

CHARLES UNIVERSITY IN PRAGUE

FACULTY OF SOCIAL SCIENCES

Institute of International Studies

Master thesis

2021

Natalia Gajdosova

CHARLES UNIVERSITY IN PRAGUE

FACULTY OF SOCIAL SCIENCES

Institute of International Studies

Natalia Gajdosova

**An alternative system of trade barriers in
international trade. Case study on Slovakia**

Master thesis

Prague 2021

Author: BSc. Natalia Gajdosova

Supervisor: Mgr. Ing. Magdalena Firtova, Ph.D.

Academic Year: 2020/2021

Bibliographic note

GAJDOSOVA, Natalia. *An alternative system of trade barriers in international trade. Case study on Slovakia*. Mater thesis. Charles University, Faculty of Social Sciences, Institut of International Studies. Supervisor Mgr. Ing. Magdalena Firtova, Ph.D.

Abstract

This thesis's objective is to whether the customs duty's dissipating its strength in its ability to create balanced conditions for the presence of competing goods in one market that are from in two mutually inhomogeneous production environments and to propose a conceptual framework for long-term action. Application of grounded theory based on comparative analysis of quantitative data within a case study allowed for a creation of data-emergent theory in the subject area of international trade. A core category of connection between an individual's wage and the level of customs duty levied on an imported good has been developed to offer an explanation of the core phenomenon of the customs duty's lost strength.

Through the theoretical conceptualisations, the variable of developed core category impacted the creation of the variable of the ratio comparing the amount of customs duty levied on imported good with the average monthly wage of the individual. The conceptual model explains 3 theoretical propositions explore the analogy which results in explanation of the core premise of this thesis. Applied emergent theory, allowed for proposal of long-term action of the alternative to customs in a form of an increased value added tax on imported goods.

Abstrakt

Cílem této diplomové práce je zjistit, zda clo stráci svou sílu ve schopnosti vytvářet vyvážené podmínky konkurenčnímu zboží na jednom trhu, které je ze dvou vzájemně nehomogenních výrobních prostředích, a navrhnout koncepční rámec pro dlouhodobou akci. Aplikace zakotvené teorie založené na komparativní analýze kvantitativních dat v rámci případové studie umožnila vytvoření teorie vznikající v oblasti mezinárodního obchodu. Byla vyvinuta základní kategorie

spojení mezi mzdou kupujícího a úrovní cla uvaleného na dovážené zboží (zložkov predejní ceny), aby poskytla vysvětlení základního jevu ztrácající se síly cla.

Prostřednictvím teoretických konceptualizací, navrhnutá proměnná umožnila vytvoření hlavní kategorie za pomoci poměru srovnávající výši cla uvaleného na dovezené zboží s průměrnou měsíční mzdou jednotlivce. Konceptní model vysvětluje 3 teoretické návrhy zkoumající analogii, která vede k vysvětlení základní premisy této práce. Aplikace vzniknutá teorie umožnila návrh dlouhodobé působení alternativy k celnímu systému ve formě zvýšené daně z přidané hodnoty na dovážené zboží.

Klíčová slova

mezinárodní obchod, clo, zvýšená DPH, obchodní překážky, dovoz, celní unie

Keywords

international trade, customs duty, increased VAT, trade barriers, import, the Customs Union

Range of thesis: 111829 symbols without spaces

Declaration of Authorship

1. The author hereby declares that he compiled this thesis independently, using only the listed resources and literature.
2. The author hereby declares that all the sources and literature used have been properly cited.
3. The author hereby declares that the thesis has not been used to obtain a different or the same degree.

Prague 4. May 2021

Natalia Gajdosova

Acknowledgments

The author is grateful especially to my supervisor Mgr. Ing. Magdalena Firtova, Ph.D. and to my family.

Institute of International Studies

Master thesis proposal

This thesis aim is to conduct the exploratory study through the analysis of conceptual framework which explains a phenomenon and provides long-term action recommendation. The phenomenon which is analysed within the thesis proposes that the customs duty loses its strength in creating balanced conditions for the presence of competing goods in one market that have been produced in two mutually inhomogeneous production environments. The analysed action in a form of alternative to the customs duty, that emerged from the theory, proposes that increased VAT by one unit on imported goods has a larger effect on the final (retail) price than a one-unit increase in customs duty has. The final analysed proposition aims to offer deeper validation for the emergent theory, proposing that importer in the cooperation with the exporter has a lower ability to eliminate the effect of regulation of international trade in the case of an increase in the rate of increased VAT than in the case of an increase in customs duty rate. The thesis applies the grounded theory principles and analysis of cyclical quantitative data related to the context of the studied phenomenon. This chapter presents the research background, research problem, objectives, and used methodology.

Abbreviations and Acronyms

CPA: the Classification of Products by Activity

EU: the European Union

GNI: the gross national income

ITGS: International trade in goods statistics

OECD: the Organisation for Economic Co-operation and Development

OLAF: the European Anti-Fraud Office

UK: the United Kingdom

VAT: the value added tax

WTO: the World Trade Organisation

Table of Contents

List of Tables	12
List of Figures	12
List of Graphs.....	12
1. Introduction.....	13
1.1 Research Objectives	15
1.1.1 Theoretical Understanding And Formulation of the Action.....	15
1.2 Thesis Structure.....	17
2. Literature review	18
2.1 Challenges concerning the customs	19
2.2 Conceptual framework of the customs.....	20
2.3 Research regarding tax-tariff reform.....	25
2.4 Relevancy of the Grounded Theory Principle.....	29
3. Research Methodology	31
3.1 Adopting Grounded Theory	31
4. Data Collection and Analysis.....	34
4.1 The Selected Case Study	34
4.2 The Selected Categories and Period.....	35
4.3 Abstract wonderment	36
4.4 Data collection sources.....	36
4.5 Data Analysis Process	38
4.5.1 The Coding	38
4.5.2 The Statistical analysis	39
4.6 Theory emergence	39
5. Research Findings	40
5.1 The Emergent Theory.....	41
5.2 The Action.....	48
5.2.1 Conceptual framework: Introduction of increased VAT	49
5.2.2 Conceptual theory: Implications of customs duty versus the increased VAT.....	57
6. Discussion and Conclusion	63
6.1 Discussion	63
6.2 Implications.....	67
6.3 Limitations.....	67
6.4 Future Research.....	68
6.5 Conclusion.....	69

Bibliography..... 71
List of Appendices 79
Appendix A: Shapiro-Wilkins Test of normality..... 80
Appendix B: The core category calculations 81
Appendix C: Household consumption of textiles 83

List of Tables

Table 1. The comparison of change in the amount of customs duty and change in the amount of VAT (Author, 2021)

Table 2. The comparison of change in the amount of customs duty and change in the amount of VAT cont. (Author, 2021)

Table 3. Core Category calculation in the case of Textile, (Author, 2021)

Table 4. Core Category calculation in the case of Furniture, (Author, 2021)

List of Figures

Figure 1. Emergent Theory as a Model (Author, 2021)

Figure 2. Summary statistics for variables regarding Textile, Author's own calculation (StataCorp., 2021)

Figure 3. Summary statistics for variables regarding Furniture, Author's own calculation (StataCorp., 2021)

Figure 4. Pearson correlation between the ratio of textile and furniture between years 2004-2019, Author's own calculation (StataCorp., 2021)

Figure 5. The Shapiro-Wilk test of normality, Author's own calculation (StataCorp., 2021)

Figure 7. Household consumption of textiles and clothing in the European Union (EU28) from 2009 to 2018 (EURATEX, 2019)

Figure 8. Household expenditure on clothing, footwear and household textiles as a proportion of total household expenditure in the EU, 2000-2017, per cent (Christis et al., 2019)

List of Graphs

Graph 1. Total import of textile and furniture in billions of euros, 2004-2019, (Author, 2021)

Graph 2. Net mass of textile and furniture in billions of kilograms, 2004-2019, (Author, 2021)

Graph 3. Entry price for textile and furniture in euros, 2004-2019, (Author, 2021)

Graph 4. The ratio of the share of customs duty paid for the per capita amount of imported textiles (or furniture), 2004-2019, (Author, 2021)

Graph 5. The retail price development for textile (or furniture), 2004-2019, (Author, 2021)

Graph 6. The development of the transfer to national budget, 2004-2019, (Author, 2021)

1. Introduction

As the world entered the age of unprecedented globalisation, the need to assess the potential emergent benefits as well as negatives has risen more than ever before. Globalisation, among other things, can be perceived within the area of the international trade, where higher levels of liberalisation expose markets, their consumers and producers to increase in various potential dangers. These dangers include fraudulent behaviour as well as quality depreciation of products within the market. All these negatively affect the domestic economy, especially the country's budget. These thoughts have become a primary source for the main focus of this thesis, which is to study the ability of the customs duty to create balanced conditions for competing goods in one market, which originate from two mutually inhomogeneous production environments. The analysis of mentioned phenomenon resulted in potential help in the elimination of the budget and other losses through the tax-tariff reform, where the value-added tax (VAT) would present a substitute to customs tariffs imposed on imported goods. This thesis aim is to conduct the exploratory study through the analysis of conceptual framework which explains a phenomenon and provides long-term action recommendation. This is done through the use of grounded theory principles and analysis of cyclical quantitative data related to the context of the studied phenomenon. This chapter presents the research background, research problem, objectives, and used methodology.

Nevertheless, literature is more absent on research of tax-tariff reform, which will analyse customs duty and increased VAT as a substitutes. As the following literature review will declare, this reality creates an opportunity for capturing a gap, and for the exploration of the theory of customs duty's dissipating power and its potential solution through the tax-tariff reform. This thesis's interest and data collection sampling are focused on imported goods from a territory outside of the EU that satisfy the criteria described in Chapter 5.

The research problem is the dissipating ability of customs duty to create balanced conditions for competing goods in one market that are from two mutually inhomogeneous production environments. In the grounded theory method, analysis focus is rather on an exploratory framework through data collection than a prior deduction from literature to avoid presumptuousness (Glaser, 1992) and to allow research to flow into further clarity. The choice for the thesis's area of interest is based on the researcher's previous studies. The literature review presented in Chapter 2 provides the background for the topic, accommodates theory conceptualisation, assist in the emergence of core category and identifies gaps, which further legitimised the topic. Through data collection, in Chapter 4 the

concerned area becomes more narrowed. The analysis of data constructed the core category of the ratio comparing the amount of customs duty levied on imported good with the average monthly wage of the individual. Found core category's role within the emergent theory, is presented in Chapters 4 and 5. The action framework utilising increased VAT developed through conceptual theory is also presented in Chapter 5.

Applied research methodology is based on grounded theory principles as this thesis consists of quantitative study, data collection and conceptual framework. Glaser and Strauss developed a grounded theory in 1967 as a research methodology that avoids assumption in the analysis of complex environments (Kennedy & Lingard, 2006). Such research tries to explain an unclear problem. Grounded theory was selected as a research methodology because of:

- i. A lack of theories addressing the problem area and a challenging use of a deductive methodology with the anchored hypothesis. An inductive methodology with an exploratory approach was selected to be more suitable.
- ii. The exploratory theory allows assessing the phenomenon.
- iii. The emergence of implicit data.
- iv. A need for a new point of view to construct a framework for resolution.
- v. An adaptable methodology allowed for flexibility in the analysis of emerging data.

This analysis uses quantitative data and positivist research method using a mathematical type of writing since the study attempts to explore a phenomenon derived from a collection of numerical data. Positivist research uses observable and quantifiable data to interpret results with objective measurability (Henning et al., 2004). Rather than using the Gaserian Grounded Theory, this thesis employs the later emerged Straussian School. This is because it allows for literature study to identify research problems and narrows them from data collection (Strauss & Corbin, 1998). This research is based on formal epistemology using externalism and methodological reductionism as its theory of justification.

The emergent theory of this thesis is derived from data collected directly from the entity affected by the problem, which is the country of Slovakia. The theory is relatable to the studied country as explained customs duty phenomenon provides the entity with an exploratory framework upon which action knowledge could be obtained. This attempts to make a connection between the emergent theory and the situational context in the studied country.

This thesis proposes a theory-generation methodology (Glaser & Strauss, 1967), as well as propositions that can be used as a blueprint for a recommendation for a systematic change within the regulation of international trade. The presented theory is relevant for decision-makers as it encourages an international trade reform.

1.1 Research Objectives

The main research objective of this thesis is to construct an understanding of the phenomenon of customs duty decreasing strength in the creation of balanced conditions for the presence of goods that have been produced in two inhomogeneous environments, and are competing (sold to the consumer) in one market. This thesis also aims to propose a conceptual framework for long-term action, which incorporates the use of increased VAT. Following research questions were utilised:

1. 'Does the customs duty lose its strength in creation of balanced conditions for competing goods in one market from inhomogeneous production environments?'
2. 'Has increased VAT by one unit on imported goods a larger effect on the final price than a one-unit increase in customs duty?'
3. 'Does importer in the cooperation with the exporter have a lower ability to eliminate the effect of regulation of international trade in the case of increase in the rate of increased VAT than in the case of increase in customs duty rate?'

The first research question was an initiation for the research. As the data is collected and analysed, the second and third research question emerged. Thus, the initial research question is dependent on data and forms the 'abstract wonderment' of this research.

1.1.1 Theoretical Understanding And Formulation of the Action

The core category of a ratio comparing the amount of customs duty levied on imported good with the average monthly wage of the individual emerged from a data collection and analysis process explaining the phenomenon of the customs duty's lost strength. The emergent theory is presented as a model, illustrated in Figure 1.

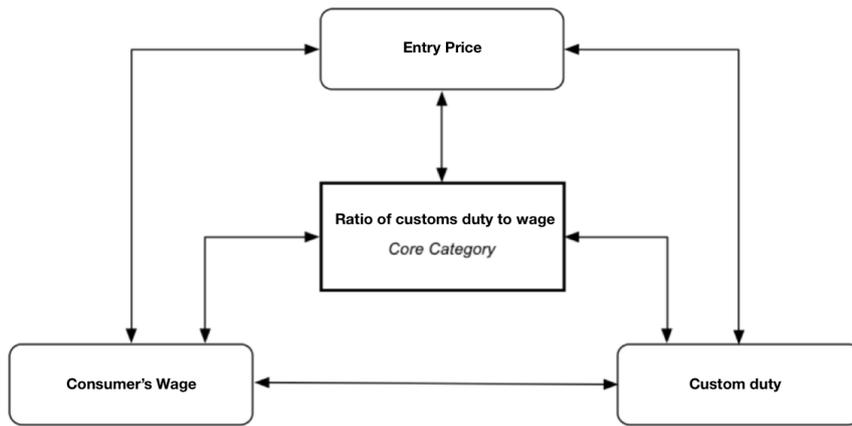


Fig 1. Emergent Theory as a Model (Authors own creation, 2021)

This thesis creates a recommendation for action based on the exploration of the phenomenon. The action aims to propose a potential solution to the problem described by the emergent theory. The long-term action applied within this thesis proposes change involving a customs duty and encourages adaptation of increased VAT concept in selected imported goods in contrast to pursuing a change of the researched phenomenon. The systematic change to the phenomenon of dissipating power of customs duty appears to be less effective than the introduction of the increased VAT action due to the emerged theory concerning the core category of this thesis. This thesis provides recommendation of how the concept of increased VAT could work and how it could present a continuous improvement in the explored situation.

The emerged theory contains suggestions for research and practice. The theory is built and derived from a real problem conceptualised within a case study on Slovakia. This develops a greater understanding for decision-makers on the context and potential uniqueness of the problem within the phenomenon. The utilisation of a new entity for a research can provide a broader and newer perspective of the phenomenon. Emergent theory on dissipating power of customs duty and introduction of increased VAT can provide for a new direction of the thought process for the future research that could include these two researched phenomena and would derive more rigid results for future decisions. There is a lack of theory on the implications of the proposed action.

1.2 Thesis Structure

The research framework is presented in Chapters 1, 2 and 3. It defines how is the data approached through grounded theory methodology principles, informs about research aims, objectives and design. Data development is presented in chapter 4 which describes the data collection and the process of generating results from collected data. The theory is described within a framework of a series of 3 propositions that connect the concepts, explains custom duty phenomenon and increased VAT action described in Chapter 5. Chapter 6 discusses and concludes.

This chapter introduced the thesis, presented grounded theory methodology and explains the initial process for research direction. Implications for research and practice were presented. Chapter 2 contains the literature review on concepts of tax-tariff reform and customs duty as a tool of regulation within international trade.

2. Literature review

As grounded theory principles advocate for the avoidance of preconceptions and bias within the research (Glaser & Strauss, 1967) this literature review intends to present the topic's background context, theories that influenced the choice of the research area, and notions that shaped thesis aims and objectives. This literature review does not intend to formulate a thesis problem or research questions. The following chapter is divided into three parts, first part explores the issues concerning the fraudulent behaviour within the customs valuation, especially in the case of imported textiles, the second part focuses on features concerning customs duty, and the final part presents past research studies related to the tax-tariff reform, which further legitimise the application of grounded theory's principles in the construction of exploratory theory as the literature regarding the field of research is not fully saturated.

Trade policy is to a great extent influenced by the economic events and economics research, therefore a large number of papers mentioned in this literature review are sourced from the journals such as the Journal of International Economy, Journal of Public Economics, Journal of Political Economy and Journal of Economic Analysis and Policy. In addition to these other sources such as the International Monetary Fund, World Banks and Oxford University Institute of Economics and Statistics provide papers that uncover valuable findings for the research on coordinated tax-tariff reform. The political aspect encompassing the debated scholarly interest is supplied by the papers which focus on the agreements and institutions concerned with international trade. Since the case study of this research incorporates Slovakia, the member state of the EU, these papers are gathered from the institutions such as the European Court of Auditors, the European Anti-Fraud Office (OLAF), the European Parliament and the Council of the EU.

