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# Transfer Price Confusion? – Proposing a comprehensive Taxonomy for Academia and Practitioners

Schulke, A.; Warning, H.O.: Transfer Price Confusion? – Proposing a comprehensive Taxonomy for Academia and Practitioners.

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# List of Abbreviations

CUP	Comparable Unrelated Price (Method)
RC	Responsibility Center
TNMM	Transactional Net Margin Method
ТР	Transfer Price
TPSM	Transactional Profit Split Method

#### Abstract

Transfer prices (TP) are charged for products or services exchanged between units within a decentralized organization. A vast body of literature from three very different academic disciplines (legal, management and economics) is concerned with the topic of Transfer Pricing. Their perspectives as well as terminology differ and are sometimes not aligned. To abate this, the article proposes a unified taxonomy on Transfer Prices that distinguishes three very distinct characteristics of any TP: its Determination Method (consisting of both its Calculation Method and its Price Method), and the Determination Process by which the TP is installed. The aim of this is to guide future academic research and provide academics and business practitioners alike with precise language and logical structure for the design of Transfer Pricing Systems.

### 1 Introduction

Transfer prices, unlike market prices, are a necessity born of the delegation of managerial responsibility in decentral business organizations. They are paid between independently managed units of an organization in exchange for products (goods or services). The term "unit" can stand for both Responsibility Centers (RC, e.g. Profit Center or Investment Center) or legal entities as we will specify in the following part (cf. Coenenberg/Fischer/Günther 2016: 722). The distinguishing feature is that these units are part of a larger organization that has dominating control rights over them both, and both units contribute to the overall business goals of that organization.

## 2 Three complexity levels, three functions of TP

Figure 1 indicates three different use cases that constitute three different levels of complexity for the design of TP systems. On level 1 on the bottom of the figure, the TP system is designed to function within a single legal entity and between RCs therein. Each RC's performance is the responsibility of the Head of that unit; thus, the transfer price immediately affects the performance of the selling and the buying unit.





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#### 2 Three complexity levels, three functions of TP

A price increase of one dollar per unit for the selling unit is pure increase in profit contribution, and in turn a dollar less for the purchasing unit's contribution. In other words, the interests of the two units' managers are diametrical with regards to the transfer price. As the system on level 1 is purely designed for internal management control purposes, only internal rules within the legal entity's Management Accounting system must be set up and adhered to.

On level two, complexity is added as the exchanging units are now part of two different legal entities within the same organization. This means that the exchange must be done via Financial Accounting systems, documented and recorded accordingly along the local Financial Accounting regulations. If both legal entities operate under the same Profit Tax regime and authority, this remains the only added complexity.

Level 3 is the most complex setup, as both entities now operate under different Financial Accounting and Profit Tax regimes and authorities, which is usually the case in international transfers (there are, however, cases where profit taxes are levied locally within the same country). On this level, a potential for conflict is arising that is not limited to the organization itself, but towards outside agents with judicative authority. As profit tax is levied by two different authorities, they also have diametrical interests, in that more profit should always be generated in the unit within their jurisdiction. This interest is aligned with the interest of the local unit's manager for profit maximization. Thus, both units' transfer prices may be (but factually not always are) subject to stringent regulation and enforcement of this regulation by independent authorities, each within their country of registration.

TP systems should fulfill three different functions, which are independent of each other and, unfortunately, potentially conflicting (Schuster/Clarke 2010: 23; Küpper e.a. 2013: 516; Coenenberg/Fischer/Günther 2016: 723-725). The first, the Coordination function, is fulfilled if the TP system leads to internal deals when these are beneficial for the organization as a whole, and incentivize managers to buy externally when it is not - without central intervention. The second, the Profit Allocation function demands that the TP correctly mirrors the individual contributions of the units to the final product sold to an outside customer. Both are internal functions of TP system, complemented by the external legal compliance function, which is relevant only on level 3 of complexity. Both participating units' chosen TP system must comply with existing regulations regarding both the system itself as well as audit-related documentation requirements. Certainly, managers do have a choice whether to remain partially or in full non-compliant with regulations, which bears the risk of litigation costs, fines and reputational impact. Prominent corporate scandals in recent years have made it very clear that non-compliance is not only a theoretical option for managers, but a very real choice in practice. We cover this important legal aspect only marginally in this text by choice, as we focus on the Management Accounting/Controlling perspective of TP systems.

