THE TRANSFER PRICING FILE AND TAX CONTROVERSIES - AN EMPIRICAL STUDY

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Abstract
Transfer pricing is a real challenge for both tax regulators and multinationals who use this procedure, in most cases to erode the tax base. The purpose of this paper is to analyse the tax practices and regulations of countries applying OECD transfer pricing regulations. To this end, the profiles of 69 countries on the application of transfer pricing regulations and methods of assessing the transfer pricing file have been analysed. The research results indicate that countries with developed economies and high tax burdens have more rigid transfer pricing tax regulations, the aim of which is to prevent tax evasion through transfer pricing. At the same time, emerging economies with a more lenient tax system do not pay particular attention to transfer pricing, but provide clear regulations on the methods of assessing the transfer pricing case. At the other end of the spectrum there are weakly developed countries, which apply OECD transfer pricing regulations but are flawed in their practical application. The results of the research are of real use both to national and international regulators and to multinationals applying transfer pricing in intra-group transactions.

Keywords
transfer pricing; tax controversies; fiscal burden; tax evasion.

JEL Classification
M40

Introduction

The accelerated development of the world's economies has intensified the process of internationalisation of companies, with an increase in the number of multinationals, which play an important role in the growth and sustainable development of countries. Multinationals and their subsidiaries are an important link in the world economy, accounting for about a third of global gross domestic product and world output. Multinationals are also important sources of foreign direct investment for emerging and developing economies. To make themselves more attractive to multinationals, governments around the world have adopted various strategies such as: upgrading infrastructure; easing tax regulations; adopting international accounting standards; adopting regulations to ensure their investment security; reducing investment restrictions, etc. Multinationals are more likely to open subsidiaries in countries that have a more lenient tax regime and at the same time are rich in natural resources and cheap labour. These characteristics are attributed to emerging economies, which are

the main recipient of FDI inflows due to abundant natural resources and a low tax burden.
Multinationals have been involved in various financial scandals over the years, which have strained the international economic system. Most of the financial scandals in economic history are related to false reporting of earnings (Waste Management Scandal 1998), falsification of financial results (Worldcom Scandal 2002, Healthsouth Scandal 2003), manipulation of stock market prices (American Insurance Group Scandal 2005), etc. The rise of multinationals has highlighted a weak link in the international tax field, namely the taxation of their profits. To protect investors and prevent tax avoidance, national and international regulators have therefore joined forces to draw up guidelines on the taxation of multinationals and transfer pricing, which is one of the most widely discussed international tax issues. Multinationals often resort to transfer pricing, which represents the value of intra-group transactions, as the simplest and most common method of tax minimisation by multinationals to erode the tax base. Basically, through transfer pricing, multinationals transfer the tax base artificially by redistributing the indicators that make up the tax base among the multinational's subsidiaries. Due to tax synergies, multinationals using transfer pricing manage to use a preferential tax regime without violating national and international law. The application of transfer pricing by multinationals in the absence of clear tax mechanisms and policies regulating its use reduces the state's ability to collect budget revenues and at the same time gives multinationals a free hand for economic crime. In this regard, the OECD has developed "Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrations", which has a dual purpose, for governments "to ensure that multinationals' profits are not artificially transferred from their jurisdiction and that the tax base reported by multinationals in their country reflects the economic activity carried out there" and for multinationals to ensure "that the risk of economic double taxation is limited" (OECD, 2022). This guide is used in 69 jurisdictions around the world, which is also the focus of our research. In addition, the OECD Transfer Pricing Guidelines "provide guidance on the application of the arm's length principle, which is the international consensus on the valuation of cross-border transactions between associated enterprises" (OECD, 2022).
Therefore, the aim of our research is to analyse the profile of countries applying OECD transfer pricing tax practices and regulations and to highlight the main issues in multinational taxation. Thus, to achieve the proposed aim we have outlined the following objectives: O1: analysis of the determinants of transfer pricing; O2: analysis and evaluation of transfer pricing tax regulations and practices in the 69 jurisdictions applying the OECD guidelines. The results of the research are of real use to both national and international regulators and multinationals applying transfer pricing in intra-group transactions. The limitations of the research are that due to the rather large sample and its non-homogeneity (countries are from different economies: predominantly developed, emerging, developing and underdeveloped economies) the results of the study are too general.