To support the thesis's aims and goals and to refrain from researching an already well-researched area, this thesis used two questions as a guide in the review of literature on dissipating power of customs duty:

- i. What are the potential challenges causing dissipating power of customs duty as a tool for regulation of international trade?
- ii. What are the reasons allowing for the challenges causing dissipating power of customs duty as a tool for regulation of international trade?

2.1 Challenges concerning the customs

Higher levels of global trade liberalisation bring an increased amount of potential dangers for domestic markets, their producers and consumers. These dangers include fraudulent behaviour as well as quality depreciation of products within the market. All these negatively affect the domestic economy, especially the country's budget. Potential help to eliminate the budget and other losses can be found in tax-tariff reform, where the VAT would present a substitute to customs tariffs imposed on imported goods. This literature review introduces the topic of customs duties in a broader sense and then deepens into the assessment of the theories and findings surrounding the research on the VAT being an alternative substitute to customs duties in international trade.

In 2012 it was reported (European Parliament, 2013) that the EU's shadow economy is worth approximately 2.35 trillion euros. Tax and customs gaps are important indicators of the value of the shadow economy. The customs gap was estimated to be 387 million euros in 2011, only calculated from identified frauds and irregularities, and is believed to be underestimated according to the report. The consequences of a shadow economy are lower tax revenue, competition distortions, social dumping or productivity inefficiencies. The document by the European Parliament pointed out the low availability of data and the limited ability of customs administrations to detect fraudulent behaviour.

Report by OLAF (2018) informs about undervaluation in the years 2013 to 2016, when textile entering the EU through the Czech Republic, France, Malta, Slovakia and UK has generated 2 billion euros in losses on custom duties. It has been also indicated that Slovakia, a country which is subject of this thesis case study, fails to recognise fraud on clothes and shoes imported from China, which caused the EU to lose approximately 300 million euros in years 2013 and 2014 (The Slovak Spectator, 2018). After several complaints about the undervaluation of prices when imports of textiles enter the EU, OLAF conducted a test on a sample of 30 potential underestimated imports of textiles and footwear from 2015. They found that in many cases the OLAF's requests had not been met and that the tested samples had been significantly undervalued. The undervaluation was in some cases so significant that the prices of imported processed cotton were lower than the price of raw cotton (European Court of Auditors, 2019).

Although there is not currently any procedure for measuring the difference between the custom duties that have been collected and the ones that were supposed to be collected, multiple fraud cases were

identified suggesting that these losses from the customs gap may be significant (Vervaele, 2018). The EU has put together channels (Eurofisc and Celbet) of different stakeholders to fight customs frauds. Despite the efforts of the EU, the channels are underused as there is a persistent lack of resources, motivation and data on a national level (European Parliament, 2019). Most current activities within the EU's document on customs valuation (2020) removes a principle of domestic sale which excluded transactions between two EU parties as a sale for export. This means that such a transaction could not be used as a base for transaction value for customs duty. Removal of domestic sale principle in the usage of later sale as a basis for transaction value, which is usually higher. This may be thus considered as the EU's effort to increase import duties payable.

Customs fraud is a source of unfair competition as non-EU companies can undercut prices of EU companies with undervalued products, the EU businesses have to charge VAT on the sale of competing product, increasing the final price of a good, and causing them to bear VAT compliance costs, affecting the competitiveness of the EU businesses in comparison to their non-EU competitors. Importers and exporters falsifying import's prices, quantity or quality on the invoices submitted for customs clearance to avoid higher payments, to shift wealth to other currencies or to hide profits outside of the country deprives national budget of income. Since the customs duties and VAT contribution towards EU budget has decreased to less than 30 per cent (European Parliament, 2019), it is eminent that to lower the pressure on GNI contributions and therefore to make the contribution fairer, it is necessary to tackle the fraud and make the customs and VAT more efficient through systematic change. There is an effort to tackle these via tools that check the price values on declarations and pair them with the average world market prices which could potentially identify the wrongful declarations (Bassega, 2020). However, although these could potentially fight the declaration's fraud they do not assess for the balance of conditions for the presence of competing goods in one market that are from two mutually inhomogeneous production environments. This thesis aim is to analyse the stated phenomenon, however, the in-depth analysis of reasons why it is allowed for such a phenomenon to occur is beyond the scope of this thesis.

2.2 Conceptual framework of the customs

Customs resembling the system we know today was first established in 17th century's Great Britain. The practise later spread through Europe, although, the early signs of customs can already be observed in ancient communities of Egypt, Greece and Rome. Throughout the time customs depleted of its fiscal function of providing more profits, and rather fulfil the means of a political instrument (Balko,

2007). As a rule, in less democratic countries customs present a significant portion of state profits. However, in more developed countries, a political aspect of customs duties prevail as they are more commonly used as a subject for negotiation between states or as an aid to gain political support through different promises of customs exemptions or adjustments in customs duties.

Besides the political and fiscal function, customs were adopted as a result of shortages of certain goods in the domestic market due to higher gains from the export of the goods to other countries, and also as a result of the entry of foreign goods into domestic markets which caused weakened domestic production and sales (Keen, 2003). Therefore one of the main purposes of customs is to protect domestic producers and consumers. Examples of customs that are directed to protect domestic producer are known as prohibited, anti-dumping or countervailing duties. Imposing customs on imports, however, may in some context be disadvantageous towards domestic consumers due to the increasing effect on the domestic price of the good (Feldstein and Krugman, 1990). The net cost is also known as efficiency loss of an importing country is measured as consumer's cost minus producer's profits minus government's revenue. Another purpose of customs duties is performing the role of a tool for industrial regulation, used when the state wants to protect its industry from outside's imports (Hamilton, 1791; List 1856). Nowadays customs are commonly used as an instrument for regulation and control of the amounts of imports.

The first development in the transformation process of the Union was the creation of the common market in 1957. This transition has led to the abolishment of customs duties within the members of the then European Economic Community, now the EU. To boost the trade within the member states, the EU single market is shaped by the Customs Union, created in 1968 to ensure free movement of goods within the member states and protects the financial interests of the member states by collecting the customs duties from third countries' imports, as well as ensuring the safety of EU citizens. This thesis incorporates the custom system used within the EU in its conceptual framework.

Customs duty is a major part of traditional own resources, which is one of three main segments contributing to the EU budget. Throughout the time, two main EU's resources from customs and VAT have been decreased to the point where the third resource, gross national income (GNI) has become a source of approximately 72 per cent of the EU's budget in 2018 (European Parliament, 2019). Although the operations of the Customs Union are fully answering to the EU, the collection of duties falls under the national authorities of a member state through which the imported good is

entering the EU. There are indications that national authorities loaded with a significant portion of import duties tend to have a light approach towards fighting customs fraud (Quirke, 2010).

The EU budget is affected by customs and VAT frauds through Member States's reduced contribution. To assess a fraud, authorities can rely on transactional data, although these can be altered as exhibited in Chapter 5 and the rise of e-commerce (buying or selling of products electronically through online services) makes it even more difficult for authorities to identify all traders and trade patterns as data and activities can be transmitted anywhere in the world. Authorities can also conduct a physical assessment to detect the value of the imported good, although the value assessment can still be incorrect due to subjectivity or non-acquaintance. This task is overburdened and complicated because of trade tax policies that involve extensive rate differentiation and pervasive exemptions adding to difficulties of monitoring trade flows. The inefficiency of the way customs administrations inspects shipments can be experienced through substantial and unpredictable delays due to physical inspections. These add to the reasons why according to the European Commission, the actual physical control reaches only 1 to 5 per cent (Senate Francois, 2015).

The early evidence of lack of verifiability of the prices stated in the invoices of the imported goods was already a matter of the research by Bhagwati (1964) on under-invoicing of imports. Under invoicing of imports means the creation of a positive difference between the value of the import that is stated in the invoice versus its actual value, which was paid by the exporter from abroad. Such a difference is said to be created either when the customs duty is implied on the imported good; or when the imports of the stated good are strictly controlled, and this control results in a premium on the domestic market. As explained in the conceptual framework of this dissertation, the importer would be better off understating the value of such an import, as the result would create savings that outweigh the extra price that would have to be paid. Further, understatement of import unit values enables the importer to import a larger quantity under his licence and if the premium on the imported commodity in the domestic market is higher than the premium to be paid for black-market exchange, and therefore under-invoicing becomes profitable.

Papers by Morgenstern (1950) and Bhagwati (1964) suggested that the evasion of tariffs and other controls could be an explanation for the evasion in import while Feenstra and Hanson (2000) give a measurement error suggestion. This inspired Fisman and Wei (2004) to analyse the evasion gap in China where a one per cent point increase in the tax rate associates with a three per cent increase in evasion. Evasion is claimed to take a place through misclassification of imports from the higher taxed

category to the lower one, in combination with underreports of the imports values. The research compared China's imports from Honk Kong, by comparing Hong Kong's reported exports and China's reported imports of the same products. They reached a result where the evasion gap is highly correlated with Chinese tax rates. This means that a higher value is lost for products with a higher value.

Similarly, a newer study (Javorcik and Narciso, 2008) based on trade data between Germany and ten Eastern European countries between the period of 1992 to 2003 suggested that the trade gap, described as a difference between the reported value exported by Germany and the value, imported from Germany reported by the importing countries, is positively correlated to the tariff in eight studied countries. Specifically, a one per cent point increase in tariff is associated with a 0.4 per cent increase in the trade gap for homogenous goods and a 1.7 per cent increase for differentiated goods. Eastern European countries were chosen in their paper because of the weaker institutions. The study further supports Rauch's (1999) claim that tariff evasion is more often for differentiated goods, probably because customs officials have difficulties assessing whether the value on the invoice is real. Tariff evasion also more likely takes place through misrepresentation of the import prices rather than underreporting of quantities or product misclassification. Problems mentioned in the paper, caused by the tariffs evasion are revenue loss, indirect effect on foreign direct investment and the increase in the competitiveness of well-connected companies at the expense of honest producers and importers. Likewise, other cases of customs corruption were detected in Russia (Baumgartner, 2001) and Poland (Polish Bulletin, 2000). Although, the study does not explicitly analyse the effects of customs reform, its results suggest that a system that gives custom officials discretion and does not involve effective audits or further examination is more prone towards evasions on tariffs.

So long as tariffs are levied, and domestic taxes differ across countries, there will be potential illegal profit to be made from smuggling. The difficulty with the elimination of such fraudulent behaviour on collecting customs duties is amplified by the recognition of customs administrations being one of the most corrupt agencies of government (Keen, 2003). The Key is to improve customs administration in a way that minimises costs to governments caused by inefficient customs operations. The efficacy of changes in customs is directly dependent on the effectiveness and competence of the customs administration, and on the government's willingness to modernise customs. The EU suggested radio-frequency identification technology for customs and real-time automation of cross-EU reporting, to the faster assessment of the fraud.

Member States yet do not follow a uniform approach to customs control of imports as there are still no EU-wide valuation decisions system (Rogmann and Zelenska, 2017; Erkoreka, 2021). This can lead to underpayment of customs duties and therefore losses in the budget. The Customs Union together with the Common Commercial Policy are areas of exclusive EU competence within which most of customs policy is defined and customs legislation is adopted. In October 2020, EU proposed Single Window Environment for Customs initiative to enhance cooperation between customs authorities of Member States. However, actual introduction of the legislation into country's system is in hands of individual Member States (Valantiejus, 2019). This brings out the problem of creating a balance between facilitation of quick import procedure while achieving satisfactory level of customs control.

Tariffs have lower collection costs compared to other taxes due to collection at a specific location (Aizenman, 1985), however, higher tariffs are associated statistically with lower declarations by the country of import in comparison to the declarations claimed by the exporter country. Jean and Mitaritonna (2010) found that customs duties are greater in poorer countries and that a one per cent point higher tariff is associated on average with an understatement of imports of one per cent or more. It is added that differences across goods matter because the value of homogenous products is easier to assess. The study suggests automated customs data treatment.

The main types of customs frauds are miss-declaration of tariff classification, undervaluation and miss-declaration of origin. Classification fraud can be done through the application of a lower import duty rate, to avoid anti-dumping or countervailing duties, or to incorrectly claim tariff suspensions (e.g fraud where ginger was falsely imported through Norway as garlic to avoid 1.6 million euros in customs duty). Valuation fraud helps to evade taxes upon import, and over-valuation can result in undeserved duty or tax benefits (e.g consumer buying through e-Commerce a product unaware of reduced customs value to less than 22 euros unintentionally becoming part of fraud and avoidance of the customs).

Customs fraud happens when the value, tariff classification or origin are deliberately declared incorrectly, resulting in either a partial or full reduction of the total liability of duties upon importation; miss-declaration of the composition of a product (e.g. weight); or avoidance of anti-dumping duties. The biggest risk of fraud in the EU Customs system is seen from the imports relief from "low value" goods up to 150 euros; exemption from VAT for imports valued up to 10 or 22 EUR; and imports declared as noncommercial, where there is a possibility for undervaluation or

mislabelling. Collecting duties and taxes through a declaration requires the participation and good faith of multiple parties. The under-declaration of the value of goods will not only diminish the import duties collected but will also result in a diminished amount of VAT due.

A special report by the European Court of Auditors from 2017 has conducted an audit to assess whether the EU and its Member States ensure that the import procedures protect the financial interests of the EU. This report found that weaknesses of the applied system are that the current system does not prioritise the importance of custom duties as a source of the financing of the EU budget and that there is a disincentive for the Member States to carry out customs controls. The report also states that member states do not control the imports properly which leads to underpayment of customs duties.

2.3 Research regarding tax-tariff reform

The research on international trade mostly focuses on explaining the surrounding aspects and trends rather than proposing new policies to more efficiently regulate the trade. Similarly, the policy-oriented papers are more likely to be written by senior authors and it tends to be written without the inclusion of quantitative research (Mansfield and Pevehouse, 2015). These realities may reflect a generational divide in the matter, as well as the possible assumption of researchers about policy makers' low interest in quantitative work. Arguably there has been a very low amount of literature and research that discuss the coordination between the tax and tariff reforms (Mitra, 1991).

The earlier literature written on the subject of linkage between the tariffs and taxes, written by Diamond and Mirlees (1971) states that the optimum for the governments of the small open economies is to set tariffs to zero and raise revenue through a consumption tax. This is based on the theory of production efficiency proposed by the authors, where it is implied that even when the lump-sum (fixed amount) taxation is not available, the preferable is the taxation on the net demand of consumers rather than the acquisition of state finance through border taxes. This is later supported by Dixit's (1985) theory of optimum taxation in an economy that is open to international trade.

The research papers are written by Hatzipanayotou et al. (1994) and Keen and Ligthart (2002) are the most alike researches to the one conducted in this thesis. This is due to the core idea and the hypothesis where tariff revenues are replaced by strengthening indirect taxes. They showed that lowering import tariffs and rising consumption taxes on the corresponding imports, with consumer prices unchanged, raises both welfare and government revenue. Hatzipanayotou et al. (1994) dealt with a uniform

reduction in import tariffs while offsetting an increase in consumption taxes with the condition of providing initial net subsidy to producers. This means that since the customs duty raises the price faced by the producers of an import above the world price, it is a subsidy to a domestic producer. Keen and Ligthart (2002) generalised their scheme to arbitrary tariff reductions and offsetting tax changes.

The key obstacle to tariff reform is revenue loss since trade taxes are a major source of revenue for governments. Keen and Ligthart (2002) explore the strategy for efficiency gains from tariff reform without public revenue loss. They find that for a small economy, a cut in import duties combined with one for one increase in domestic taxes increases both welfare and public revenue. They emphasised the need for stringent conditions like the production efficiency with a consumption tax reform which leaves consumer prices unchanged to replacing tariffs with domestic consumption taxes to increase the welfare and public revenue. To achieve unchanged consumer prices it is needed to simply offset tariff reductions, point for point, with increases in destination-based consumption taxes. In other words, exports are allowed with zero taxes whereas imports are taxed on par with domestic production. For a small open economy, as Keen and Ligthart have shown, coordinated reforms of this kind are certain to increase both welfare and public revenue, so long as the underlying tariff reform improves production efficiency. The paper voiced limitations such as issues of administration and compliance involved in shifting from trade taxes to domestic indirect taxes; and the possibility of creation of indirect tax structures with a problematic degree of differentiation across commodities.

The research paper by Michael et al. (1993) incorporates revenue concerns in an analysis of tariff reform. They identify conditions under which the simultaneous increase in consumption taxes and the decrease in tariffs improve welfare while holding government revenue constant. Paper exhibits the relative inefficiency of tariffs to consumption taxes. In conclusion, they demonstrate economic efficiency from the abolishment of customs duties even if the consumption tax would increase not only for the imported goods.

Naito (2006a) found that revenue-neutral tariff-tax reform always raises welfare. He used a thesis where the trade liberalisation may or may not accelerate economic growth, depending on factor intensity ranking. The paper differentiates between capital good (machine) and consumption good (food) to show the inefficiency of import tariff. The basis for Naito's (2006a) research is in Rodriguez and Rodrik's (2001) finding that the hypothesis that trade barriers negatively affect economic growth was not empirically robust. However, the paper did not examine the effects of a radical reduction in

tariffs combined with a radical increase in consumption taxes as Hatzipanayotou et al. (1994) and Keen and Ligthart (2002) did in multi-good economies. Naito (2006b) found that the optimal tariff rate is positive, which then forms the limit of trade liberalisation.

