of gravity models have taught us an essential lesson about troubles caused by so-called "**multilateral trade resistance**". In short, any bilateral trade flow does not depend only on the variables describing the economies and trade policies of the two trade partners (or, in this case, of Pakistan and the average of the trade partners). The rest of the world matters too – exports from Pakistan to Germany do not depend only on Pakistani or German trade policy, but also on changes in their trade relations with other countries (e.g. a new FTA between the EU and Japan). It has been demonstrated (e.g. Anderson & van Wincoop, 2003; Baldwin & Taglioni, 2006) that export (and import) equations which do not take the trade relations with third countries into account suffer from omitted variable bias, which can be difficult to deal with (the missing factor, multilateral trade resistance, is complicated and non-linear). Methods for dealing with it have been derived in gravity literature, but the author chose not to discuss its implications for the specification of similar models.

Then there is another type of issue, this time related to the data collection. The description of how the data on some of the main variables were created and what they capture is relatively short and opens some space for discussion (and, unfortunately, doubts):

- **Tariff data:** the author simply writes that the average applied tariff rates of the three main export partners (China, USA, Germany) were obtained from the WITS. What is not mentioned is whether the partners generally applied MFN rates or whether the actually applied rates relevant specifically for trade with Pakistan were used in the calculations (WITS offers multiple options). This can be quite important because Pakistan has had an FTA with one of the three countries (China) since 2006 and it received preferential market access under GSP/GSP+ from the other two markets – in other words, because rates applied on Pakistani exports developed differently (and were lower) than rates by the three countries on an average WTO member. The fact that the author does not mention at all that a significant volume of Pakistani's exports, e.g. to the EU (about 2/3 of tariff lines), had zero or preferential tariff thanks to GSP/GSP+ leads to some doubts about whether he was fully aware of this issue and whether it was taken into account.
  If the overall general averages were indeed used, then the tariff variable (which plays a crucial role in the model and author's interpretation of the results) misrepresents the actual tariff trade barriers relevant to Pakistani exports. If, on the other hand, the averages based on the partners' actual tariffs on imports only from Pakistan (and accounting for GSP and FTA) were used, the tariff variable would indeed measure the tariff burden more precisely. But, funnily enough, it can make another problem more salient – this case can make the model more vulnerable to the aforementioned issues with multilateral trade resistance, i.e. with the fact that Pakistani exports to, e.g., the USA will also be influenced by tariffs between the USA and other countries (the EU, China).
- The **non-tariff measures** are captured by an overall country-level index (on the import side) and a weighted average of the country-level measures on the export side. This is very crude, and it probably again significantly misrepresents the non-tariff barriers faced by Pakistani exports to foreign markets. However, I acknowledge that getting a truly convincing measure of the effects of non-tariff measures is a difficult task.

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The author seems to have assumed that the fixed effect panel-based model will deal with possible unobserved heterogeneity issues (p. 26). Well, this is true in some cases, but there is a significant volume of literature that suggests that it is not valid in this particular case. He presents some robustness checks, but they are very basic - the author only reestimates the standard errors with the use of clustered standard errors. However, heteroskedasticity is rather natural for similar regressions with trade data, it probably would have made sense to use the version with clustered standard errors as the main version of the model directly.

All in all, the econometric part leaves quite a few unanswered questions. I, therefore, find the results on the role of tariff and non-tariff barriers and especially the strong conclusions derived from them in the final section of the thesis as not too convincing.

Literature
The literature review appears extensive and abroad at first sight, when evaluating it from the point of view of the main objective of the thesis, I must describe it as unbalanced and unfortunately also incomplete.

On the one hand, the author starts with ancient history and reminds the reader contributions by Bishop Berkeley, Locke, Cantillon or Torrens. On the other hand, the outline of some of their contributions is simplified or explained not quite correctly. And the lengthy historical introduction contrasts with a relatively meagre space dedicated to modern contributions and to relevant empirical methods.

For example, the author's attempt (unnecessary) to explain the logic of comparative advantages (p. 5) is incorrect. If, as the discussion of opportunity costs suggests, table 2.1 describes the unit labour requirements of the countries, it is country B and not country A that would have absolute advantages (and that can produce more with the same volume of labour). The discussion of other historical contributions leaves a similar mixed impression.

Models with imperfect competition and increasing returns to trade are only mentioned very briefly (p. 6), and more recent approaches (Melitz and heterogenous firms) are only outlined very indirectly (half a sentence on p. 6, Melitz's name is not even used). Similarly, strategic trade policy models appear to be mentioned indirectly only (again, an incomplete sentence which does not mention the name of the model, p. 6), even though they can be crucial for the discussions about national champions.

Given that the author also discusses the role of special export zones, I would also expect to see a more detailed and systematic review of the topics focused on the functioning of the global value chains.

The most important omission is, however, the absence of a discussion of the implications of the research on gravity models for the methodology of empirical models of export and import data.

At the same time, though, the author had time and space to include but not fully explain other effects. For example, he mentions of the role of exchange rates - but the literature review on this topic is rather short (p. 12). It ends with Rodrik (2008), and when doing so, the author again (i) misinterprets the main conclusion (Rodrik emphasised the results for developing and not developed countries), ii) ignores the subsequent discussion (and criticism) of Rodrik's findings.

Manuscript form
The manuscript form is definitely a positive feature of the thesis. The text is written in clear and mostly precisely formulated English, there do not appear to be grammar errors or typos. Similarly, the formatting of both texts and of tables and charts is pretty good.

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Overall evaluation and suggested questions for the discussion during the defense

The results of the Turnitin analysis do not indicate significant text similarity with other available sources.

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 C.

Questions for the defence:
1. Explain the effects of GSP/GSP+ and of the FTA between Pakistan and China on tariffs faced by Pakistani exporters when exporting to the USA, Germany, and China, respectively. Similarly, briefly comment on the effects of the FTA on Pakistani import tariffs from China. Please also clarify whether these effects were reflected in the measures of tariffs used in your regressions.
2. When data on average tariffs are presented, these are often based on non-weighted averages rather than on weighted ones. Why? What can be the problems with measuring the average weighted tariffs with weights based on actual trade flows? Can a similar issue be, to some extent, relevant to your analysis?
3. Why did you include Germany rather than the whole EU market in your calculation of variables used in the regression? What would be the advantages and disadvantages of using the EU instead of Germany?

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

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

NAME OF THE REFEREE: *Vilém Semerák, Ph.D.*

DATE OF EVALUATION: *August 26th, 2024*

Digitally signed (August 26th, 2024)
Vilém Semerák

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Referee Signature

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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