Literature review

The issue of taxation of multinationals has attracted the attention not only of national and international tax regulators, but also of researchers, who are examining the effects of transfer pricing on the level of development of countries and its impact on the global foreign direct investment circuit (Melega et al., 2023). At the same time, some researchers have focused their attention on the usefulness of transfer pricing methods recommended by tax regulators. For example Kardos et al. (2016) analysed transfer pricing methods and concluded that although tax authorities provide multinationals with a multitude of methods, their use in practice is cumbersome due to the lack of transaction history and level of legal regulation. According to the OECD guide, multinationals can apply one of five methods for transfer pricing, namely: "the comparable uncontrolled price method (CUP), the resale price method (RPM), the cost plus method (CPM), the net transaction margin method (TNMM) and the transaction profit split method (TPSM)" (see Table 1). In applying transfer pricing methods, multinationals should take into account the "arm's length principle, which is a commonly used expression to refer to transactions in which two or more unrelated parties agree to do business, acting independently and in their own interest" (OECD, 2022).

Table 1. OECD transfer pricing valuation methods

Method	Explanations and definitions
The CUP Method	"The CUP method compares the price charged for property or services transferred in a controlled transaction to the price charged for property or services transferred in a comparable uncontrolled transaction in comparable circumstances. If there is any difference between the two prices, this may indicate that the conditions of the commercial and financial relations of the associated enterprises are not arm's length, and that the price in the uncontrolled transaction may need to be substituted for the price in the controlled transaction" (OECD, 2022).
The Resale Price Method	"The resale price method begins with the price at which a product that has been purchased from an associated enterprise is resold to an independent enterprise. This price (the "resale price") is then reduced by an appropriate gross margin (the "resale price margin"), determined by reference to gross margins in comparable uncontrolled transactions, representing the amount out of which the reseller would seek to cover its selling and other operating expenses and, in light of the functions performed (taking into account assets used and risks assumed), make an appropriate profit" (OECD, 2022).
The Cost Plus Method	"The cost plus method begins with the costs incurred by the supplier of property or services in a controlled transaction for property transferred or services provided to an associated enterprise. An appropriate mark-up, determined by reference to the mark-up earned by suppliers in comparable uncontrolled transactions, is then added to these costs, to make an appropriate profit in light of the functions performed and the market conditions" (OECD, 2022).
The Transactional Net Margin Method	"The transactional net margin method ("TNMM") examines a net profit indicator, i.e. a ratio of net profit relative to an appropriate base (e.g. costs, sales, assets), that a taxpayer realises from a controlled transaction (or from transactions that are appropriate to aggregate) with the net profit earned in comparable uncontrolled transactions" (OECD, 2022).

The Transactional Profit Split Method	"The transactional profit split method first identifies the combined profits to be split for the associated enterprises from the controlled transactions in which the associated enterprises are engaged. In some cases, the combined profits will be the total profits from the controlled transactions in question" (OECD, 2022).

Source: OECD (2022)