Another research by Baunsgaard and Keen (2005) looked at the question of whether the countries which switched to domestic taxes as the source of government revenue have recovered these losses from past trade liberalisation? They found various results for different income groups of countries. For the high-income countries the answer happened to be yes, they did recover these losses on customs from the domestic tax and for middle-income countries, this was also true in the long run. However, in the case of low-income countries, mixed results have been generated, where some countries were able to recover these losses while others have not. The issues that caused the inability to recover these losses from customs have been as follows: imperfect competition; significant informal sector; and tariffs on intermediates, meaning these goods are not subject to consumption tax. However, later research by Keen (2008) showed that in a simple context that a VAT applied at the same rate to imports and formal sector sales does indeed cause an inefficient expansion of informal production. It is concluded that any such welfare loss from trade reform could presumably be mitigated by structural tax reforms that make domestic tax instruments more effective.

A study by Mitra (1991) argues that coordinated reform of tariffs and indirect tax can be designed to meet the revenue requirements of the government. He argues that since tariffs raise the prices faced by the importing producers above the world prices, the good then becomes a subsidy to a domestic producer. Subsequently, the VAT in combination with tariffs increases the price faced by the consumer of import above the world price and constitute a tax on the domestic user.

Another thesis favours an indirect tax reform where the trade taxes are reduced and VAT increases to raise governments lost revenue from the reform. The paper by Emran and Stiglitz (2005) sees several limitations to this idea, especially when applied in developing countries. These limitations are smuggling, informal economy, differential administrative costs of different taxes, non-tradable and intermediate goods. Their paper takes into account an analysis of reforms in developing countries and shows that once there is incomplete coverage of consumption tax caused by the informal economy, the tariff-tax reform reduces welfare under plausible conditions. However, a significant part of the VAT revenue in a typical developing country comes from the VAT collected at the border, it is essentially a trade tax in the guise of VAT, therefore, in this case, the implemented tax reform policies are not as damaging. In addition to these claim, when the competing domestic production in the

informal sector is not taxed by VAT, a tax collected at the border is, in fact, a trade tax, even if it is collected as a VAT. This is so because this tax causes a disagreement between the prices faced by the domestic and international producers and therefore cannot be considered as a consumption tax.

Emran and Stiglitz (2005) further state that if the goal is to eliminate trade taxes then the part of VAT that is collected at the border should also be eliminated, especially when the corresponding domestic production is not taxed due to its informal nature. However, this thesis does not want to eliminate trade tax in terms of imposing a cost on importing goods into a country, but it rather offers an alternative that will protect the domestic economy but still allow boosting of domestic production and at the same time eliminate the fraud on trade tax. They further state that an increase in the VAT on an exportable commodity has no effects on domestic production and does not increase incentives for smuggling out of the country. Finally, the VAT supports cross-border purchases, assuming customs administration is reasonably efficient (Ebrill et al., 2001).

Paper by Munk (2005) supports the criticism within the thesis presented by Stiglitz (2003) against the recommendation of the International Monetary Fund and the World Bank to adopt VAT instead of customs tariffs. In the paper after the implications for optimal taxation are explored, it is suggested that costs of tax administration have to be taken into the account to achieve desirable tax-tariff reform. This statement is derived after the realisation that the Diamond-Mirrlees (1971) production efficiency theorem, which implies that even when lump-sum taxation is not available, then it is preferable to finance small open economy's budget through household's net demand taxes rather than to rely on taxation of boarder trade, does not hold when there is association of the tax with the costs of administration.

Javorcik and Narciso (2013) further study the consequences of the accession to WTO by showing the displacement of tariff evasion by the effect of limiting the discretion of customs officials in terms of assessing values of goods. The officials are mandated to accept the invoice issued by the exporters and are limited to negotiate with them therefore their ability to detect misrepresented import prices is decreased. Pre-shipment inspection programme may improve tariff collection and reduce fraud or corruption, however, there are mixed results whether this is true in real life (Anson et al., 2006) as well as accompanying high costs of the inspections. There is a positive relationship between tariff rate and misrepresentation of prices on invoices of imported goods before the accession to the WTO (Javorcik and Narciso, 2013).

In general, the coordination of tariff and consumption tax is taken as a tool to create more open economies while keeping the government revenue the same. However, today with much greater levels of trade liberalisation than in the past, it is possible to look at this coordination from the point of view where it creates a more efficient control of trade flow, protection of domestic production, the safety of consumers, and to manage the fight against the customs fraud. The recovery of duty losses caused by fraud schemes is difficult to measure and challenging to achieve due to the lack of availability of measurable data. Although the study from the European Parliament provides recommendations for tackling the frauds on customs duties such as prioritising customs gap measurement and providing authorities with access to financial transactional third-party data, they mention systematic changes in the collection of customs duties levied on imported goods remains lacking within the literature. Limited amount of studies that draw a relation between the levels of customs duties imposed on imports and increasing level of standards of living in the importing country creates an overlook that may have direct implications on domestic producers through the presence of competing goods in one market that has been produced in two mutually inhomogeneous production environments.

2.4 Relevancy of the Grounded Theory Principle

To better conceptualise the idea which initiated the use of grounded theory for the analysis of the customs duty's dissipating strength in its ability to create balanced conditions for the presence of competing goods in one market that have been produced in two mutually inhomogeneous production environments, this section is drawn upon issues of national budgetary losses and customs fraud. It should be kept in mind that trade liberalisation, although viewed as a significant benefit to the economy, has an opposite side causing potential unfair treatment of domestic consumers and producers, further explored within the thesis's conceptual framework.

Most of the past research papers studied coordination of tariff and consumption tax to create a more open economy while keeping the government revenue unchanged. This thesis is positioned to analyse the coordination between the tariff and tax reforms in sense of more efficient protection of domestic production, the safety of consumers and fight against the fraud through the exploration of the phenomenon of the customs duty's dissipating power. The use of grounded theory is considered appropriate as the focus shifts from literature towards the construction of theoretical concepts. While the literature tends to be acquainted with issues concerning the customs, the inclusion of the VAT as a solution to these challenges seem to be absent as the two tend to be analysed separately without

drawing of a significant connection between the two. Novel insight into the issue offered for the emergence of a conceptual framework that may have implications for practice and research.

The relevancy of the emergent theory and followed action lays in the potential improvement of effectiveness in customs controls and minimising of its costs as well as in the reduction of fraud activities affecting the country's budget. The action in a form of a tax alternative to customs duties may be understood as a simplification of the trade policy on rapidly expanding cross-border trade. Finally, there is common desirability of international coordination of national policies which can be achieved more easily and simply through the proposed long-term action in Chapter 5.

This chapter presents a foundational literature review of the challenges concerning the customs, conceptual framework of the customs and research regarding tax-tariff reform. Chapter 3 continuous laying out used methodology of this thesis.

3. Research Methodology

A methodological framework and analysis within this thesis follow the grounded theory principles to present an emergent theory that explores the customs duty dissipating strength in its ability to create balanced conditions for the presence of competing goods in one market that have been produced in two mutually inhomogeneous production environments and to further explore a connected conceptual framework for long-term action. This thesis should not be viewed as a strict substantive theory in the traditional sense. The Straussian model of grounded theory (Thai et al., 2012) is adopted as a guideline for this thesis. The reasons for this choice are explained within this chapter, as well as the epistemological stance, challenges faced, and research design applied in this study.

Although not a straightforward decision this thesis uses an approach of problem-relevant research design. This is to assist the progress of exploratory investigation through quantitative data collection concerning a phenomenon that was not previously fully researched. The grounded theory uses a methodology of an inductive approach to create a practical theory, which is appropriate in the case when initiated research focuses first on an exploration of a phenomenon through the analysis of emergent data. Such an approach allowed for the emergence of the core category (Glaser, 1992) which then explains the initial phenomenon (Draucker, et al. 2007). After the exploratory stage, the thesis continues with a more confirmatory approach.

3.1 Adopting Grounded Theory

Grounded theory by Glaser & Strauss emerged in 1967 as a new way of theoretical research. Strauss's branch out created two separate models known as Glaserian grounded theory and Straussian grounded theory. The Straussian approach demands a prior general research question (Strauss & Corbin, 1990). The Straussian grounded theory model appears to be more appropriate for this research because:

- i. more importance is placed into verification of phenomenon;
- ii. focused more on explanation through methodological procedures rather than theoretical (Heath & Cowley, 2004);
- iii. application of prior knowledge of the area and deductive approach (Keddy, Sims, & Stern, 1996);
- iv. the initial research problem is known and defined.

The involvement of abstract wonderment, which is the main difference to other research methodologies, sets out the general idea rather than a well-defined hypothesis (Rennie, 1998). The abstract wonderment of this research can be identified as the initial idea of dissipating power of customs duty to perform a fair tool for regulation of international trade. The challenges of this research were to recognise the role of literature and to refrain from methodological confusion. This research is based on formal epistemology using externalism and methodological reductionism as its theory of justification. As suggested in Birks et al. (2013), the following was used in the memoing process of this thesis: identification of emergent issues regarding the research design; analysis of researcher's assumptions; continuous coding process; notation on ideas emerging throughout the coding stage; and assessment of the epistemological position of the thesis.

To generate propositions that explain the phenomenon and construct the action, the repetitive analysis of collected data was conducted. Assessment of the relationships within numerical data was done through continuous comparative analysis. Applied data processing constructed concepts explained by the units of collected data. The quantitative data was gathered from databases that provided observations on variables believed to be connected to the explanation of the researched phenomenon. Data collection and analysis is described in detail in Chapter 4. Theoretical sampling, comparison and theoretical saturation provided for discovering of core category (Glaser & Strauss, 1967).

The quantitative coding approach is deductive and etc. It involves premeditated codes which create quantifiable connections between the categories and concepts. Validation of theoretical propositions is achieved through coding of numerical connections. Substantive coding initiated by the identification of data which appears as a step in the direction to explain the phenomena. This is done in the open coding stage through the analytical conceptualisation of collected variables. Then core category is determined through the construction of variables from the collected data in the selective coding stage. Lastly, to create an emergent theory, modelling of relationships between core category and accompanying concepts, was conducted within the theoretical coding (Holton and Walsh, 2016). The core category as a "high impact dependent variable of great importance" (Glaser, 2007) allowed for theoretical saturation which was reached after statistical testing of the core category. This provided insight into the explanation of the phenomenon. Further description of the core category is in Chapter 4.

This chapter describes Straussian grounded theory, the process of coding, memoing, theoretical saturation, methodological challenges and epistemology. The following chapter provides the data collection and analysis processes.

4. Data Collection and Analysis

In this chapter descriptions of sources for data collection, analysis, coding and emergence of relationships of the conceptual theory are presented. This thesis initiated by the proposition of dissipating strength of customs duty's ability to create balanced conditions for the presence of competing goods in one market that have been produced in two mutually inhomogeneous production environments, as it appeared to be under-researched.

This study employs multi methodology as the research uses more methods of research. It is quantitative research in which systematic investigation is done through retrospective research using pre-recorded data. This research investigates phenomena of the development of customs duty as a tool of regulation of international trade and the possibility of substitution by the increased VAT. Exploration involves a case study based on country of Slovakia. The phenomenon is investigated by gathering quantifiable data, coding process and performance of mathematical and statistical operations. This research has policy-oriented aspects as it attempts to understand features of international trade policy. Further, this research is descriptive as it uses deductive reasoning to reach a logical explanation of the phenomenon.

4.1 The Selected Case Study

Data from Slovakia presents a base for this thesis's case study. Slovakia is selected as a study object to assure practicability, data accessibility and relevancy of the research. This research relies on the complex and well-developed system of the EU Customs Union, of which Slovakia is part. It is also stated that poorer countries with small open economies, with a weaker rooted rule of law principles, tend to view the application of customs duty as more challenging and are more prone to risks that are emerging from these deficits. In the context of member states of the EU, Slovakia can be considered as economically poorer, while ranking in the bottom half regarding the strength of application of the rule of law in the country. As discussed in the literature review, multiple reports exist, showcasing the customs administration of Slovakia fails in recognition of fraud, for example on clothes and shoes imported from China. A reason for such failures may be the reality that burdensome customs controls may influence the traders' choice of the customs office for importation, making Slovakia a potential target for fraudsters when trying to enter the EU common market. As mentioned in Slovak National Control Institute's paper (2020), customs authorities in Slovakia are not fast enough in claiming the debt on customs and seem to have low levels of planned controls.

All of the above-mentioned make the Slovak case interesting for this research, as arguably very complex and evolved custom system of EU, shows deficiencies when applied to a potentially less developed country, than what is considered as an average within the Union. Finally, Slovakia's suitability for exploration of the conceptual framework is in its minor effect on world prices through changes in trade, migration and consumption taxes as it is a small market, making it preferable for the numerical operations of collected data demonstrated in this thesis.

4.2 The Selected Categories and Period

Process of coding generated conceptual categories which are presented in a form of six variables, described later in this chapter. These vary across time and the dimension of different categories of analysed imported goods. These imported goods are labelled as furniture and textiles. Since there are two categories of variables studied over time, this analysis is considered to be a panel study.

The category of textiles was chosen due to its proclivity towards fraudulent behaviour of under-invoicing when imported to the EU (OLAF, 2018; The Slovak Spectator, 2018; European Court of Auditors, 2019). In 2017, there has been EU consumption of approximately 26 kilograms of textiles per person, while production has been around 7 kilograms. This makes the EU a net importer of textiles, mainly as a finished good from Asia (European Environmental Agency, 2021). The category of furniture was chosen for this analysis since EU countries rank among the top producing countries for furniture (CSIL, 2019), such as Germany (5 per cent of world production in 2016), Italy (4 per cent) and Poland (3 per cent). Domestically produced goods are of interest since they primarily enjoy protection from the imported competing goods.

Gathered longitudinal data about studied variables are examined overtime of 16 years between 2004 and 2019. As the initial year, 2004 has been chosen since it is a year of accession of Slovakia to the EU (Nic, 2014). The year 2019 has been chosen as a final year for observations due to the unavailability of all the needed data for the consequent years, and also because it is the year when the United Kingdom (UK) has formally left the EU (Nicolaidis, 2020). The change in data from UK's withdrawn would create a bias in the collected data.

4.3 Abstract wonderment

The abstract wonderment that sets out the general idea for exploration initiated the process of defining the emergent research questions. This initiation can be summarised in a question asking 'What data-emergent theory can aid in the explanation of the customs duty decreasing strength in creation of balanced conditions for competing goods in one market from two inhomogeneous production environments?'. The analysis's core focus is on a dissipating strength of customs duty in the research field of the EU, more specifically Slovakia. From the primary interpretations based on abstract wonderment, data relationships emerged and helped in discovering further understandings integrated in the customs system. These understandings are reflected in subsequent research questions and propositions about the concept of increased VAT.

4.4 Data collection sources

Theoretical illustrations based on quantitative data represent a medium for theory discovery of this thesis. Analysis of data previously collected for other purposes is known as secondary. This thesis uses secondary trivial data. The data used for the values of imported goods were gathered from the Eurostat (2019a), the statistical office of the EU from the dataset of International trade in goods statistics (ITGS). ITGS measures the value and quantity of goods traded between the EU Member States and goods traded by the EU Member States with non-EU countries. This analysis uses detailed data that refer to the most detailed level of the Classification of Products by Activity (CPA 2008) product nomenclature. These data are measured in yearly periodicity, and the following statistical fields of CPA 2008 product nomenclature are included in this analysis: reporting country (EU), partner country (extra-EU), trade flow (import) and product.

The CPA 2008 is arranged in a way that each product heading is assignable to a single heading of the European activity classification, the NACE Rev. 2. This enables trade statistics to be considered jointly with other sets of general economic statistics (for example national accounts, employment statistics, etc.) CPA 2008 was chosen to be used in this analysis due to its data compatibility for further productivity analysis, creation of input-output tables and the ability to follow the impact of trade on employment. Product classifications in CPA 2008 are designed to categorise products that have common characteristics. Products used in this analysis are in section C - Manufactured goods, under code 13, titled as Textiles and under code 31, titled as Furniture (Eurostat, 2008).

In the case of data relating to extra-EU trade imports/exports covered by the customs inward processing procedure and imports/exports covered by the customs outward processing procedure are distinguished from normal transactions or transactions not recorded from customs declarations. Any natural and legal person lodging a customs declaration in a Member State is reporting to the extra-EU trade statistics on the condition that the customs procedure is of statistical relevance.

EU is a reporting entity for the used dataset since 2000, the United Kingdom is included in the dataset until October 2020. Dataset uses quantity for goods given as the weight in kilograms without packaging; this quantity is referred to as the 'net mass'. Trade values are given in euros. The reference period for extra-EU trade is usually the calendar month during which the customs declaration is accepted by customs authorities.

Used dataset benefits from a high level of comparability over time due to the stability of the concepts, definitions and classifications. Statistics on trade in goods are an instrument of primary importance for numerous public and private sector decision-makers, as they constitute an essential source of information for economic studies. The special trade system used for the collection of data means that goods from a non-EU country are not recorded unless they enter the free circulation market of the EU.

Extra-EU trade data are gathered from an administrative source based on the records of trade transactions in customs declarations. Since the used statistics are not collected as samples they are not jolted by sampling errors. Non-sampling errors possibly impacting the data are difficult to classify goods, errors in trade valuation, difficult to distinguish repair (repair should not be included in trade statistics) and processing, missing data. Further, the accuracy of detailed trade data is influenced by estimates for missing data or estimates for non-collected net mass. The changes to the methodology that do affect the used data set are the inclusion of data for Croatia in 2013, inclusion of data for Bulgaria and Romania in 2007.