#### **3** Relevance of TPs

Kaplan (1984) traces major management control tools and their history to the managerial (and non-academic) developments at DuPont and General Motors: "In summary, by 1925 DuPont and General Motors had developed many contemporary managerial control practices: decentralization via a functional or multi-divisional organization, the ROI performance measure, [...] incentive and profit-sharing plans, and a market-based transfer price policy." (Kaplan 1984: 401).

Transfer pricing has been around for over a century and made its way into the business literature accordingly. It is a standard topic in most, but surprisingly not all, Management Accounting/Controlling textbooks, with usually a focus on different TP methods. Also, since the first international tax treaties and double taxation agreements emerged as of 1915 onwards, the TP discussion made its way into the field of law as well. After OPEC first formulated the Arm's Length Principle in 1963 (Picciotti 2017: 11), and later proposed acceptable TP methods to satisfy this principle, a large body of literature emerged around these methods and their use in search of regulatory compliance in different nations worldwide (Ignat/Ionescu-Feleagă 2022). A third major stream of literature is found in the economic field, with two very different approaches: on the one hand, formal mathematical modeling of different TP methods and their consequences, often based on principle-agent-theory. A second, more recent economic body of literature focuses on the socio-economic consequences of the use of TP for the purpose of "tax avoidance", also sometimes euphemistically referred to as "tax planning". Sikka/Willmoth (2010) quite insightfully refer to this global problem as the dark side of transfer pricing (see also Heckemeyer/Overesch 2017). They also note that this important topic of willful profit shifting is given no or very little room in Management Accounting literature and textbooks – which raises the question if ethical considerations are factually out of scope for controllers in business practice?

In summary, no doubt there is a continuously high academic, but also practical interest of managers in the topic, driven by globalization and more and more sophisticated transfer price regulation in the leading industrialized nations (Lohse/Riedel/Spengel 2014; for general bibliometric reviews on transfer pricing literature, see Kumar e.a. 2021 or Fulop 2022).

#### Excursus 1: OECD terminology on transfer pricing methods

#### Traditional transaction methods

**Comparable uncontrolled price (CUP)**: the price charged between unrelated firms in transactions which are similar in all respects which could affect open market pricing, or which can be determined by reasonably accurate adjustments to take account of any such differences.

**Resale price**: the price at which a product bought from a related party was sold to an unrelated party minus a gross profit margin to cover costs and an appropriate profit for the unit selling to the unrelated party.

**Cost plus (or cost-based)**: basis of the price calculation are the costs incurred in the production of goods or services by a supplying unit to a related party, plus an appropriate mark-up, based preferably on that charged by the same supplier in comparable transactions with unrelated parties.

#### Transactional profit methods

**Transactional net margin method (TNMM)**: the net profit realized from an appropriate base (e.g. costs, sales, assets) in a transaction (or series of transactions that can appropriately be aggregated), ideally by comparison with similar transactions by the same person with unrelated parties, or if not possible, the net margin earned in comparable transactions by independent enterprises, based on a functional analysis to determine comparability.

**Transactional Profit Split Method (TPSM):** the combined profits earned from a transaction or transactions apportioned according to one or more 'allocation keys' (e.g., assets or capital employed, costs, headcount, sales). This method applies to highly integrated operations, and may apply to the total profits, or as a two-stage process in which each party is assigned a routine return (using one of the other methods) for non-unique contributions, and only the residual profit is apportioned.