Transfer pricing methods have been developed with the aim of providing multinationals with legal tools for intra-group transfers and at the same time to exclude and prevent economic crime. The multitude of transfer pricing methods is to the advantage of multinationals as it gives them the possibility to optimise intra-group transactions and thus avoid sanctions from tax regulators. According to Radolovic (2012), "the decision making process on transfer pricing optimization has two dimensions that need to be taken into account: the optimization dimension in terms of available capacity, tax laws of countries, available market and other indicators of the individual company and the dimension of international transfer pricing regulation in line with the OECD Guidelines." Therefore, in order for multinationals to benefit from optimal transfer pricing and competition, transfer pricing assessment methods must examine all the sides mentioned by Radovic (2012). Of the many methods available to multinationals, they must use the one that corresponds to their business and provides an objective assessment of the transaction price and tax base, but in practice, they aim to use methods that lead to profit maximisation and tax minimisation, i.e. to shape a good image and position in the market. Based on the assumption that "the application of different transfer pricing methods affects the amount of the tax base", Šupuković (2021) analysed the possibilities of tax avoidance in transactions between the parent company and subsidiaries within the group, concluding that "the application of different transfer pricing methods affects the amount of the tax base of each business entity, thus confirming the basic assumption of the paper and that the study of transfer pricing is not exact, and in this context, the choice of the final transfer pricing solution should be based on several possible outcomes, i.e. comparable market prices." In practice, the lack of an international framework for taxing multinationals and of clear transfer pricing regulations provides niches for tax base erosion and tax avoidance through transfers to subsidiaries operating in tax havens. The solution to combat economic crime through transfer pricing is to establish a single global tax rate and reduce the tax burden, which is the main incentive for transactions to tax havens. As Lucian (2010) argues, "tax evasion is the result of inadequacies in the law, of the methods of enforcement, of the lack of provision for the main causes of evasion or of a tax policy considered excessive by taxpayers", and in order to prevent and combat it, national and international bodies must commit to drawing up common regulations that do not constrain or provide taxpayers with loopholes for such practices. In this regard, the OECD, through Pillar II of international tax reform, has come up with a proposal to tax multinationals at a minimum of 15%, a rule that applies to multinationals and groups of companies with combined financial revenues of more than EUR 750 million per year (European Commission, 2022). The effectiveness of this reform will be felt when all the world's governments have implemented this resolution, which is currently applied by 137 countries. An important effect of the 15% minimum tax on multinationals will be the one that it will reduce the number of transfer pricing transactions. At the same time, the new tax rule will contribute to increasing tax revenues in most of the economies that will apply this rate and will contribute to achieving Sustainable Development Goal (SDG) target 17.1: "mobilise and strengthen domestic resources, including through international support to developing countries, to improve domestic capacity to collect taxes and other revenues" (SDGs, 2022). According to Lassourd (2022), "the impact of global minimum tax rules will depend on their interaction with domestic tax policies and how different countries change their tax regimes as a result." In this vein, the following research questions emerge:

Q1: Do tax regulations and policies for assessing and establishing transfer pricrs correspond to the current economic developments and the needs of multinationals and governments in collecting tax revenues objectively?

Q2: Do existing tax regulations and policies for assessing and establishing the transfer prices eliminate and prevent any form of tax avoidance?

Research methodology

The present research is a quantitative questionnaire-based research, i.e. the OECD "Transfer Pricing Country Profile" questionnaire, which provides data on transfer pricing regulations, methods, documentation and agreements, making possible the a comparative analysis of transfer pricing in 69 jurisdictions (see Table 2). The OECD questionnaire was applied individually to each country and outlines the level of transfer pricing regulation in each economy and their compliance with the OECD guidelines. The questionnaire consists of both open and restricted questions, which were analysed using quantitative methods.

Table 2. Countries included in the analysis

Korea, Rep.	China	Jamaica	Chile	Ireland	Switzerland	Ukraine
Angola	Dominican Republic	Georgia	Uruguay	Germany	New Zealand	Senegal
Nigeria	Tunisia	Italy	France	Austria	Russia	Argentina
Papua New Guinea	Brazil	Cameroon	Belgium	Denmark	Maldives	Albania
Honduras	Columbia	Costa Rica	USA	Iceland	Mexico	Panama
Netherlands	India	Israel	Portugal	Sweden	Armenia	Romania
Kenya	Africa Southern	Spain	Malta	Luxembourg	Indonesia	Bulgaria
Turkey	Greece	Lithuania	Mary Great Britain	Finland	Peru	Malaysia
Croatia	Hungary	Poland	Slovakia	Latvia	Slovenia	Czech Republic
Estonia	Japan	Singapore	Australia	Canada	Norway	

Source: developed by the author

In order to analyse the level and quality of tax regulations and practices in the 69 selected jurisdictions and to answer the research questions, using multiple linear regression, we defined a quality index of transfer pricing tax regulations and practices (qqtpr), which was also considered the dependent variable of the model. Seven independent variables were established as independent variables based on the OECD questionnaire, reflecting the methods, regulations and tax and legal practices of transfer pricing establishing and assesment (see Table 3).