The variable of average annual wages per full-time equivalent dependent employee (later in the text referred to as "average annual wage") for Slovakia are OECD estimates based on OECD (2019) extracted from OECD Annual National Accounts Prices and Purchasing Parities Database. The data of average annual wages are measured per full-time and full-year equivalent employee in the total economy. Average annual wages are obtained by dividing the national-accounts-based total wage bill by the average number of employees in the total economy, which is then multiplied by the ratio of

average usual weekly hours per full-time employee to average usually weekly hours for all employees. Data is given in 2019 constant prices of national currency units, which is euro. The data provides stable time-series comparisons, as they are derived consistently and transparently for all countries.

4.5 Data Analysis Process

The Straussian grounded theory research process consists of data collection, coding, comparative analysis, and theoretical saturation (Glaser & Strauss, 1967; Goulding, 2002). This part describes developments in the data analysis process which resulted in the construction of core category, propositions and finally the emergent theory. The first step in the analysis was a collection of data based on which was decided what additional data is needed to be explored. This step is called theoretical sampling and it helped in the emergence of primary three numerical variables (codes) gathered for this study. These are:

- i. the total import for CPA 2008 13 Textiles and CPA 2008 31 Furniture, billions of euros
- ii. the net mass for CPA 2008 13 Textiles and CPA 2008 31 Furniture, 100 kilograms
- iii. the average yearly wage for Slovakia, the 2019 constant prices of euros

4.5.1 The Coding

Detailed examination in the form of open coding of the properties and dimensions of collected data during the phase of theoretical sampling generated new conceptual categories. This stage consisted of the mathematical technique using numerical methods of linear algebra performing arithmetic operations on input data. They represent the conceptual framework through which the relationships were investigated. The final variable (code) labelled as the ratio of the share of average yearly wage in Slovakia to the customs duty levied (later only as 'the ratio') represents the core category. Following variables (codes) were identified:

- iv. the entry prices for CPA 2008 13 Textiles and CPA 2008 31 Furniture, euros
- v. the customs duty levied on CPA 2008 13 Textiles and CPA 2008 31 Furniture, euros at a customs duty rate of 10 per cent
- vi. the ratio of the share of average yearly wage in Slovakia to the customs duty levied on CPA 2008 13 Textiles and CPA 2008 31 Furniture between the years 2004 to 2019, percentage

Selective coding is done through the comparison of observed data identifying the theoretical relationships. Theoretical relationships were transformed into propositions which provided the possibility for a more in-depth understanding of the phenomenon and emergence of the action framework. These are practically represented in the logical description of data regarding the calculations of customs duty levied on an imported good.

4.5.2 The Statistical analysis

Selective coding was completed via theoretical saturation based on comparative analysis over time and between the categories (furniture and textiles) were conducted, even though “the statistical tests of significance of an association between variables are not necessary when the discovered associations between indices are used for suggesting hypotheses” (Glaser and Strauss, 2017). The statistical method of correlation is used to assess the statistical relationship of the phenomenon’s core category over time between the categories of furniture and textile.

To assess the correlation between the ratio of the share of customs duty levied on imports per capita to the amount of the Slovak average wage in the case of textile and furniture between years 2004 and 2019, this analysis used statistical software Stata (StataCorp., 2019) to conduct the Pearson correlation. The measured variables are continuous. The satisfaction of linearity assumption was concluded via observation of fitted scatterplot. The Shapiro-Wilk test of normality in both cases (textiles and furniture) cannot reject the null hypothesis at $p < 0.1$ and conclude that there is not sufficient evidence to say that the variables are not normally distributed. Further results can be found in the Appendix A: Shapiro-Wilkins Test of normality.

4.6 Theory emergence

The developed theoretical propositions analysed within this thesis are based on the emerged realisations. Creation of a rational model that connected all the substantive categories related to the emerged core category resulted in the construction of a proposition involving the action based on the alternative to customs duty in a form of an increased VAT on imported goods. This was the final stage of theoretical coding applied to this thesis starting when the theoretical saturation was reached.

This chapter showed analysis using the grounded theory methodological principles. The bridge over from the raw data through the coding process to achieve theoretical saturation through statistical analysis is presented. This process emerged into the construction of a conceptual framework which explains the core phenomenon of customs duty decreasing strength in the creation of balanced conditions for the presence of goods that have been produced in two inhomogeneous environments, and are competing (sold to the consumer) in one market. Further, this thesis developed the long-term action framework involving the introduction of an alternative to the customs duty system. The emergent theory and propositions are presented in Chapter 5.

5. Research Findings

This chapter's presentation of the research findings is divided into three parts each covering one emerged proposition, together forming a core theory and accompanying long-term action framework. Research findings are the result of data analysis described in Chapter 4. Core phenomena explored and explained within this study is the dissipating strength of customs duty's ability to create balanced conditions for the presence of competing goods in one market that have been produced in two mutually inhomogeneous production environments. Phenomenon explanation derives from discovering of core category which is the ratio of the share of average yearly wage to the customs duty levied on an imported good. The final proposition described in this chapter concerns the long-term action proposed as an alternative to customs duty which emerged during the analysis process.

5.1 The Emergent Theory

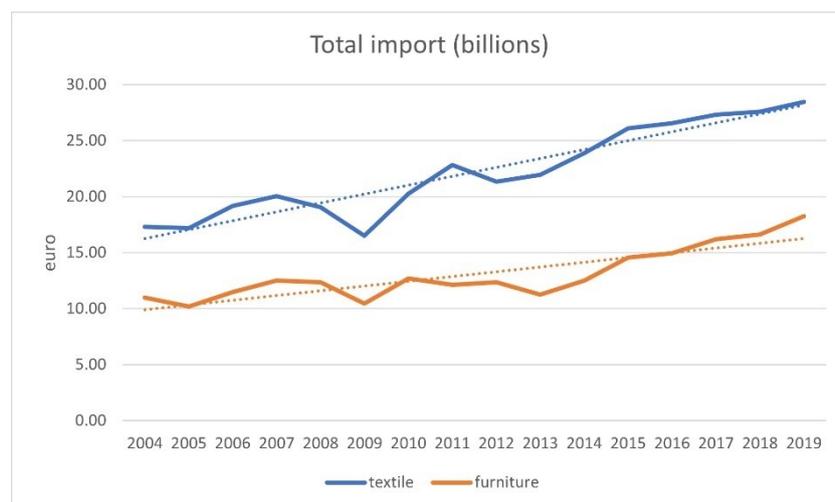
This section explains and comments on the results of the conducted analyses which provides the arguments for support of the thesis proposition 1. The proposition states that the customs duty loses its strength in creating balanced conditions for the presence of competing goods produced in one market that have been produced in two mutually inhomogeneous production environments. This is proven through the analysis of the share of customs duty paid on the good concerning the average monthly wage of consumers in the importing country. This led to the emergence of the core category. There are two dimensions to the analysed variables of imported goods used in this analysis and these are textiles and furniture. These goods are both intentionally described as manufactured, meaning they can be and they are produced in the domestic economy of the importing country, and they are substitutable, meaning they are substitutable, meaning that they are identical, similar, or comparable to another good, in the consumer's point of view (Besanko et al., 2013).

Proposition 1: The customs duty loses its strength in creating balanced conditions for the presence of competing goods in one market that have been produced in two mutually inhomogeneous production environments.

One of the main objectives of the customs duty is to eliminate the consequences of differences between inhomogeneous production environments so that the resulting price of goods produced in two different environments is mutually competitive. The proposition, therefore, states that over time, customs duty loses its power to create impartial conditions for the competitiveness of competing

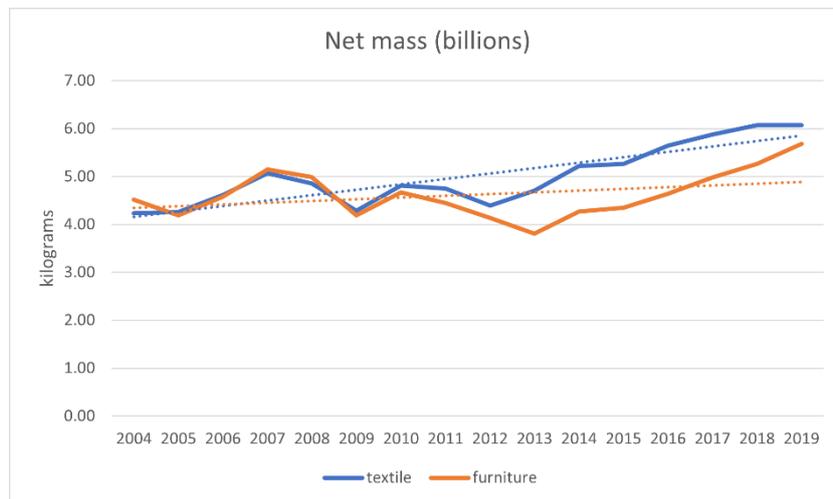
goods from different backgrounds in the common market. This is computed through analysis of the development of the ratio which compared the amount of customs duty levied on imports of textiles (furniture) per capita with the average monthly wage of Slovak national. In other words, in terms of customs cost on an imported good, how has this cost's impact on average wage changed during the time? If the ratio has been increasing, it will mean that the amount of customs duty on imported good would take a higher amount out of Slovak consumer's average monthly wage, creating an incentive to reconsider the alteration for domestically produced textile (furniture) which is not burdened by the cost of customs duty. This is based on demand theory which states that the higher the price of a good, *ceteris paribus*, the less of it will be demanded (van Ryzin, 2005; Marshall, 2009).

The data for the total import of imported goods were collected from Eurostat's ITGS database. It measures the annual value of total import to the EU of selected good from outside of the EU (extra-EU). Total import is measured annually and its values are represented in billions of euros. Values collected have been used to observe total import's development over time and to generate the values for the entry price of imports. Total import of textile in euros has increased by 64,4 per cent from 2004 to 2019. This on average represents an approximately 4,3 per cent yearly increase in the total amount of imports of textile to the EU. Total import of textile has reached its highest value of 28,46 billion euros in 2019 (Graph 1). This aligns with the results for total import of furniture, which has reached its highest value of 18,27 billion euros in 2019. The total import of furniture has increased by 66,1 per cent between 2004 and 2019, which is an increase of around 4,4 per cent a year.



Graph 1. Total import of textile and furniture in billions of euros, 2004-2019, (Author, 2021)

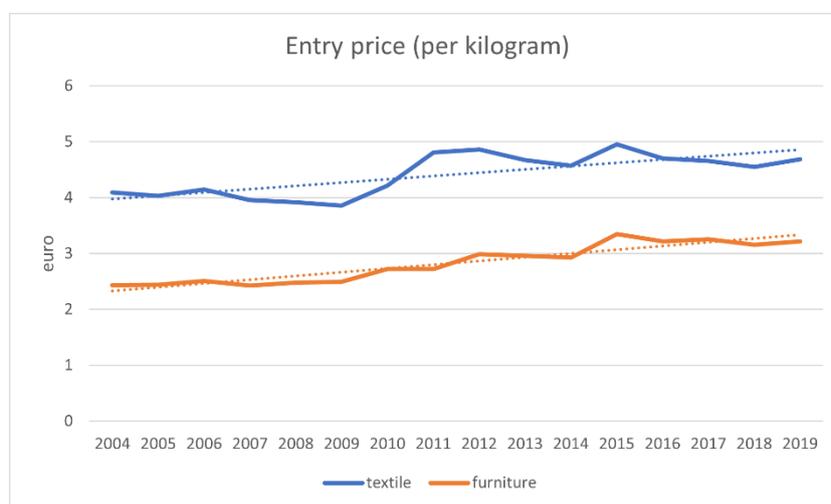
Net mass measures weight in kilograms of total import to EU from extra-EU for selected good and is accounted for on annual basis. The collected values from Eurostat’s ITGS database were used to observe net mass's development over time and to calculate the average import per person and the entry price of imports to the EU. It is assumed that what is imported into the EU and goes through the EU customs clearance does not then export outside the EU. Re-export of imported goods would be less efficient than direct trade between third countries without re-exportation through the EU as it adds customs costs. These original values were measured in 100 kilograms. The net mass of imported textile to the EU has increased by 43,7 per cent from the year 2004 to 2019. This represents an average increase of 2,9 per cent per year. Net mass reached its highest value of 6,08 billion kilograms in 2019. The net mass of imported furniture has risen by 25,6 per cent over observed years, which corresponds to an average yearly increase of 1,7 per cent. The highest value of 5,68 billion kilograms was measured in 2019, the same as in the case of textiles (Graph 2).



Graph 2. Net mass of textile and furniture in billions of kilograms, 2004-2019, (Author, 2021)

The average import of textile (or furniture) per EU national per year is calculated by taking the value of net mass and dividing it by 513 million, which is the EU population in 2019 (Eurostat, 2019b). To analyse the development of the following variables, the value of net mass per person has to be fixed for the observed period. Because of this, the analysis uses the value of 9 kilograms of imported textiles (or furniture) per EU national per year. The value of 9 kilograms was calculated by taking the mean of observed years’ average import of textile (or furniture) per EU national per year.

Variable entry price is created for each year by division of the value of total imports with the value of net mass. Entry price measures the price of imported good including the transactional value and additional costs levied on the goods when entering the free movement of goods market of the EU for the first time. Measurements are given in euros per kilogram. The values of entry price are used to observe the change in its development over time and more importantly to calculate the value of customs duty levied on 9 kilograms of imported goods each observed year. The entry price of 1 kilogram of imported textile has increased by 14 per cent from 2004 to 2019, which represent an average yearly increase of 1 per cent. Imported textile's entry price has reached its maximum value of 4,95 euros per kilogram in 2015. Similarly, the entry price of imported furniture has been also increasing by 32,2 per cent from 2004 to 2019. This corresponds to the yearly rate of 2,2 per cent with the highest value of 3,35 euros per kilogram reached in 2015 (same as for textile – Graph 3).



Graph 3. Entry price for textile and furniture in euros, 2004-2019, (Author, 2021)

The average yearly wage for Slovakia has been collected from the OECD Annual National Accounts Prices and Purchasing Parities Database. It measures the average annual wages per full-time equivalent dependent employee and is given in the 2019 constant prices of euros. The average yearly wage is collected to observe its development over time as well as to calculate the ratio of the share of customs duty levied on 9 kilograms of textile (or furniture) to the average yearly wage of Slovak national. The average yearly wage of Slovak national has increased by approximately 52 per cent per from in 15 observed years. It reached its highest value of 15017 euros in 2019.

The value of customs duty measures the amount of duty levied on the imported good for each observed year. It is measured in euros. Besides the observation of the development of this variable

over time, the calculated customs duty values are used in the calculation of the ratio of the share of customs duty levied on 9 kilograms of textile (or furniture) to the average yearly wage of Slovak national. The formula for the calculation of customs duty is given in (a). In this analysis, the customs duty rate for textiles (or furniture) is fixed at 10 per cent and the average net mass per person is fixed at 9 kilograms. These two parameters are fixed because their changes would affect the result and it would not be possible to conclude the other measured parameters. The analysis examines the theoretical duty in an unchanged environment over time, changing the selling price of the product to the final consumer. Since the entry price is the only floating variable for the calculation of the customs duty, these two variables have an equal rate of change over time. Value from 2015 is the highest observed value for textiles, it equals 4,45 euros of customs duty levied on 9 kilograms of textile (per person) that year. The highest observed value for furniture is 3,01 euros of customs duty levied on 9 kilograms of furniture (per person) was also measured in 2015.

$$(a) \text{ customs duty (eur/year) = entry price (eur/kg/person/year) * customs duty rate (\%) * net mass per person (kg/person)}$$

The ratio of the customs duty levied on the imported goods per person to the average annual wage of Slovak national used to prove the phenomenon that customs duty does not affect the price of the imported goods to the extent that the Slovak consumer's average wage would be impacted enough that it would influence the decision of the Slovak consumer, which would motivate him to change the choice of purchase in favour of domestic textiles (or furniture). Value is observed as a percentage and it has decreasing trend over time in the case of textiles (Graph 4). Ratios highest value was observed in 2004 (0,037 per cent) whereas the highest value is measured in 2019 (0,028 per cent). In the case of furniture, the trend is stagnant, as the values for each year vary between 0,018 to 0,022 per cent. Based on the data it is concluded that the customs duty as a tool for the creation of balanced conditions for the presence of competing goods produced in an inhomogeneous environment, in one market, is losing its strength. Summary statistics for the variables can be seen in Figure 2 and 3.