To return to Kaplan (1984), he comments critically on the academic efforts to solve practical problems in TP systems since that time: "Thus, the transfer price problem remains an open issue to this day [...]. In the meantime, it is probable that the distribution of transfer pricing practices among firms in 1983 would be indistinguishable from that of thirty years ago, when the transfer pricing problem first attracted the attention of academics." (Kaplan 1984: 403). It is possible, but not at all certain, that his view would be milder after almost 40 years of additional contributions by academia to the field.

### 4 Confusion?

The authors have collected and analyzed a sample of over 100 English-language publications on the topic of TP gathered via the EBSCO database, and found remarkable differences and inconsistencies in the use of terminology. This is not surprising given the mentioned three main disciplines involved in research and the internationality of publication as well. Describing these inconsistencies is not the main purpose of this article, instead we would rather like to offer some anecdotal evidence on the seemingly most basic term: the so-called TP methods and their treatment in Management Accounting textbooks. Table 1 compares the most common Anglo-American textbooks on Management Accounting and one leading textbook in Germany with the OECD standard of acceptable (Arm's length) TP methods. Comparable Unrelated Price (CUP), Resale Price and Cost-plus Price are considered by OECD as "traditional" TP methods, with CUP being preferred among the three methods (OECD 2022: 97-112). The Transactional Net Margin Method (TNMM) was added to the OECD list at a later date, and allows for a TP to be calculated in a way that enables the producing unit to earn a net margin (e.g. profit margin or return on capital) that is considered fair and typical for the type of product produced. The Transactional Profit Split method (TPSM) allocates the profits realized from sale of final products between both parties, so it is usually administered ex-post based on actual figures.

The only common denominator in the comparison in Table 1 are the reference ideal of market price (CUP) and the mention of cost-plus methods. All textbooks offer a method that OECD does not support: Negotiated prices. In addition, we find that Drury (2018) and Anthony/Govindarajan (2003) introduce own denominations for both "Multi-tier prices" and "Dual prices". The distinction between use of standard vs. actual costs is mentioned in two sources. Only Weber/Schäffer (2016) refer to and present the OECD-recommended methods in full – yet do not reference further methods as mentioned just above. In summary, there is little commonality in the methods presented in this sample of common textbooks. Looking beyond this, it becomes evident that the term "method" is rather implicitly and broadly defined: Sometimes it refers to the way a TP is calculated (e.g. cost-plus), sometimes to the nature of the price itself (single vs. dual or multi-tier), sometimes to the processual way it is agreed upon between the parties (e.g. negotiated). The following part of this paper proposes a more structured approach to the use of the term "method" in three distinct ways to aid a structured understanding of the structure and the formation of TP systems.

4 Confusion?

# Table 1: Textbook TP method comparison

Source: TP Me- thod:	OECD 2022	Blo- cher/ Stout/ Cokins	Horng- ren e.a.	Anthony/ Govin- darajan	Mer- chant/ van der Stede	Drury	Weber/ Schäf- fer
CUP ("Market price")	х	x	х	x	x	x	x
Resale Price	Х	х	_	_	-	-	х
Cost- plus Price	X	Var vs. Full costs, markup opt.	x	Standard- cost us- age, markup opt.	Var vs. Full costs, markup opt.	Var vs. Full + opp. costs, markup opt.	Var vs. Full + opp. costs, markup opt.
TNMM	х	-	_	_	-	-	Х
TPSM	х	-	_	_	-	-	Х
Other	_	Negoti- ated; Dual prices	Nego- tiated	Negoti- ated; "two- step" prices (Multi- tier); profit sharing ex post; "two sets" (Dual Prices)	Negoti- ated; Stand- ard vs. Actual Cost as base; Dual prices	Negoti- ated; Costs plus lump sum fee (Multi- tier), Dual prices	Negoti- ated

CUP: Comparable Unrelated Price; TNMM: Transactional Net Margin Method; TPSM: Transactional Profit Split Method

Source: own table

#### 5 Towards a comprehensive TP taxonomy

Based on our findings from literature, we propose a transfer price taxonomy for academia and practice, which offers a more nuanced view on the aforementioned terminology and how TP systems "come to life". The first step here is to separate between the TP Determination Method and the Determination Process. The Determination Method answers two fundamental questions: that of the calculative basis for concrete TPs, and the chosen price method by which the product in questions is remunerated from purchaser towards the producing unit. We propose to discriminate within the Determination Method between the Calculation Method and the Price Method, as the latter concern entirely separate choices that need to be made from a methodological point of view.