The linear regression model was defined by the function:

$$Y_i = \alpha + \sum_{j=1}^{6} \beta_{ij} X_{ij} + \varepsilon_i, \text{ i=1,..,n.}$$

where, n is the sample size.
Based on the selected variables (see Table 3), the linear regression equation was defined as:

$$Iqtpr = \alpha_1 + \beta_{11} \cdot \mathrm{Alpr} - \beta_{12} \cdot Lcitpr + \beta_{13} \cdot Rtpriav + \beta_{14} \cdot Gitav + \beta_{15} \cdot Ftr + \beta_{16} \cdot Tprd + \beta_{17} \cdot Adj + \varepsilon_1$$

Table 3. Description and definition of independent variables in research

Variables	Description
Iqtpr	Quality index of transfer pricing regulations and tax practices
Alprp	The arm's length principle and defining related parties
Lcitpr	Level of comparability of information for transfer pricing purposes
Rtpriav	Regulations for determining the transfer price of intangible assets, intangible values
Gitav	Guidance specific to intragroup transactions with low added value
Ftr	Financial Transactions Regulations
Tprd	Transfer pricing documentation regulations
Adj	Adjustments at the end of the year and secondary adjustments

Source: developed by the author

In this research we used multiple linear regression because it is an essential tool for diagnosing and identifying problem cases, and the aim of our research is to identify the strengths and weaknesses of tax valuation and transfer pricing regulations and practices in the 69 jurisdictions, which apply OECD transfer pricing regulations. At the same time, as Aiken et al. (2003) state, multiple regression (MR) analysis provides flexibility for modelling data and examining relationships between predictor (independent) variables and the dependent variable.

Result and discussions

The regulation of transfer pricing has become an important topic for national and international regulators, this subject initiating various discussion platforms for the development of an appropriate legal framework for the objective assessment of transfer prices in order to avoid any form of tax avoidance. The non-taxation of multinationals' income is the main concern of political actors and professionals involved in tackling transfer pricing issues. At the same time, existing tax regulations on transfer pricing taxation are strongly criticised (Rogers & Oats, 2022) and are the subject of debates among regulators and practitioners as to their effectiveness and their adaptability to recent geopolitical changes. The lack of clear transfer pricing regulations, puts transfer pricing professionals in a difficult position, because according to Rogers and Oats (2022) they "require substantial practical knowledge and experience accumulated over time, including not only the theoretical application of the ALP (The arm's length principle), but also the agreements reached in practice." The quality of tax regulations and practices for assessing and setting transfer prices has negative effects not only on the efficiency of the state in collecting its revenues, but also on the flow of foreign direct investments. According to De Mooji and Liu (2018) "unilateral adoption of transfer pricing regulations can have a negative impact on actual investment by multinationals." Given the importance of transfer pricing to the international business environment, transfer pricing regulations are reviewed and supplemented annually. For example, the latest revisions have come with explanations of the range of competition used to determine the market price of a good or service, so regulators are trying to eliminate any dispute over the correct application of transfer pricing rules and principles. The introduction and extension of transfer pricing regulation helps to reduce the risk of tax avoidance by limiting the transfer of profits between businesses. Reidel and Zin (2014) argue that this behaviour of the authorities is not surprising, as the introduction of "anti-avoidance measures to prevent taxpayers from adjusting transfer prices for tax purposes" ensures the efficiency of the state in revenue collection, thus preventing the development of large-scale ecomic crime.