Variable	Obs	Mean	Std. Dev.	Min	Max
total_import	16	22.22	4.013565	16.51	28.46
net_mass	16	5.0075	.6326083	4.23	6.08
entry_price	16	4.415625	.3734161	3.85	4.95
wage	16	12404.61	1386.414	9875.88	15017.42
customs	16	3.975	.3365511	3.47	4.46
customs_wage	16	.0003225	.0000282	.00028	.00037

Fig 2. Summary statistics for variables regarding Textile, Author's own calculation (StataCorp., 2021)

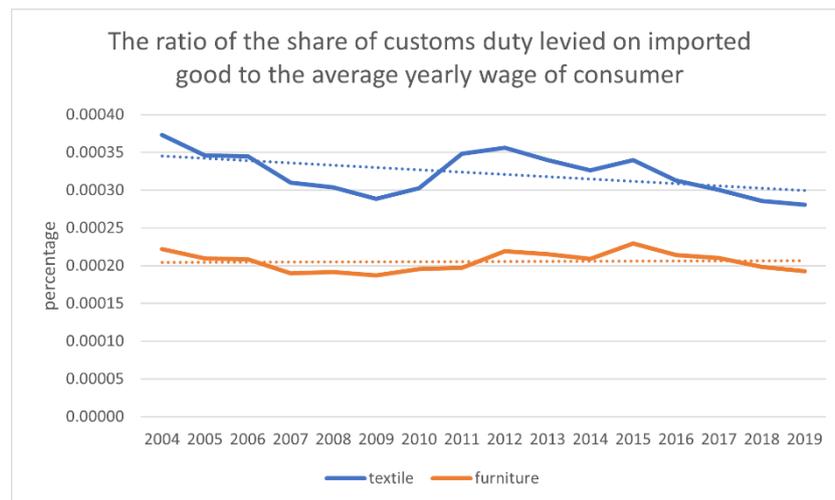
Variable	Obs	Mean	Std. Dev.	Min	Max
total_import	16	13.09313	2.353697	10.2	18.27
net_mass	16	4.61625	.4899779	3.81	5.68
entry_price	16	2.831875	.3408268	2.43	3.35
wage	16	12404.61	1386.414	9875.88	15017.42
customs	16	2.5475	.3072133	2.18	3.01
customs_wage	16	.0002063	.0000126	.00019	.00023

Fig 3. Summary statistics for variables regarding Furniture, Author's own calculation (StataCorp., 2021)

The phenomenon of weakening customs duty levied is further observed from the comparison of the share of customs duty levied on textiles (or furniture) to the Slovak average annual wage in the year 2004. The decrease of this ratio from the first observed variable to 2019 represents a 24,76 per cent in 2019 when compared to the year o 2004 in the case of textiles. In the case of furniture in the year 2019, there is a decrease of 13 per cent on the ratio of customs duty levied to the ratio of average wage from 2004.

Following research questions have emerged during the process of analysing proposition 1. 'Has the unit entry price of the imported textiles (or furniture) to the EU's free circulation of goods market been increasing between the years 2004 to 2019?' The first research question is attempted to be answered by analysing the development of the entry price. From Graph 3 it can be concluded that the entry price of the imported textiles and furniture to the EU's free circulation of goods market has been increasing between the years 2004 to 2019. The second research question is framed as 'When the customs duty rate is fixed, has the ratio of the share of customs duty paid for the per capita amount of imported textiles (or furniture) to the amount of the average wage of Slovak national been

increasing or decreasing from years 2004 to 2019?’. The second research question is answered by analysis of the development of the ratio of the share of customs duty levied on textile (furniture) import per capita to the amount of the average wage of Slovak national. From Graph 4 it can be derived that for textiles the measured ratio shows a downward sloping trend. Similarly, in the case of furniture, the ratio has been stagnant.



Graph 4. The ratio of the share of customs duty paid for the per capita amount of imported textiles (or furniture), 2004-2019, (Author, 2021)

According to the analysis, the ratio of the share of customs duty levied on textiles import per capita to the amount of the average wage of Slovak national has been decreasing over time, and in the case of furniture, it has not significantly changed. It can be concluded that the customs duty as a tool for the creation of balanced conditions for the presence of competing goods produced in an inhomogeneous environment, in one market, is losing its strength. This is deduced because customs duty does not affect the price of the imported textiles (furniture) to the extent that the Slovak consumer’s average wage would be impacted enough to create an incentive for him/her to alter his buying choice for domestically produced textile (furniture). This phenomenon is intensified by the long-term declining trend of the share of the input price of textiles (furniture) on imports over time, which means a further weakening of the duty's ability to sufficiently fulfil its role. See the tables regarding the analysis in Appendix B.

Theoretical saturation based on comparative analysis over time and between the categories (furniture and textiles) were conducted. The method of correlation is used to assess the statistical relationship

of the phenomenon's core category over time between the categories of furniture and textile. To assess the correlation between the ratio of the share of customs duty levied on imports per capita to the amount of the Slovak average wage in the case of textile and furniture between years 2004 and 2019, this analysis used statistical software Stata (StataCorp., 2019) to conduct the Pearson correlation (Fig 4).

The correlation coefficient, r , is 0,7242 on the sample size of 16 observations. Since it is positive, it can be concluded that there is a positive strong (Cohen, 1988) correlation between the ratio of the share of customs duty levied on imports per capita to the amount of the Slovak average wage in the case of textile and furniture. This means that higher values of the ratio for imported textile are associated with higher values of the ratio for imported furniture. The coefficient of determination, r^2 , statistically explains 52 per cent of the variance in one measured variable by the other one. The hypothesis about the linear relationship between the variables is statistically significant at $p < 0.005$.

	textile furniture	
textile	1.0000	
	16	
furniture	0.7242* 0.0015	1.0000
	16	16

Fig 4. Pearson correlation between ratios of textile and furniture between years 2004-2019, Author's own calculation (StataCorp., 2021)

5.2 The Action

As the proposition that the customs duty lose the customs duty loses its strength in creating balanced conditions for the presence of competing goods in one market that have been produced in two mutually inhomogeneous production environments over time has been explained in the previous part of this chapter, this part proposes action in a form of a policy reform that could perform as a more suitable tool in regulation of international trade. This action is based on the introduction of increased VAT and on the proposition that the increased VAT by one unit on imported goods has a larger effect on the final (retail) price of these imported goods than one unit increase in customs duty has. To

explain this proposition this thesis analyses the difference between the ways customs duty and VAT, therefore increased VAT, impact the final (retail) price of imported goods.

5.2.1 Conceptual framework: Introduction of increased VAT

Proposition 2: Increased VAT by one unit on imported goods has a larger effect on the final (retail) price than a one-unit increase in customs duty has.

The purpose of this part is to explain the proposal of an action that emerged from the exploration of the core phenomenon in proposition 1. The aim is to introduce an alternative to the customs system currently employed within the EU concerning the regulation of trade of specified imported goods to the EU. This action presents a change in conditions in the practice of imports taxation. Through the employment of reflexivity, this part presents a developed understanding of how change could be formulated and put into action.

In economics, good is defined as an item that satisfies human wants and provides utility (Marshall, 2009). This dissertation applies its theory to the following types of goods:

- a) consumer (final) goods - any item that is meant for consumption and not for the production of another good, such as clothing; or
- b) intermediate (producer) goods - components or partly finished goods that are sold to be used as an input in the production of other goods such as consumer goods (O'Sullivan and Sheffrin, 2003), such as textile;

which are

- a) tangible - physical and can be touched, such as a personal computer; and
- b) durable - yields utility over time, such as consumer electronics; and

are not commodities such as raw materials and primary products (Deardorff, 2006), for example, natural gas, steel, fruits, vegetables, fish and others. These are the definition criteria used for goods that are denoted as imported goods in the further part of this dissertation. The proposed theory could be potentially applied to all types of the imported goods, however, due to the nature of some of the goods which are imported to the EU, custom duty appears to be a sufficient tool for regulation of

international trade. This is mainly because the customs value (defined in later part) of these goods should be defined unambiguously due to their homogenous nature. Further, the differentiation of the origin of these imported goods could cause an obstacle in the determination of the final (retail) price of the good. For example, raw material, such as oil, imported from country A, and country B could have been mixed, before it has gotten to the final consumer, and therefore the application of increased VAT can be incorrect or too exhausting due to the demanding process of differentiation between the origin of the final product.

The VAT, also known as the goods and services tax, is an indirect consumption tax made on the purchase price of a good. It is levied on a good when a value is added at any stage of production and final sale. Although the seller is the taxable person, the buyer is the one paying the tax to the seller as part of the price (European Commission, 2014). Businesses are eligible to deduct the VAT paid by them on the purchases on the VAT collected on the sales their business has made. This cannot be done in the case of consumers. VAT is commonly used throughout the EU. There are different rates of VAT within the accepted EU range applied across the member states, as well as there are various reduced VAT rates across the EU. For calculation in this dissertation, the VAT is set to be 20 per cent, as this is a standard (not reduced) value of VAT used in Slovakia.

The theoretical aspect added to this analysis which represents a substitute to the idea of customs duty is a concept of an increase in VAT applied to the imported goods. This means that different types of imported goods have established additional VAT to them, same as in the concept of customs duty when the imported good is assigned a rate which is levied on it. These rates of increased VAT on imported goods would have been uniform in the internal market of the EU, same as are the rates of customs duties. Increased VAT on imported goods would have been applied as an additional percentage to the VAT of every EU country where the value is added at any stage of production and final sale. In practice, accounting for increased VAT is the same as in the case of VAT. Increased VAT is added rate of percentage to the corresponding country's VAT calculated from the same base as would have been in a case when only VAT is applied to the purchase of a good. A similar concept of increased VAT to the one presented by this dissertation is mentioned in Flatters (2005) as it is stated: "if a sales tax is levied at a rate of 5 per cent on domestic goods and 15 per cent on imports, this is equivalent to an import duty of 10 per cent".

VAT on purchases within the EU is calculated from the net price (the actual price the buyer will pay after any discount or promotion) (van Doesum and van Kesteren, 2016). For example, if there is a net

price equal to 100 euros and the VAT due is rated at 20 per cent, then the gross price (the price of the item including the tax) is 120 euros, formula and calculation shown in (a) and (b).

(a) $\text{net price} + \text{VAT} = \text{gross price}$

(b) $100\text{€} + (100\text{€} \times 20\%) = 120\text{€}$

The base for the VAT levied on purchases made on goods that have not yet entered the free movement of goods territory of the EU, is calculated from the taxable amount which is made up of the customs value, the customs duty paid, the transportation and insurance costs up to the first place of destination within the EU. If the taxable amount equals 100 euros and the VAT due is rated at 20 per cent then the gross price is 120 euros, formula and calculation shown in (c) and (d).

(c) $\text{taxable amount} + \text{VAT} = \text{gross price}$

(d) $100\text{€} + (100\text{€} \times 20\%) = 120\text{€}$

Customs duty as an instrument for the regulation of international trade is defined at the EU level and is binding on all EU countries within the framework of a single customs policy (customs union) (Egan, 2001). A mark-up for increasing the standard VAT rate would (could) also be defined at the EU level and would be binding on all EU countries. As a result, the increased VAT rate in each country would be calculated as the sum of the standard VAT rate in that country and the mark-up to the standard VAT rate. For example, for imported good to which the standard VAT rate is 20 per cent in a given country and the mark-up defined at the EU level for selected imports is 10 per cent, then the increased VAT rate in that country would be 30 per cent. Therefore, if there is a net price of an imported good equal to 100 euros, the standard VAT due is rated at 20 per cent and the mark-up levied on the imported good is 10 per cent, then the gross price would be 130 euros, formula and calculation shown in (e) and (f).

(e) $\text{net price} + \text{increased VAT} = \text{gross price}$

(f) $100\text{€} + (100\text{€} * 30\%) = 130\text{€}$

The customs duty levied on imported goods in the analysis provided by this dissertation refers to the common customs tariff classification which is applied to all the imported goods from outside of the territory of the EU. Such a tariff is known as a common external tariff which is introduced when countries create a customs union (Pasat, 2013), such as EU Customs Union. Common external tariff is the same for all the member states of the EU's internal market and incorporates all the EU customs laws and rules. The rates of duty differ based on the import itself and based on the country from where the import is declared to be incoming to the EU. The price paid or payable is the total payment made or to be made by the buyer to or for the benefit of the seller for the imported goods. The following analysis uses the ad-valorem customs duty concept which establishes a percentage to the customs value (in this analysis denoted as an entry price) of the imported good, meaning the value used to levy an ad valorem duties. Throughout the calculations provided by the present part of the dissertation, the minimum customs duty value levied on the imported goods is 10 per cent (Appendix B).

In the example used in the analysis of the above-described phenomena, the entry price of the imported good is equal to 9 euros. The entry price has been selected randomly and can be set as any natural number. The entry price in this analysis represents a value that is used as a base in the calculation of a customs duty or the VAT for the imported good. This value used for the calculation can be defined as one of these (European Commission, 2018):

- a) transaction value, which is based on the price paid by the receiver of the imported good before the good enter the free circulation within the EU. This value is stated on the evidence of the price receiver has paid, such as an exporter's (seller's) invoice. This value should include the cost of delivery to the EU border, commissions (except buying commission), royalties and licence fees paid on the imported goods as a condition of sale, cost of containers and packing, any proceeds of resale the exporter (seller) will be receiving and goods and cost of goods and services receiver had to give to the seller for free or at reduced cost used or carried outside of the EU to produce the import. Transaction value is used for customs valuation also in the case when the goods imported into the EU enter the Union without the evidence of the price such as exporter's invoice. In this case, these goods are stored in the customs warehouse and their transaction value is determined by later sale to a receiver located within the EU (European Commission, 2020). If the good is imported from a processor, that is from an entity that assembles or works on an existing product(s) to create a new product that is imported, then the transaction value is worked out with the addition of the value of materials and the components given to the processor by the receiver.

- b) the customs value of identical good produced in the same country of territorial importation. This value is used when there is no evidence of the price, due to the goods being imported as a consignment; or due to good being received on the sale price; or because the good has been received for free or on loan. Goods are considered identical when they are the same in all respects allowing for minor differences in appearance.
- c) the customs value of similar good produced in the same country of origin, imported for carrying out the same task and is commercially interchangeable. This value is used when transaction value cannot be calculated and when there is no customs value for the identical good produced in the same country of origin.
- d) the value of the selling price of the good (or identical or similar good) in the EU.
- e) value based on the production cost. This includes any materials, manufacturing and any other processing performed during the production of the imported good).

There are different ways of customs valuation for imported fruits and vegetables known as 'simplified procedure values' and 'standard import values', however, they are not of interest for this dissertation since fruits and vegetables do not fall under a type of goods defined earlier in this dissertation as imported goods.

For this analysis, the gross profit of a retailer is defined as a difference between the revenue and the cost of making or providing the product, (in the analysis described within the thesis this product represents the imported good) before deducing overheads, payroll, taxation or interest payments (Dahan, and Srinivasan, 2011). For the following analysis, the gross profit is randomly selected to be set at 50 euros. Same as with the entry price above, the gross profit can be any natural number.

To analyse the statement that increased VAT by one unit on imported goods has a larger effect on the final (retail) price than one unit increase in customs duty, this dissertation explains the technicality of how the retail price is calculated and what roles play the customs duty, VAT and therefore increased VAT in the calculation of the retail price. The retail price is defined as “the total price charged for a product sold to a customer, which includes the manufacturer's cost plus a retail markup” (Campbell, 2011), and it is calculated as shown in formula (g) and calculation (h) which is based on the values defined in the above part of the dissertation (Appendix B):

$$(g) \text{ retail price} = (\text{entry price} \times (1 + \text{customs duty} / 100) + \text{gross profit}) \times (1 + \text{VAT} / 100)$$

$$(h) 71,88\text{€} = (9\text{€} \times (1 + 10\% / 100) + 50\text{€}) \times (1 + 20\% / 100)$$

From the formula given in (g), it is possible to derive the difference between the way customs duty and VAT affect the final (retail) price. The customs duty is levied on the entry price of the good while the VAT is levied on the net price (taxable amount) of the retail price. The net price in formula (g) composes of the entry price, customs duty and the gross profit. Since VAT is always going to be levied on a bigger value (the net price) than the value (the entry price) customs duty is, then VAT will always present a larger portion of the retail price than custom duty does.

Table 1 shows the effect on the value of the retail price when the customs duty is gradually increased by 5 per cent, while the VAT is fixed at 20 per cent. Entry price and gross profit are kept on the 9 euros and 50 euros, respectively. The retail price reaches a maximum value of 81,6 euros when the customs duty is increased to 100 per cent. Table 1 also shows the effect on the value of the retail price when the VAT is gradually increased by 5 per cent, while the customs duty is fixed at 10 per cent. Entry price and gross profit are kept on the 9 euros and 50 euros, respectively, same as in the case of gradual increase of the customs duty. The retail price reaches a maximum value of 119,8 euros when the VAT is increased to 100 per cent. The difference between the maximum value of the retail price when the customs duty is increased to 100 per cent in comparison to when the VAT is increased to 100 per cent is 38.2 euros. This is graphically presented in Graph 5., where the blue line represents the retail price when customs duty is gradually increased, and the green line represents the retail price when the VAT is gradually increased.



Graph 5. The retail price development for textile (or furniture), 2004-2019, (Author, 2021)

The custom duties and VAT are forms of taxation that serve the fiscal purpose of being a source of income for a state budget. Therefore, Table 1 shows the amount that would be transferred to the state budget in the case when the customs duty are gradually increased by 5 per cent, as well as when the VAT is increased gradually by 5 per cent, *ceteris paribus*. The formula for calculation of transfer to national budget is shown in (i). The amount transferred to the national budget ranges between 12,88 euros and 22,6 euros when the customs duty levied, and when the VAT is levied on the retail price the amount for the national budget ranges between 12,88 to 60,8 euros. The difference between the maximum value reached when customs duty is set to 100 per cent versus when VAT is set to 100 per cent is 38,2 euros. This is graphically presented in Graph 6, where the blue line represents the transferred amount to the national budget when customs duty is gradually increased, and the red line represents the transferred amount to the national budget when the VAT is gradually increased.