Logically independent from that is the Determination Process, which describes the kind and sequence of internal activities between the involved parties that results in an agreed internal contract for the exchange. Kahneman/Sibony/Sunstein (2022: Ch. 1) convincingly argue that any decision taken can be viewed as the product of a decision-making process, which in our case must always involve a number of different process steps over a certain period of time to come to a TP agreement between two sides. This process can, in addition to the immediate parties, potentially also involve parties from a central organizational function, external consultants or representatives of tax authorities.

Before further elaborating on Determination Method and Process, Figure 2 on the following page sums up the proposed taxonomy.



#### 5 Towards a comprehensive TP taxonomy

The **Calculation Method** delivers the numerical basis for the determination of a transfer price. This can be an (adapted or "pure") market price, or any cost or margin-based method. The lower bound of cost-based prices will always be the variable cost of the product, as a rational profit-maximizing manager cannot accept selling any product below this threshold. A market price calculation of a TP below the threshold of the variable production costs of the selling unit would result in no TP agreement and an outside procurement of the product. The market price can be within the range of cost/margin-based calculations, but does not have to be (as indicated by the upper arrow). The Calculation Methods named in Figure 2 are non-exhaustive, meaning they are common in literature, but other methods are possible. We argue that any TP, especially those that are negotiated between units, will require a calculation method and data to feed it. The idea that, in practice, a negotiation would not be based on facts and figures and follow an agreed Calculation Method is unreasonable and far from business practice. Managers don't (just) haggle (cf. Hamel 2011: 53).

The **Price Method** concerns two additional decisions that need to be considered: Single price (simple) or utilization of a compound price (more complex, but possibly easier to accept as risks are shared more evenly). Example of a compound price is a Multi-tier price, for example a two-tier price with a fixed compensation paid to the producing unit for installing/guaranteeing the production capacity, and a variable unit price for each unit produced. Another example is a Dual price, where the producing unit receives a price that is in parts subsidized by Headquarters (HQ), usually in a negotiationbased process setting, administered centrally to avoid a No-Deal situation that would be sub-optimal for the company as a whole. The second choice that must be made for any transfer price is whether to use standard or actual prices, which of course differ in terms of risk distribution between the two units involved.

The **Determination Process** is the set of activities of both units (and potentially some part of the HQ organization, e.g., corporate controlling) that leads to an agreement or not. In a dictated price setting process (cf. Cheng 2002: 2), both the Calculation Method and the Price Method are set by the HQ organization and the producing and selling units both must accept a price that is determined by a central controlling unit. This extremely rigid setting has the potential to frustrate the unit managers, as both sides might feel that they are not getting a fair deal. Also, the setting contradicts the idea of decentralized managerial autonomy, thus it is highly unlikely to exist in practice. If only the Determination Method is set by HQ, this in theory gives room for calculation but not for negotiation, as both unit managers and their associated controllers would just have to "do the numbers". However, in practice, there is likely room for discussion about which data (e.g. cost types) to include and which not. Negotiation is now found here as a category of possible process choices. This can be very formalized 5 Towards a comprehensive TP taxonomy

and follow a centrally pre-defined sequence of steps. On the other extreme, the negotiation process can be structured entirely between the two negotiating parties, with strictly no central involvement and regulation. As this can potentially absorb enormous managerial capacity and time, an arbitration element might be centrally ordained in order to cap the costs of the negotiation process. Other variants found in literature would be an internal auction process in case several units of the organization could produce the needed product, or a mechanism for the producing unit to match an outside offer to avoid e.g., idle capacity costs in the unit (last offer process). An additional step for achieving legal compliance could be an internal or external audit of the transfer price Determination Method, or the attainment of a sign-off on the latter by legal authorities (often referred to as an Advance Pricing Agreement, or APA). Again, this list of possible process choices is non-exhaustive, with no limit to further creativity in design of process options and variants.