Table 4. Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.753[a]	.568	.518	.288017	1.382
a. Predictors: (Constant), Adj, Lcitpr, Rtpriav, Tprd, Gitav, Ftr, Alprp					
b. Dependent Variable: Iqtpr					

Source: developed by the author

Therefore, according to the data in the above table, we can see that the predictor variables quality index of transfer pricing regulations and tax practices; the arm's length principle and defining related parties; level of comparability of information for transfer pricing purposes; regulations for determining the transfer price of intangible assets, intangible values; guidance specific to intragroup transactions with low added value; financial transactions regulations; transfer pricing documentation regulations; Adjustments at the end of the year and secondary adjustments influence the quality index of transfer pricing regulations and tax practices, the dependent variable, in a proportion of 56.8% (see Table 4). In practice, the current level of transfer pricing regulation in the analysed 69 jurisdictions is covered to the extent of 56.8%, which shows that current regulations do not fully cover this area. Lack of regulation also leads to increased economic crime through transfer pricing.

Table 5. ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Mr
1	Regression	6.645	7	.949	11.444	.000[b]
	Residual	5.060	61	.083		
	Total	11.706	68			
a. Dependent Variable: Iqtpr						
b. Predictors: (Constant), Adj, Lcitpr, Rtpriav, Tprd, Gitav, Ftr, Alprp						

Source: developed by the author

The model designed to assess the quality of tax valuation and transfer pricing regulations and practices for the 69 jurisdictions was validated as the Sig. significance threshold value is 0.000 , which is below the 0.05 threshold (see Table 5).

Table 6. Coefficients[a]

Model	Unstandardized Coefficients	Standardized Coefficient	t	Mr

			s		
		B	Std. Error	Beta		
1	(Constant)	.059	.191		.312	.756
	Alprp	.536	.236	.578	2.270	.027
	Lcitpr	-.134	.070	-.366	-1.918	.060
	Rtpriav	.132	.129	.126	1.028	.308
	Gitav	.004	.141	.003	.026	.980
	Ftr	.089	.137	.084	.648	.519
	Tprd	.267	.153	.239	1.744	.086
	Adj	.135	.102	.147	1.332	.188
a. Dependent Variable: Iqtpr						

Source: developed by the author

According to the regression coefficients, the regression equation is outlined as:

$$Iqtpr = 0.059 + 0.536 \cdot \text{Alpr} - 0.134 \cdot Lcitpr + 0{,}132 \cdot Rtpriav + 0.04 \cdot Gitav + 0.089 \cdot Ftr + 0.267 \cdot Tprd + 0.135 \cdot Adj$$

The quality of tax regulations and practices for assessing and setting transfer prices, according to the correlation table, is influenced by the predictor variables in the following order: The arm's length principle and defining related parties (Alprp), Level of comparability of information for transfer pricing purposes (Lcitpr), Transfer pricing documentation regulations (Tprd), Adjustments at the end of the year and secondary adjustments (Adj), Regulations for determining the transfer price of intangible assets, intangible values (Rtpriav), Financial Transactions Regulations (Ftr), Guidance specific to intragroup transactions with low added value (Gitav). The application of the arm's length principle and the comparability of information are essential elements in the correct and objective determination of transfer prices. According to the model data, it can be seen that the arm's length principle is applied and the comparability of information, i.e. the history of transactions, is taken into account in setting and assessing transfer prices in the 69 jurisdictions, allowing for objective and market-based transfer pricing. At the same time, it is noted that there are overlaps in the 69 jurisdictions in terms of regulations and practices for setting and valuing transfer prices of intangible assets, financial transactions and low value added intra-group transactions. At the same time, from the analysed sample, which includes countries from different types of economies and levels of development, it is evident that countries with developed economies and high tax burdens have more rigid transfer pricing tax regulations aimed at preventing tax evasion through transfer pricing, while emerging economies do not pay particular attention to transfer pricing, but provide clear regulations on the methods of assessing the transfer pricing record, while underdeveloped countries, which apply OECD transfer pricing regulations, are lagging behind in their practical application. Thus, according to our results, we succeed in answering our research questions Q1 and Q2, concluding that tax regulations and policies for transfer pricing assessment and determination do not correspond to economic actuality and the needs of multinationals and governments in the objective collection of tax revenues, and fail to prevent and eliminate tax evasion.