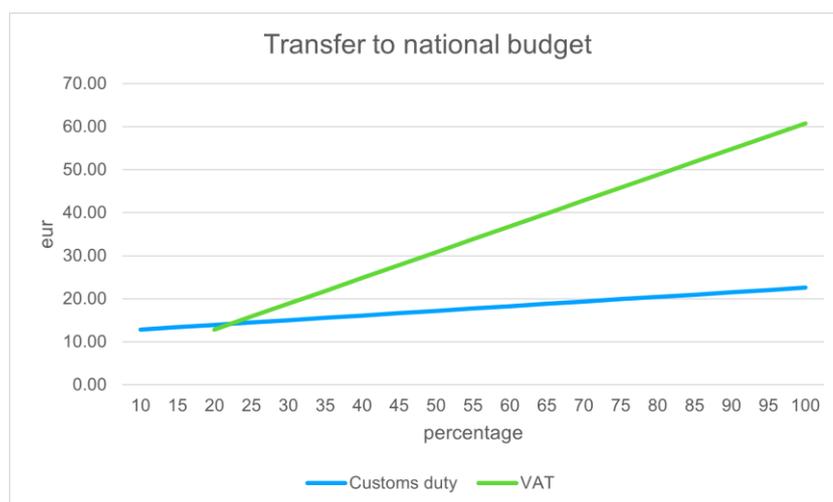
(i) the amount transferred to national budget = retail price - gross profit - entry price

The comparison of change in the amount of customs duty and change in the amount of VAT	
Customs duty	10%
VAT	20%
Composition of retail price	
	eur
Entry price	9.00
Customs duty	0.90
Retailers' gross margin	50.00
VAT	11.98
Retail price	71.88

The impact of the change in customs duty rate on Fixed parameters		
Retailers' GM	50.00	
VAT	20%	
Entry price	9.00	
Customs duty (%)	Retail price	Transfer to national
10	71.88	12.88
15	72.42	13.42
20	72.96	13.96
25	73.50	14.50
30	74.04	15.04
35	74.58	15.58
40	75.12	16.12
45	75.66	16.66
50	76.20	17.20
55	76.74	17.74
60	77.28	18.28
65	77.82	18.82
70	78.36	19.36
75	78.90	19.90
80	79.44	20.44
85	79.98	20.98
90	80.52	21.52
95	81.06	22.06
100	81.60	22.60

The impact of the change in VAT rate on the Fixed parameters		
Retailers' GM	50.00	
Customs duty	10%	
Entry price	9.00	
VAT (%)	Retail price	Transfer to national
20	71.88	12.88
25	74.88	15.88
30	77.87	18.87
35	80.87	21.87
40	83.86	24.86
45	86.86	27.86
50	89.85	30.85
55	92.85	33.85
60	95.84	36.84
65	98.84	39.84
70	101.83	42.83
75	104.83	45.83
80	107.82	48.82
85	110.82	51.82
90	113.81	54.81
95	116.81	57.81
100	119.80	60.80

Tab 1. The comparison of change in the amount of customs duty and change in the amount of VAT
(Author, 2021)



Graph 6. The development of the transfer to national budget, 2004-2019, (Author, 2021)

5.2.2 Conceptual theory: Implications of customs duty versus the increased VAT

Proposition 1 presented above in this chapter has explained the customs duty loses its strength in creating balanced conditions for the presence of competing goods in one market that have been produced in two mutually inhomogeneous production environments over time. Proposition 2 suggested action in the form of a substitute to a customs duty through the analysis provided above. This proposition has outlined a policy that introduces the concept of increased VAT on imported goods. The analysis has explored the proposition that the increased VAT by one unit on imported goods has a larger effect on the final (retail) price than a one-unit increase in customs duty has and therefore the increased VAT on imported goods would (could) perform as a more suitable tool in regulation of international trade. The following part of the thesis explores the proposition which emerged from the analysis of the theory concerning the previous two propositions, and that is the importer in the cooperation with the exporter has a lower ability to eliminate the effect of regulation of international trade in the case of an increase in the rate of increased VAT than in the case of increase in customs duty rate, which is another reason for increased VAT being a more suitable tool in regulation of international trade than the customs duty is.

Proposition 3: Importer in the cooperation with the exporter has a lower ability to eliminate the effect of regulation of international trade in the case of an increase in the rate of increased VAT than in the case of an increase in customs duty rate.

As it has been stated in the literature review provided by this thesis, one of the main issues faced by the EU, relating to customs, is the fraud of undervaluation or under-invoicing of goods on the customs import declaration. Customs import declaration is a form that declares the details about the imported good (European Commission, 2021) such as its value which is then used as a base for the calculation of the customs duty that is due. Definition of different ways of customs value derivation is given above in this chapter. Undervaluation of imports means the creation of a difference between the value of the import that is stated in the invoice in comparison to the actual value of the import, which was paid by the exporter from abroad (Bhagwati, 1964). The phenomena of lowering the value of imports by the importer in the cooperation with the exporter are present due to the limited ability of customs administration to detect fraudulent behaviour since the customs officials are administered to accept the invoice issued by the exporter and are restricted in negotiation with the exporter (Javorcik and Narciso, 2013).

Undervaluation of imports adds to an increase in the customs gap which is the difference between the duties collected and the duties that are legally due (European Parliament, 2019), therefore it lowers the amount that is supposed to be transferred to the national budget, hurting the domestic economy. Further, stating the lower value of import on the invoice presents an anti-competitive practice (unlawful prevention of competition in the market) (Armentano, 1991) towards the domestic producers. Since the customs duty is paid by the importer and by the undervaluation of the price on the invoice (which is the basis for calculating the customs duty) the cost of import is lower. The invoice is issued by the exporter and by cooperating with the importer in undervaluation of the price on the invoice, the amount of customs duty that is due is reduced, thus the imported good becomes more price competitive (Biswas, 2012). Undervaluation is not only unfair towards the domestic producers but also towards the importers who do not use such practices. These anti-competitive practices distort the target market in general. Also, the possibility of undervaluation, as well as its widespread use for certain commodities, creates pressure for higher intensity of customs controls, the search for more complicated procedures for proving the undervaluation of goods and ultimately the possibility of corrupt behaviour of the control administration.

When the concept of increased VAT is applied on imports as a substitute to customs duty, it lowers the ability of the importer in the cooperation with the exporter to eliminate the effect of regulation of international trade, and it creates the lower possibility for the importer and the exporter to perform an anti-competitive practice, of undervaluation of imported goods, towards the domestic producers. To explore this proposition, this dissertation provides an analysis of a model which compares the

elimination of the effect of an increase in customs duty versus the elimination of the effect of an increase in the VAT rate. An increase in the VAT rate or customs duty has the effect of an increase in the final (retail) price for the final consumer (see formula (g)). In supply and demand theory (Marshall, 2009), an increase in the final (retail) price of normal good has an effect of a decrease in demand for the good (Whelan, et al., 2001). The effect of such an increase in customs duty or VAT rate, can create an incentive for the importer and the exporter to respond by the reduction in the entry price of the imported good indicated on the invoice (undervaluation) declared during the customs procedure. Essentially, exports in cooperation with the importer may affect the final (retail) price of the imported good by manipulating the entry price (see formula (j) for the calculation of the entry price).

$$(j) \text{ entry price} = (\text{retail price} / (1 + \text{VAT} / 100) - \text{gross profit} / (1 + \text{customs duty} / 100))$$

The calculation (k) interprets the calculation of the entry price of the example. Same as in the example provided in previous parts of the dissertation, the following values are used in the calculation (k): the entry price of 9 euros, the retail price of 71,88 euros, the gross profit of 50 euros, the VAT of 20 per cent, and the customs duty of 10 per cent. Table 2 shows the change in entry price initiated by the change in the rate of customs duty for the retail price to stay unaffected. From Table 2 it can be deduced that even the 100 per cent customs duty rate does not limit the importer's and exporter's ability to decrease the entry price in a way that the effect of an increase in customs duty does not affect the retail price.

$$(k) 9\text{€} = (71,88\text{€} / (1 + 20\% / 100) - 50\text{€} / (1 + 10\% / 100))$$

Table 2 shows the change in entry price initiated by the change in the rate of VAT for the retail price to stay unaffected. In contrast to customs duty's failure to limit exporter's ability to decrease the entry price, in provided example such an ability of exporter is exhausted before VAT rate reaches 45 per cent, approximately at 43 per cent. This is because the entry price of the invoice of imported good, therefore the good's value cannot be zero or negative. To keep the retail price unaffected when the VAT rate is set to be higher than 43 per cent, the importer and exporter would have to declare import value as zero or negative, which is in practice impossible.

The comparison of change in the amount of customs duty and change in the amount of VAT	
Customs duty	10%
VAT	20%

Composition of retail price	eur
Entry price	9.00
Customs duty	0.90
Retailers' gross margin	50.00
VAT	11.98
Retail price	71.88

Adjustments of the entry price due to the changes in customs duty rate in order to keep retail price the same.				
Fixed parameters				
Retailers' GM	50.00			
VAT	20%			
Retail price	0.20			
Customs duty (%)	Entry price	Change in entry price	Retail price	Transfer to national
10	9.00	x	71.88	12.88
15	8.61	-4%	71.88	13.27
20	8.25	-8%	71.88	13.63
25	7.92	-12%	71.88	13.96
30	7.62	-15%	71.88	14.26
35	7.33	-19%	71.88	14.55
40	7.07	-21%	71.88	14.81
45	6.83	-24%	71.88	15.05
50	6.60	-27%	71.88	15.28
55	6.39	-29%	71.88	15.49
60	6.19	-31%	71.88	15.69
65	6.00	-33%	71.88	15.88
70	5.82	-35%	71.88	16.06
75	5.66	-37%	71.88	16.22
80	5.50	-39%	71.88	16.38
85	5.35	-41%	71.88	16.53
90	5.21	-42%	71.88	16.67
95	5.08	-44%	71.88	16.80
100	4.95	-45%	71.88	16.93

Adjustments of the entry price due to the changes in VAT rate in order to keep retail price the same.				
Fixed parameters				
Retailers' GM	50.00			
Customs duty	10%			
Retail price	0.20			
VAT (%)	Entry price	Change in entry price	Retail price	National budget
20	9.00	0%	71.88	12.88
25	6.82	-24%	71.88	15.06
30	4.81	-47%	71.88	17.07
35	2.95	-67%	71.88	18.93
40	1.22	-86%	71.88	20.66
45	-0.39	-104%	71.88	22.27
50	-1.89	-121%	71.88	23.77
55	-3.30	-137%	71.88	25.18
60	-4.61	-151%	71.88	26.49
65	-5.85	-165%	71.88	27.73
70	-7.02	-178%	71.88	28.90
75	-8.11	-190%	71.88	29.99
80	-9.15	-202%	71.88	31.03
85	-10.13	-213%	71.88	32.01
90	-11.06	-223%	71.88	32.94
95	-11.94	-233%	71.88	33.82
100	-12.78	-242%	71.88	34.66

Tab 2. The comparison of change in the amount of customs duty and change in the amount of VAT
cont. (Author, 2021)

The higher rate of change in the entry price of imported good, when there is employed a tool for the regulation of the international trade, is seen in the case of using VAT as a tool to regulate the international trade compared to the customs duty. In the example from Table 2. when customs is increased to 40 per cent, the entry price decreases by 21 per cent compared to the original entry price of 9 euros, to 7,07 euros, so the retail price stays unaffected. In the case of VAT being raised to 40 per cent, the entry price decreases by 86 per cent compared to the original entry price, to 1,22 euros to keep the retail price unchanged. This is because VAT presents a bigger fraction of the final (retail) price than the customs duty does. Besides limiting an anti-competitive practice, increased VAT causing imports and exporter to decrease the entry price of the imported goods to keep the retail price unchanged at a higher rate of change may aid in uncovering undervaluation fraud, since the lower values may be more suspicious and unrealistic for the customs administrations.

Further, even though the entry price decreases at a higher rate as a response to an increase in the VAT rate than the customs duty to keep the retail price unchanged, the transfer to the national budget from the retail price increases at a higher rate in the case of using VAT as a tool of regulation of international than the customs duty. From the example in Table 2 when customs duty is at 40 per cent, the transfer to the national budget equals 14,81 euros while in the case of the VAT increased to 40 per cent the transfer to the national budget presents 20,66 euros. In this example, the transfer to the national budget is 5,85 euros higher in the case of increased VAT than in the case of customs duty. This is caused by the difference in the base for calculation of the VAT and the customs duty, where the calculation of VAT is based on the final (retail) price while the customs duty is based on the entry price of the imported good (see analysis in above part).

The consumer's final decision to purchase a certain good is linked to its final price (Hustic, and Gregurec, 2015). The customs duty is calculated based on the entry price at import. This entry price presents a fraction of the final price at which the imported good is sold to the final consumer. If the share of the entry price of the imported good decreases compared to the final (retail) price of the good, then customs duty as a tool for regulation of international trade weakens, since due to this development the customs duty's share on the final (retail) price is reduced. The problem with the use of customs duty to regulate international trade is the importer's and exporter's ability to eliminate the impact of the change in customs duty. On the other hand, in the case of increased VAT importer's and exporter's ability to affect the final (retail) price by changing the entry price is met with a limit because the calculation of VAT is based on the final (retail) price, instead of on the entry price as in the case of customs duty. Due to this reason, increased VAT seems to present a more suitable tool in

the regulation of international trade. By comparison of the model in which customs duty is used as a tool of international trade regulation and the model where the VAT rate is used instead while holding the first value of the entry price, the retail price and the gross margin fixed, it has been shown that VAT presents a more powerful tool in lowering the ability of importer and exporter to eliminate the effect of regulation of international.

The system of the new trade regulation based on the increased VAT rate for selected imported goods appears to be less pliable than the customs system used today. While in the customs duty system the charge (duty) is dependent on the importer's declaration of the price of imported good, in the system based on the increased VAT rate the charge (percentage by which the VAT is increased) depends on an easily verifiable final (retail) price to the final consumer. Since a control of the final (retail) price offered to the final consumer is already present in the current system (e.g cash registers, movements on payment cards, etc.) (European Commission 2021a; European Commission, 2021b) the abandonment of customs duties and its replacement by an increased VAT rate would mean the removal of one control element for imported goods in the whole system of trade controls.

The aim of this paper is also to provide exploratory research to gain a better understanding of the phenomena. This section has presented a theory-building analysis based on 3 propositions that focus on exploring the concepts concerning the relationships between concepts of customs duty and later in the study its proposed alternative of increased VAT. An emergent theory is presented as a model explaining the phenomenon of customs duty decreasing strength in the creation of balanced conditions for the presence of goods that have been produced in two inhomogeneous environments, and are competing (sold to the consumer) in one market. Further, this thesis proposes a conceptual framework for long-term action based on the introduction of increased VAT which is then placed into the context of evaluation of the emergent theory through the last proposition of this study.

6. Discussion and Conclusion

The main goal of this thesis was to explore whether the customs duty loses its strength in its ability to create balanced conditions for the presence of competing goods in one market that have been produced in two mutually inhomogeneous production environments and to propose a conceptual framework for long-term action. The above is achieved through the creation of the conceptual model explained through 3 theoretical deductive propositions within this thesis Long-term action based on the alternative to customs duty in a form of an increased VAT on imported goods was proposed, through the application of the emergent theory. This thesis concludes with a discussion of the implications of the emergent theory and recommendations for future research.

The application of grounded theory enabled this research to explain the core phenomena of customs duty dissipating ability to regulate international trade. Three propositions have developed within this thesis that captured the essences which may form a base for future action. The following discussion attempts to add towards the understanding of broader issues concerning the explored phenomenon and aims to emphasise the importance of the action initiation.

This part presents a discussion of the implications of the emergent theory and introduced recommendations for future research based on the research findings of the prepositions and long-term action framework explored within Chapter 5. The demonstrated research findings are the result of the data analysis described in Chapter 4. The application of Straussian grounded theory principles within the methodology that allowed for the emergence of the presented theory is described in Chapter 3. The literature review of the challenges concerning the customs, conceptual framework of the customs and research regarding tax-tariff reform are presented in Chapter 2.

6.1 Discussion

Custom duties have three main functions: fiscal, protectionist and bargaining. It is an indirect tax levied on goods that cross the border of a country by customs authorities to raise the country's revenue, and/or protect domestic industries. It can be based on the value of a good, its weight, dimensions or others. It is an example of a barrier to trade that can be imposed on imports or exports. This thesis interest is in the customs levied on imports. Customs directly impact the price of goods from external commerce (Pasat, 2013). The three main functions of customs are fiscal, protectionist and negotiation. They represent a source of state income, protect from foreign competitors and present

a tool for political negotiations on trade. Higher customs have a retaliation effect which protects the internal market from the competition of imported goods.

A homogeneous environment provides alike or similar conditions with alike or similar rules for operation. This can be found for example within the EU car production. Following examples show, that country's factor endowment has impact on its comparative advantage in the production and consequent relation to international trade (Heller, 1976; Jensen 2012; Curtis and Irvine 2013). A homogeneous environment is not within the EU wine production or the cultivation of other crops (Deconinck, and Swinnen, 2015). In this case, the EU favours some regions. For example, in Slovakia subsidies were given for the liquidation of vineyards. Whereas in France winemakers received subsidies per hectare of vineyard. Inhomogeneous environments are for example EU and Turkey's clothing industry (Karaalp, and Yilmaz, 2012).

The power of the customs duty to even out the conditions between imports and domestically produced goods weakens when the share of entry price declared for customs clearance in the final price of a good has a decreasing trend. The analysis of proposition 1 had shown a weakening in the case of textiles and negligible increasing trend in the case of furniture of the duty over the 15 years. However, since the customs have been in use since ancient times (Balko, 2007), the trend shown in the analysis appears to be measured over a short period compared to how long customs duties have existed. There are limitations in the gathering of consistent data to evaluate a longer period. Nevertheless, it is possible to look at the structure of the final price of imports and evaluate the trends which show a change in the share of the entry price for customs clearance to the final price. Such an analysis would further demonstrate the trend of customs' strength for the longer period.

The final price of imported good consists of the costs that influence the transaction value for customs clearance and the costs that are added to the final price after customs. If the costs that are added to the final price after customs clearance grow faster over time than the costs within transaction value then the strength of customs duty decreases and vice versa. For the foreseeable future, it is not very realistic to assume that any of the below-mentioned factors would have a reducing effect on the final price in the case of textile or furniture. On contrary, increasing incentive to protect workers (Van Cleynenbreuge, 2018) and emphasis on the greening of the EU will probably have an effect of an increase in the costs added to the final price after the customs clearance.