In the authors' opinion, this taxonomy offers an improved logical distinction in both theory and practice for the management of TP systems. The central controlling organization of a business should be keenly aware of the different Determination Methods and their hierarchy, and formulate clear rules for their application as well as the Determination Process within the decentral organization. This is key to ensure the three functions of TP including, where applicable, legal compliance. A simple choice of a convenient method, without a compelling argumentation against more preferable choices, can become a costly lapse upon taxation audits. However, the hierarchy and range of accepted methods within any organization should also be clearly defined and limited to support both and effective and efficient TP process in its practical use.

#### **Excursus 2: Authors' practical observations**

Both authors combine management experience of more than three decades. Both have worked with Transfer Pricing systems on an international level and in both a consulting and managerial function. In their, clearly non-representative, practical sample of TP systems, the dominant price calculation method was some variation of a cost base plus margin. This may not be a preferable method within the OECD hierarchy of methods, but in practice, the availability of internal data seems to trump the costly and often imperfectly matching quest for market prices and other external comparables. This however requires a thorough argumentation for the TP documentation, for which often costly help is sought from outside professionals. Also, the use of transactional TP methods appears to be extremely rare, but may have increased in recent years. Simple prices appear clearly favored, as is the use of standard prices for set

periods of usually six to twelve months, with some more "exotic" variations of e.g. externally market-indexed prices.

As to the determination process, the authors have witnessed a clear preference towards negotiated TP, usually with the underlying reason to support decentralized structures of decision making. This in practice often leads to fierce and intense (thus also costly) internal negotiation processes that sometimes appear less civilized than those with unrelated outside parties. Surprisingly, few organizations seem to have a standardized, simple escalation and arbitration process in place to contain these instances. One of the authors can bear witness to a 14-month negotiation process with an internal service provider, with multiple instances of escalations to central management functions.

#### 6 Concluding thoughts

Much room is given in academic literature to the discussion of so-called TP methods. Most commonly, the distinction between these methods is guided by differences in TP Calculation Methods, but as the example of negotiated TPs as a method has shown, no clear definition of the term "method" is underlying its use.

In addition, awareness of controllers and managers that there are different Price Methods available would also potentially be beneficial, where for example multi-tier prices help both parties share risks better, or dual prices might be a tool used in arbitration to avoid deadlocks or external sourcing. The decision between the use of standard or actual prices should be an informed one as well and uniformly applied throughout the entire organization. In literature, these choices are often given a marginal treatment, if any.

Lastly and independent from this, we argue that clear choices and guidelines for efficient TP processes are necessary prerequisites within a practical TP system. The proposed taxonomy helps put a clear focus on the potentially complex Determination Process that is often neglected within organizations' Transfer Pricing systems. Controlling organizations should not leave this process undefined and to chance – it is easy, but potentially costly, to rely on an underlying self-regulation of managers' common sense of "being in the same boat". Whether organizations choose a very tight process regime of dictated prices or methods, or a formally structured negotiation and possibly also escalation process, or the even more formal internal auctions: They should choose. While organizations seem keenly aware of the costs and benefits of external procurement and tightly manage these processes in dedicated organizational units, the TP process might be left to decentral managers, with controllers in a supporting or merely documenting role. Equal care should be given to the design and governance of the process of coming to, and regularly adjusting, a transfer price on an internal procurement contract.

The proposed taxonomy should alleviate the confusing lack of differentiation in literature and practice between methods and process in TP systems, which we see most stark in the common treatment of negotiation as a method of TP determination. We hope to see our proposal find gradual acceptance, and a reflection of that acceptance in literature and practice over time. Based on the taxonomy, future research could potentially provide more structured insights in the TP Determination Methods – both in terms of Calculation and Price Methods – and Determination Processes used today by decentral organizations, and valuable insights into their practical implications for management control purposes.

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