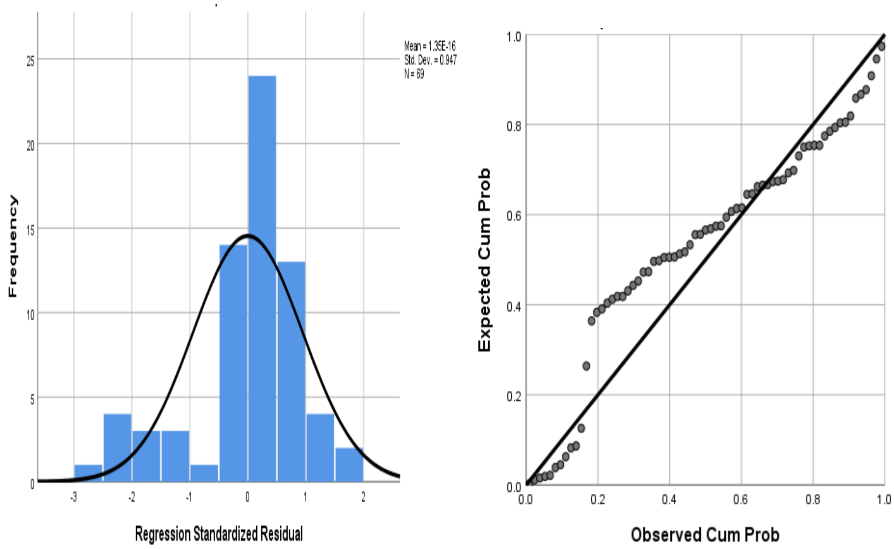

Figure 1 Histogram and Plot Regression
Source: developed by the author

According to the figure above, it can be seen that the histogram distribution of the variable quality index of transfer pricing regulations and tax practices is a multimodal distribution, because several variables were analyzed in the model, which have a normal distribution, and the distribution of the trend line on the *Q-Q Plot* of the variable is non-homogeneous.

Conclusions

The level and quality of transfer pricing regulation is a key factor in preventing and combating tax evasion. Therefore, national and international regulators should join forces to identify and establish clear rules and standards that leave no room for interpretation and are easy to apply in practice. Setting a minimum tax rate of 15% for multinationals can be a start in discouraging multinationals from applying transfer pricing to erode the tax base. The effects will only be felt once all governments around the world will commit to adopt OECD transfer pricing rules into national regulations, thus creating a common front in the fight against economic crime.

Our research has shown that the arm's length principle is applied in 69 jurisdictions for setting and assessing transfer prices and that comparability of information like transaction history, is taken into account, allowing for objective and market-based transfer pricing. At the same time, the results of the research show that there are overlaps across the 69 jurisdictions in the regulation and practice of transfer pricing of intangible assets, financial transactions and low value-added intra-group transactions. At the same time, from the analysed sample, which includes countries from different types of economies and levels of development, it is evident that countries with developed economies and high tax burdens have more rigid transfer pricing tax regulations aimed at preventing tax evasion through transfer pricing, while emerging economies do not pay particular attention to transfer pricing, but provide clear regulations on the methods of assessing the transfer pricing record. Regarding the underdeveloped countries, which apply OECD transfer pricing regulations, they are lagging behind in their practical application.

In the same vein, the results of the research indicate that current tax regulations and policies for assessing and establishing transfer prices do not correspond to the current economic situation and the needs of multinationals and governments in the objective collection of tax revenues, and fail more or less to prevent and eliminate tax evasion.

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