In the past, several key factors had an impact on a faster growth of the costs added after customs clearance for some imported goods. Since VAT is added after the customs clearance, its introduction first in France in 1954 (James, 2011), has resulted in a sharp increase in the share of the after customs clearance costs. Further, increased worker's protection in the EU has resulted in a growth in insurance contributions. An increase in the minimum wage (Fernandez-Macias, and Vacas-Soriano, 2016) and thus the actual valuation of workers in all areas as well as the introduction of the income tax rate which affects all subjects that influence the sale of the final product to the final consumer are factors influencing faster growth of the costs added after customs clearance. In addition to these, certification of certain products imported into the EU (Martinez, and Bañados, 2004), and greening of the EU (Westhoek, et al., 2012), such as the introduction of emission classes for trucks and the pressure to tighten them means an increase in transportation costs within the EU, which also increase the factors influencing post customs clearance costs.

Not only increase in the costs added after customs, reduce the strength of the customs duty but also a fall in the value of aspects added to the transactional value before customs clearance may have the same effect. The reduction of transactional value may be affected by the subsidy policy in the third countries (Venables, 1985), which benefit the producer's from outside of the EU. Further, declining protection of workers in third countries (Freeman, 2010); rise in the use of child labour (Rena, 2009); total or partial exemption from income tax in third countries; and increases in the share of non-organic production (Nazeer, et al., 2016) all present factors which may have a reduction effect on transactional value which is a base for customs valuation.

According to an official European Commission website, the EU's tariffs on import are one of the lowest worldwide. The EU imports (excluding fuels) more out of the less developing countries than USA, Canada or China. Two-thirds of the EU's imports consist of raw materials, intermediary goods and parts needed for production within the EU. The effect of customs duty on imports is the protection of the local producer of competing goods by allowing them to increase prices on the domestic market (Keen, 2003). However, customs duties can also penalise domestic producer since they also raise the cost of imported inputs used in the production. Since the imports to the EU majorly consist of further production inputs it is important to control for the effective rate of protection.

The effective protection of domestic producers is measured by the added value that differentiated customs duties allow producers to obtain per unit they produce (Das, 2003). The actual degree of protection is not equal to the tariff rate. The reason is that the effective protection rate differs

depending on whether the customs tariff is applied on parts for the production of finished goods. The effective rate is higher than the nominal rate of protection on the final good when the average customs rate on inputs is lower than the one on the final good. Such a possibility of economic distortion would be eliminated by the use of increased VAT since the protection element would be accounted for from the final price rather than the lower entry price, as described in Proposition 2.

Different types of commodities have different levels of possibility for customs evasion. Commodities which unit price can be compared to prices on stock exchanges (raw materials), commodities which unit price can be considered relatively high (machines, cars), commodities that are about to enter the production (semi-finished products) there is a lower level of risk for undervaluation on invoices. The higher risk of an undervaluation is put on commodities that are intended to be bought by the final consumers, who do not claim the purchase as a company expense. Therefore, it would be appropriate for such commodities, strained by an increased risk of undervaluation, to find a system of trade barrier that would be able to effectively function and control for such risks.

Possible changes in the current customs system of undervaluation prone commodities may be a) calculation of the customs duty based on the weight of the goods; and b) abolishment of customs duties for the concerned commodities and introduction of an increased VAT rate for these goods proposed in proposition 2. Alternative a) offers easy control by an automated weighing system at customs points. The possible shortcoming is unfairness towards an alike good where there is a difference in weight of a good just because of the use of different material for production. This is usually the case of cheaper versions of competing goods. The burden of higher duty on cheaper goods due to their weight may harm consumers from low-income group.

The increased VAT rate for the concerned imports would remove the full burden of the trade barrier at the customs level and would pass it on to traders of goods imported from outside of the EU. An essential condition for such a change would be monitoring the purchase and sale of goods imported from the outside of the EU. Such purchases would be subject to an increased VAT rate. It would be an extension of the VAT control report used within the EU countries, similar to tracking of selected items with exemption from output VAT when selling to a VAT payer. The advantage of such a system is its potential fairness as the resulting increased VAT rate would be calculated from the final retail price to the final consumer (who would not apply input VAT). It would be necessary to restrain from the possibility to deduct VAT on these goods if they are consumed by the final consumer (or the

deduction would be possible up to the normal rate for the goods produced within the EU). Elements concerning the practical introduction of proposition 2 should be a subject for further research.

6.2 Implications

One of the main objectives of this thesis is the exploration of an alternative system of the trade barriers in international trade to substitute the one currently used in the EU, which through exploration of the theoretical framework within this thesis appears to be potentially more inadequate to perform its objective in full potential. As mentioned in the paper from the European Parliament (2019) and the analysis by the European Court of Auditors (2017), the current customs system has issues with uncovering fraudulent behaviour causing budgetary losses and indirectly negatively affects the domestic economy. The proposed alternative to the trade policy presents an approach for decision-makers, which may help in the formulation of a strategy for change.

This thesis adds towards the research on coordinated tax tariff reforms which as discussed within the literature review, appears to be significantly under-researched. The emergent theory based on analysed data constructed arguments which attempt to further elaborate the theories proposed by Hatzipanayotou, et al. (1994) & Keen, et al. (2002) as their papers analysed lowering of import tariffs and rising consumption taxes on the corresponding imports. Case study analysis within this thesis presents an example for further analysis incorporating more subjects and dimensions which would aid in a further deepened understanding of the core phenomenon.

6.3 Limitations

This part presents the limitations recognised during the process of composing this thesis to reflect on their's potential impact. Although the phenomenon is probable to exist within other subjects and categories, without additional research, this thesis cannot claim this as a conclusion. Explorations proposed within this thesis cannot be considered as fully general or transferable beyond the subjects of research, meaning Slovakia and categories of goods used in the study. This limitation would be removed through enlargement of the sample size which may help in further anchoring the explanation of the core phenomenon. There is also need to acknowledge the limitation of ability to gather consistent data for evaluation of a longer period. Further, due to the interpretative methodological process, this thesis may exhibit researcher bias despite the incorporation of theoretical sensibility.

This bias could be potentially eliminated through the inclusion of more researchers. However, it is believed that these limitations do not decrease the credibility of the emerged theory.

6.4 Future Research

Since customs present an important aspect of international trade regulation for the domestic market, the governments should emphasise improving the effectiveness of controls and minimise their costs and possibility of fraud activities. The customs duties and VAT-based contribution to own resources would be larger and resulting in total national contributions to the EU budget fairer if fraud in these areas was tackled more efficiently. The current customs controls system seems increasingly inadequate for addressing the new fraud risks on rapidly expanding cross-border trade. New tools and solutions, as well as a stronger focus on financial losses and risks, are sorely needed. Therefore, it is still essential to find ways to improve the collection of traditional and existing own resources. The difficulties to be faced in easing restrictions to trade can be addressed by sound policies.

Europeans consume on average 26 kg of textiles per person per year (European Environmental Agency, 2021). In the past decade, the price of clothes has fallen relative to inflation. As the EU's consumption of textiles has been increasing, the share of expenditure on clothing have been decreasing and the amount of customs duty in euros per kilogram have not been changing, the EU consumers' incentive (calculated as the share of customs duty to average wage) to purchase domestically produced textiles was not affected by the customs duty levied on competing imported goods (see Appendix C for further support of the argument).

There would be a benefit from researching whether the unit price of imported textiles did change significantly over time. If the textile prices stayed stagnant that would mean that the share of the customs duty in the final price of the textile has decreased. This would mean a long-term trend of degradation of the role of customs. However, due to missing data for retail prices per kg for EU, such an analysis is not provided in this thesis and would be suggested as further research into the strength of customs as a tool for regulations.

Further research should incorporate the environmental aspects and safety of human health to evaluate the dissipating effect of customs duty towards the regulation of international trade. There is a significant incentive on goods produced within the EU member states to meet the harmonised requirements of human and environmental safety. For example, environmental pressures related to

textiles include climate change, pollution, resource and land use (European Environmental Agency, 2021). To reduce the environmental impacts of textiles production and consumption while keeping the economic benefits demands a systematic change. This requires effective policies addressing the responsibilities and standards of production. EU administrations are in principle unable or have a hard time to scientifically assess these requirements in production outside of the EU, therefore, the efforts to meet the EU requirements of the EU's domestic producer should be sufficiently protected. The protection of the domestic economy, environment, consumer security and health standards should be prioritised.

The suggestions for the questions to be research following this study are as follows:

- i. Does customs duty present a tool that balances inhomogeneous production conditions in two different production environments?
- ii. Does the value of the customs duty in the relation to the purchased quantity of the imported goods influence the consumer's decision?
- iii. How to balance the appropriate amount of trade in goods while prioritising the safe environment and the protection of health?
- iv. How can the change proposed in this thesis be initiated?

Analysis of the above-mentioned questions would broaden the explored conceptual framework. Future research could analyse the actions proposed within this thesis and test for its appropriateness. Additional research could also present material for comparison with the present thesis. An increase in data collection sample while considering more subjects and categories could expand, confirm and enrich the emergent theory.

6.5 Conclusion

The use of a broader research question, 'Does the customs duty lose its strength in creation of balanced conditions for competing goods in one market from inhomogeneous production environments?' represented a starting point for conducting the present thesis. Application of the grounded theory based on comparative analysis of quantitative data within a case study allowed for an explanation of the phenomenon. As the proposition shows the dissipating power of the customs duty to perform the previously stated premise, this thesis proposes an alternative in form of tax-tariff reform. Through the application of the emergent theory, long-term action based on the alternative to

customs duty in a form of an increased VAT on imported goods was proposed. The alternative is presented through the proposition which shows that increased VAT by one unit on imported goods has a larger effect on the final price than a one-unit increase in customs duty. The thesis is further supported by the analysis of the third proposition where it is shown that importer in cooperation with the exporter has a lower ability to eliminate the effect of regulation of international trade in the case of increase in the rate of increased VAT than in the case of increase in customs duty rate. It is hoped that this thesis adds towards the analysis of increased globalisation of the international trade and understanding of alternatives to customs duty's usage as a tool for the trade regulation.

Bibliography

Allen, M. ed., (2017). *The SAGE encyclopedia of communication research methods*. Sage Publications.

Anson, J., Cadot, O., and Olarreaga, M. (2006). 'Tariff evasion and customs corruption: Does pre-shipment inspection help?.' *The BE Journal of Economic Analysis & Policy*. 5(1), 1–26.

Armentano, D.T., (1991). 'The ethics of anticompetitive practices.' *The Mid-Atlantic Journal of Business*, 27(1), p.67.

Balko, L. (2007). 'História genézy cla v medzinárodnom obchode.' *Journal of International Relations*, 5(2), pp.125-146.

Bassega, L., (2020). 'Stopping Illicit Financial Flows Across Borders: The Case of Trade Misinvoicing.' *Global Financial Integrity*. 1 September Available at: <https://gfintegrity.org/stopping-illicit-financial-flows-across-borders-the-case-of-trade-misinvoicing/> (Accessed: 1 March 2021)

Baunsgaard, T., and Keen, M., (2005). *Tax revenue and (or) trade liberalisation*. Working paper. International Monetary Fund.

Besanko, D., Dranove, D., Schaefer, S., and Shanley M., (2013). *Economics of Strategy*. United States of America: John Wiley & Sons. p. 168.

Bhagwati, J., (1964). 'On the underinvoicing of imports.' *Bulletin of the Oxford University Institute of Economics & Statistics*, 27(4), 389–397.

Biswas, A.K., (2012). 'Import tariff led export under-invoicing: A paradox.' *The Journal of International Trade & Economic Development*, 21(3), pp.347-360.

Campbell, H., (2011). 'Retail price'. *Financial Glossary*. The Free Dictionary. Available at <https://financial-dictionary.thefreedictionary.com/Retail+price> (Accessed on 3 April, 2021)

Centre for Industrial Studies (2017). *World Furniture Outlook 2017/2018 New 100 Countries Edition*. [Press release] July. Available at https://www.worldfurnitureonline.com/PDF/press-release/W0_July17_PR.pdf (Accessed on 30 March 2020)

Council of the European Union (2014). *Council decision of 26 May 2014 on the system of own resources of the European Union*. Official Journal of the European Union.

Christis, M., Vercauteren, A., Arnold, M., Nicolau, M., Lafond, E., M. L., Coscieme, L., and Manshoven, S., (2019). *Textiles and the environment in a circular economy*.

Curtis, D. and Irvine, I., (2013). 'The international trade.' in Curtis and Irvine (2013) *Microeconomics: Markets, Methods and Models*. Lyrix Advancing Learning.

Dahan, E. and Srinivasan, V., (2011). *The impact of unit cost reductions on gross profit: Increasing or decreasing returns?*. IIMB Management Review, 23(3), pp.131-139.

Das, D. K., (2003). *Quantifying trade barriers: Has protection declined substantially in Indian manufacturing?* (No. 105). Working paper.

Deardorff, A.V., (2006). *Deardorff's Glossary of International Economics*, 2000, 2001.

Deconinck, K. and Swinnen, J., (2015). 'The economics of planting rights in wine production.' *European Review of Agricultural Economics*, 42(3), pp.419-440.

Dixit, A. K. Auerbach, A.J., and Feldstein, M. (1985) *Handbook of Public Economics. Tax policy in open economies*. North-Holland, Amsterdam. Vol. 1

Egan, M., (2001). *Constructing a European market: standards, regulation, and governance*. OUP Oxford.

Emran, M. S., and Stiglitz, J., (2005). 'On selective indirect tax reform in developing countries.' *Journal of Public Economics*, 89, 599–623.

Erkoreka, M., (2021). 'The European Union Customs Administration and the Fight Against Fraud.' *European Papers-A Journal on Law and Integration*, 2020(3), pp.1425-1434.

EURATEX. (2019). *Household consumption of textiles and clothing in the European Union (EU28) from 2009 to 2018 (in billion euros)*. Statista. Statista Inc.. Available at <https://www.statista.com/statistics/417674/eu-european-union-textile-clothing-household-consumption/> (Accessed April 3, 2021).

European Commission (2014). *General overview*. Available at: http://ec.europa.eu/taxation_customs/taxation/vat/how_vat_works/index_en.htm (Accessed 17 July 2020).

European Commission (2018). *COMPENDIUM OF CUSTOMS VALUATION TEXTS*.

European Commission (2020). *CUSTOMS VALUATION IMPLEMENTING ACT ARTICLES 128 AND 136 UCC IA ARTICLE 347 UCC IA*. Brussels. Available at: https://ec.europa.eu/taxation_customs/sites/taxation/files/resources/documents/customs/customs_code/guidance_valuation_en.pdf (Accessed on 1 April, 2021).

European Commission, (2021a). *Customs declaration - Taxation and Customs Union - European Commission*. [online] Taxation and Customs Union - European Commission. Available at https://ec.europa.eu/taxation_customs/business/customs-procedures/general-overview/customs-declaration_en (Accessed 15 March 2021).

European Commission (2021). *VAT invoicing rules - Taxation and Customs Union - European Commission*. [online] Taxation and Customs Union - European Commission. Available at https://ec.europa.eu/taxation_customs/business/vat/eu-vat-rules-topic/vat-invoicing-rules_en (Accessed 13 February 2021).

European Commission (2021b). *VIES (VAT Information Exchange System) enquiries - Taxation and Customs Union - European Commission*. [online] Taxation and Customs Union - European Commission. Available at https://ec.europa.eu/taxation_customs/business/vat/eu-vat-rules-topic/vies-vat-information-exchange-system-enquiries_en (Accessed 16 February 2021).

European Court of Auditors (2017). *Special report No 19/2017: Import procedures: shortcomings in the legal framework and an ineffective implementation impact the financial interests of the EU*. Luxembourg: Office for Official Publications of the European Communities.

European Environmental Agency. (2021). *Textiles in Europe's circular economy* [online]. Copenhagen.

European Parliament (2013). *DG for Internal Policies, From Shadow to Formal Economy: Levelling the Playing Field in the Single Market*. Luxembourg: Office for Official Publications of the European Communities.

European Parliament (2019). *Protection of EU financial interest on customs and VAT: Cooperation of national tax and customs authorities to prevent fraud*. Brussels: Policy Department on Budgetary Affairs

Eurostat (2008). *CPA 2008 Structure and explanatory notes*. Available at <https://ec.europa.eu/eurostat/documents/1995700/1995914/CPA2008structureexplanatorynotesEN.pdf/79e7f2e5-4e8c-493b-8684-bafaf75801d3> (Accessed on 2 February 2021)

Eurostat (2008). *CPA 2008 INTRODUCTORY GUIDELINES*.
<https://ec.europa.eu/eurostat/documents/1995700/1995914/CPA2008introductoryguidelinesEN.pdf/df1e8d19-1156-4a1c-b384-4f95a12515e5> (Accessed on 3 February 2021)

Eurostat (2019a). 'International trade in goods statistics database'. Available at <https://ec.europa.eu/eurostat/web/international-trade-in-goods/data/database> (Accessed 5 January 2021)

Eurostat (2019b). *EU population up to over 513 million on 1 January 2019*. [Press release]. 10 July. Available at <https://ec.europa.eu/eurostat/documents/2995521/9967985/3-10072019-BP-EN.pdf/e152399b-cb9e-4a42-a155-c5de6dfe25d1> (Accessed on 27 March 2021)

Feldstein, M.S. and Krugman, P.R., (1990). International trade effects of value-added taxation. In *Taxation in the global economy* (pp. 263-282). University of Chicago Press.

Fernandez-Macias, E. and Vacas-Soriano, C., (2016). 'A coordinated European Union minimum wage policy?.' *European Journal of Industrial Relations*, 22(2), pp.97-113.

Fisman, R., and Wei, S., (2004). 'Tax rates and tax evasion: Evidence from 'missing imports' in China.' *Journal of Political Economy*, 112(2), 471–496.

Flatters, F., (2005). *Measuring the impacts of trade policies: Effective rates of protection*. New York: Mimeo. com, Inc.

Freeman, R. B. (2010). *Labor regulations, unions, and social protection in developing countries: Market distortions or efficient institutions?*. Handbook of development economics. 5:4657-702.

Glaser, B.G. and Strauss, A.L., (2017). *Discovery of grounded theory: Strategies for qualitative research*. Routledge.

Hamilton, A., (1791). *Report on the Subject of Manufactures*.

Hatzipanayotou, P., Michael, M.S., and Miller, S.M., (1994). 'Win-win indirect tax reform: A modest proposal.' *Economics Letters*. 44, 147–151.

Heller, P. S., (1976). 'Factor endowment change and comparative advantage: The case of Japan, 1956-1969.' *The Review of Economics and Statistics*, pp.283-292.

Henning, E., Van Rensburg, W. and Smit, B., (2004). *Finding your way in qualitative research*. Pretoria. RSA: Van Schaik Publishers.

Holton, J.A. and Walsh, I., (2016). *Classic grounded theory: Applications with qualitative and quantitative data*. Sage Publications.

Hustic, I. and Gregurec, I., (2015). *The influence of price on customer's purchase decision*. In *Central European Conference on Information and Intelligent Systems* (p. 27). Faculty of Organization and Informatics Varazdin.

James, K., (2011). *Exploring the origins and global rise of VAT*. The VAT Reader (Tax Analysts), pp.15-22.

Javorcik, B. S., and Narciso, G., (2008). 'Differentiated products and evasion of import tariffs.' *Journal of International Economics*. 76(2).

Jean, S., and Mitaritonna, C., (2010). *Determinants and pervasiveness of the evasion of custom duties*. CEPII, Working Paper, (2010-26).

Jensen, B.S., (2012). 'Comparative Cost and Factor Endowments: Ricardo and Ohlin.' In *Positive and Normative Analysis in International Economics*. pp. 54-83. Palgrave Macmillan, London.

Karaalp, H.S. and Yilmaz, N.D., (2012). *Assessment of trends in the comparative advantage and competitiveness of the Turkish textile and clothing industry in the enlarged EU market*. *Fibres & Textiles in Eastern Europe*.

Keen, M., and Ligthart, J.E., (2002). 'Coordinating tariff reduction and domestic tax reform.' *Journal of International Economics*, 56, 489–507.

Keen, M., (2003). *Changing customs: Challenges and strategies for the reform of customs administration*. International Monetary Fund.

Keen, M., (2008). 'VAT, tariffs, and withholding: border taxes and informality in developing countries.' *Journal of Public Economics*. 92, 1892–1906.

Lejeune, I., (2011). *The EU VAT experience: what are the lessons*. Tax Analysts, pp.257-282.

List, F., (1856). *National system of political economy*. JB Lippincott & Company.

Mansfield, E.D. and Pevehouse, J.C., (2015). *Trade Policy and Trade Policy Research*.

- Marshall, A., (2009). *Principles of economics: unabridged eighth edition*. Cosimo, Inc..
- Martinez, M.G. and Bañados, F., (2004). *Impact of EU organic product certification legislation on Chile organic exports*. *Food Policy*, 29(1), pp.1-14.
- Michael, S., Hatzipanayotou, P., and Miller, S.M., (1991). 'Integrated reforms of tariffs and consumption taxes.' *Journal of Public Economics*. 52, 417–428.
- Mitra, P., (1991). *The coordinated reform of tariffs and indirect taxes*. In: Khalilzadeh-Shirazi, J., Shah, A. (Eds.), *Tax Policy in Developing Countries*. World Bank, Washington, DC.
- Munk, K. J., (2005). *Tax-Tariff Reform with Costs of Tax Administration*. University of Aarhus Department of Economics Working Paper No. 2005-21, Available at SSRN: <https://ssrn.com/abstract=1147617> or <http://dx.doi.org/10.2139/ssrn.1147617>
- Naito, T., (2006a). Growth, revenue, and welfare effects of tariff and tax reform: win– win–win strategies. *Journal of Public Economics*. 90, 1263–1280.
- Naito, T., (2006b). 'Tariff and tax reform: dynamic implications.' *Journal of International Economics*.68, 504–517.
- Nazeer, M., Tabassum, U. and Alam, S., (2016). *Environmental pollution and sustainable development in developing countries*. *The Pakistan Development Review*, pp.589-604.
- Nic, M., (2014). *Slovakia in the EU: An unexpected success story?*.
- Nicolaides, P., (2020). 'The Agreement on the Withdrawal of the UK from the EU and Euratom and its impact on the future application of state aid rules in the UK.' *Maastricht Journal of European and Comparative Law*, 27(4), pp.503-512.
- OECD (2019). *OECD Economic Outlook.*, OECD Publishing, Paris., Available at: <https://doi.org/10.1787/b2e897b0-en> (Accessed: 12 February, 2020).
- OLAF (2018). *The OLAF report 2017*. Luxembourg: Office for Official Publications of the European Communities.

O'Sullivan, A. and Sheffrin, S.M., (2003). *Economics: Principles in action*. Upper Saddle River, New Jersey 07458: Pearson Prentice Hall. Pp. 202.

Pasat, O., (2013). 'Customs duties. Customs tariff.' *Perspectives of Business Law Journal*, (02), pp.165-174.

Rena, R., (2009). 'The child labour in developing countries: a challenge to millennium development goals.' *Indus Journal of Management & Social Sciences*, 3(1), pp.1-8.

Rogmann, A. and Zelenska, K., (2017). 'The EU and its member states on the way towards a Customs Single Window.' *Customs Scientific Journal CUSTOMS*, 7(1), pp.20-33.

Quirke, B., (2010). 'OLAF's role in the fight against fraud in the European Union: do too many cooks spoil the broth?.' *Crime, law and social change*, 53(1), pp.97-108.

Smarzynska, J. B., and Narciso, G., (2013) *Accession to the World Trade Organization and Tariff Evasion*. CEPR Discussion Paper No. DP9592.

StataCorp. (2019). *Stata Statistical Software: Release 16*. College Station, TX: StataCorp LLC.

DOCUMENTATION: StataCorp. 2019. Stata 16 Base Reference Manual. College Station, TX: Stata Press.

StataCorp. (2021). 'The Shapiro-Wilk test of normality, Author's own calculation' in *Stata Statistical Software: Release 16*. College Station, TX: StataCorp LLC. DOCUMENTATION: StataCorp. 2019. Stata 16 Base Reference Manual. College Station, TX: Stata Press.

Thai, M.T.T., Chong, L.C. and Agrawal, N.M., (2012). 'Straussian grounded theory method: An illustration.' *The Qualitative Report*, 17(5).

The Slovak Spectator (2018). *OLAF: Slovakia might have to pay €300 million to the EU*. Available at: <https://spectator.sme.sk/c/20913199/olaf-slovakia-might-have-to-pay-300-million-to-the-eu.html> (Accessed: 12 January 2021)

Valantiejus, G., (2019). *Are the EU member states ready for the new Union Customs Code: emerging legal issues on the national level*.

van Cleynenbreugel, P., (2018). 'The freedom to receive trade union services: an additional stepping stone for enhancing worker protection within the EU internal market?.' *European Labour Law Journal*, 9(2), pp.101-115.

van Doesum, A. and van Kesteren, H., (2016). *Fundamentals of EU VAT law*. Kluwer Law International BV.

van Ryzin, G.J., (2005). 'Models of demand.' *The Oxford Handbook of Pricing Management*.

Venables, A. J., (1985). 'Trade and trade policy with imperfect competition: The case of identical products and free entry.' *Journal of International Economics*. 19(1-2):1-9.

Vervaele, J.A., (2018). The European Public Prosecutor's Office (EPPO): Introductory Remarks. In *Shifting Perspectives on the European Public Prosecutor's Office* (pp. 11-19). TMC Asser Press, The Hague.

Westhoek, H., Van Zeijts, H., Witmer, M., van den Berg, M., Overmars, K., Van der Esch, S. and Van der Bilt, W., (2012). *Greening the CAP. An analysis of the effects of the European Commission's proposals for the Common Agricultural Policy 2014-2020*.

Whelan, J., Msefer, K. and Chung, C.V., (2001). *Economic supply & demand*. MIT.

List of Appendices

Appendix A: Shapiro-Wilkins Test of normality

Appendix B: The core category calculations

Appendix C: Household consumption of textiles

Appendix A: Shapiro-Wilkins Test of normality

The Shapiro-Wilk test of normality in both cases (textiles and furniture) cannot reject the null hypothesis at $p < 0.1$ and conclude that there is not sufficient evidence to say that the variables are not normally distributed as seen in Figure 5 (StataCorp., 2021).

Shapiro-Wilk W test for normal data					
Variable	Obs	W	V	z	Prob>z
textile	16	0.94314	1.152	0.281	0.38928
furniture	16	0.95153	0.982	-0.036	0.51429

Fig 5. The Shapiro-Wilk test of normality, Author's own calculation (StataCorp., 2021)

Appendix B: The core category calculations

EU Population	513000000
VAT rate	10%
Average yearly consumption of textile per capita (kg)	9.00

	total import bil EUR	Net mass (100kg)	Net Mass kg/capita	Net mass (bil kg)	Entry price
2004	17.32	42,299,471	8.25	4.23	4.09
2005	17.18	42,634,008	8.31	4.26	4.03
2006	19.15	46,174,142	9.00	4.62	4.15
2007	20.04	50,639,128	9.87	5.06	3.96
2008	19.04	48,584,751	9.47	4.86	3.92
2009	16.51	42,845,067	8.35	4.28	3.85
2010	20.28	48,129,954	9.38	4.81	4.21
2011	22.82	47,461,109	9.25	4.75	4.81
2012	21.32	43,898,413	8.56	4.39	4.86
2013	21.96	47,045,784	9.17	4.70	4.67
2014	23.89	52,223,938	10.18	5.22	4.57
2015	26.08	52,676,284	10.27	5.27	4.95
2016	26.55	56,437,589	11.00	5.64	4.70
2017	27.33	58,751,462	11.45	5.88	4.65
2018	27.59	60,702,290	11.83	6.07	4.55
2019	28.46	60,766,330	11.85	6.08	4.68

Avg yearly wage	Customs duty	Customs duty to avg yearly wage	Comparision to duty share in 2004	Change
9875.88	3.685	0.0373%	100.00%	x
10475.21	3.626	0.0346%	92.78%	-7.22%
10830.95	3.733	0.0345%	92.37%	-7.63%
11500.56	3.562	0.0310%	83.01%	-16.99%
11624.05	3.528	0.0303%	81.34%	-18.66%
12015.93	3.469	0.0289%	77.38%	-22.62%
12541.46	3.792	0.0302%	81.03%	-18.97%
12432.50	4.327	0.0348%	93.28%	-6.72%
12280.21	4.371	0.0356%	95.41%	-4.59%
12370.26	4.200	0.0340%	91.01%	-8.99%
12612.70	4.117	0.0326%	87.48%	-12.52%
13116.23	4.456	0.0340%	91.05%	-8.95%
13539.44	4.233	0.0313%	83.80%	-16.20%
13930.62	4.187	0.0301%	80.56%	-19.44%
14310.35	4.091	0.0286%	76.62%	-23.38%
15017.42	4.215	0.0281%	75.24%	-24.76%

Tab 3. Core Category calculation in the case of Textile, (Author's own calculation, 2021)

EU Population	513000000
VAT rate	10%
Average yearly consumption of textile per capita (kg)	9.00

	total import bil EUR	Net mass (100kg)	Net Mass kg/capita	Net mass (bil kg)
2004	11.00	45194313	8.81	4.52
2005	10.20	41867209	8.16	4.19
2006	11.48	45801432	8.93	4.58
2007	12.50	51499016	10.04	5.15
2008	12.34	49854959	9.72	4.99
2009	10.45	41877114	8.16	4.19
2010	12.71	46644742	9.09	4.66
2011	12.11	44448016	8.66	4.44
2012	12.35	41327768	8.06	4.13
2013	11.26	38077092	7.42	3.81
2014	12.50	42691247	8.32	4.27
2015	14.55	43464787	8.47	4.35
2016	14.95	46451762	9.05	4.65
2017	16.20	49802053	9.71	4.98
2018	16.62	52669657	10.27	5.27
2019	18.27	56779310	11.07	5.68

Avg yearly wage	Customs duty	Customs duty to avg yearly wage	Comparison to duty share in 2004	Change
9875.88	2.19	0.022%	100.00%	x
10475.21	2.19	0.021%	94.40%	-5.60%
10830.95	2.26	0.021%	93.91%	-6.09%
11500.56	2.18	0.019%	85.62%	-14.38%
11624.05	2.23	0.019%	86.41%	-13.59%
12015.93	2.25	0.019%	84.27%	-15.73%
12541.46	2.45	0.020%	88.13%	-11.87%
12432.50	2.45	0.020%	88.92%	-11.08%
12280.21	2.69	0.022%	98.74%	-1.26%
12370.26	2.66	0.022%	97.02%	-2.98%
12612.70	2.63	0.021%	94.18%	-5.82%
13116.23	3.01	0.023%	103.55%	3.55%
13539.44	2.90	0.021%	96.45%	-3.55%
13930.62	2.93	0.021%	94.76%	-5.24%
14310.35	2.84	0.020%	89.49%	-10.51%
15017.42	2.90	0.019%	86.93%	-13.07%

Tab. 4. Core Category calculation in the case of Furniture, (Author's own calculation, 2021)

Appendix C: Household consumption of textiles

According to the survey from Euratex (2019) household consumption of textiles and clothing in the EU has increased by approximately 15 per cent from 2009 to 2018 (Fig 7.).

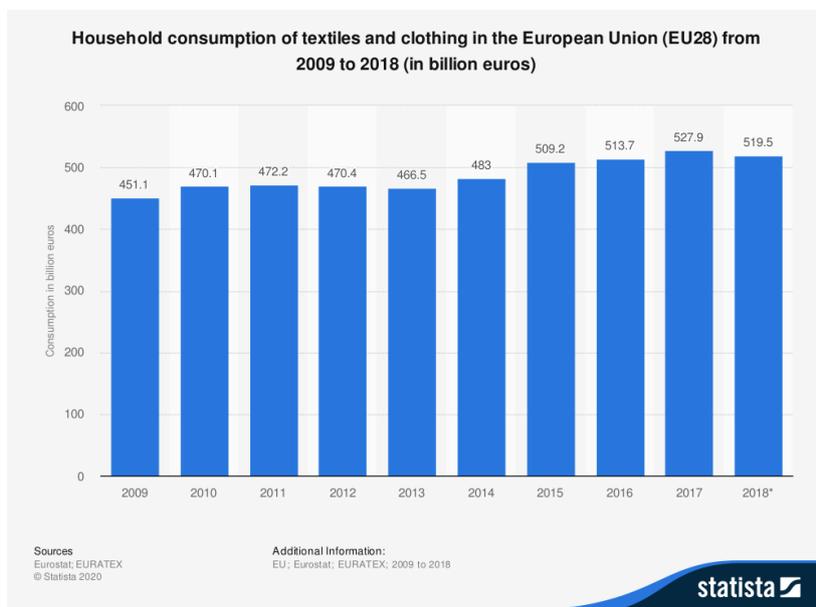


Fig. 7. Household consumption of textiles and clothing in the European Union (EU28) from 2009 to 2018 (EURATEX, 2019)

According to figure 8 (Christis et al., 2019) the share of household expenditure on clothing, footwear, and household textiles as a proportion of total household expenditure in the EU has a long-term declining trend - from 2000 to 2017 it decreased by 16 per cent when calculated from the graph as $(1 - (5.3 \text{ per cent} / 6.3 \text{ per cent}))$. This two presented figures within the Appendix C further support the claim that the EU consumers' incentive to purchase domestically produced textiles does not seem to be affected by the customs duty levied on competing imported goods or else.

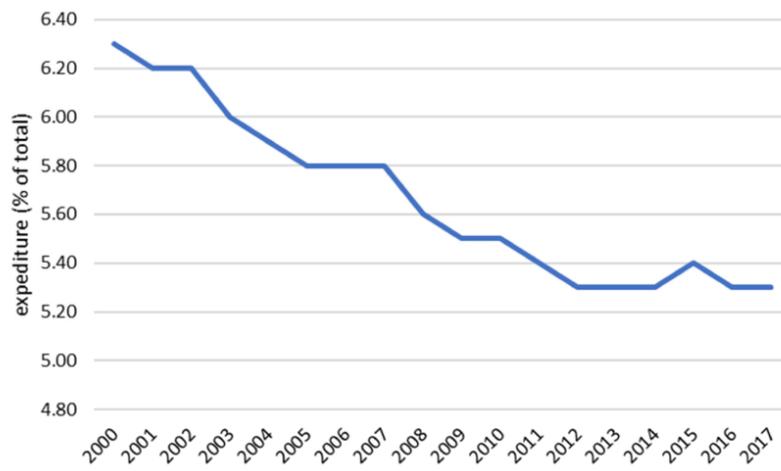


Fig 8. Household expenditure on clothing, footwear and household textiles as a proportion of total household expenditure (Christis et al., 2019)