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Transfer pricing at glass, porcelain and ceramic industry

Danuše Nerudová, Veronika Solilová

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Research Centre
Faculty of Business and Economics
Mendel University in Brno
Zemědělská 1, 613 00 Brno
Czech Republic
http://vyzc.pef.mendelu.cz/en
+420 545 132 605

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Abstract

Danuše Nerudova and Veronika Solilova: **Transfer pricing at glass, porcelain and ceramic industry**

Glass, porcelain and ceramic industry which has a long tradition in the Czech Republic is a part of the manufacturing industry. The effect of globalization, international trade development, export orientation and dependence on a range of related industries causes that many enterprises operating in this industry have been constantly looking for ways how focus on high value-added production, how enhance innovation, how cope with competition or with lingering worldwide crisis. Many enterprises operating in this industry have been entering into cross-border situations facing international tax issues. The aim of the paper is to evaluate the impact of the different forms of the manufacturing subsidiary distributing own products through distributing subsidiary in the form of commission agent on the total tax liability of the parent company operating in this industry and further to identify the most suitable legal form of manufacturing subsidiary for parent company with respect to the selected transfer pricing policy.

Keywords:

transfer prices, arm's length principle, tax liability

JEL: F23, H21, K33

Contacts

Danuše Nerudova: Department of Accounting and Taxes, Faculty of Business and Economics, Mendel University in Brno, Czech Republic (d.nerudova@seznam.cz)

Veronika Solilová: Department of Accounting and Taxes, Faculty of Business and Economics, Mendel University in Brno, Czech Republic (ritve@email.cz)

INTRODUCTION

The Czech Republic as a small open economy has been increasingly involved in international trade. Glass, porcelain and ceramic industry[1] is a traditional part of the manufacturing industry in the Czech Republic – industry classified under code CZ-NACE 23 represents 4.55 percent[2] share on outputs, including trade margin from the Czech manufacturing industry and represents export-oriented industry. The effect of globalization, international trade development, export orientation and dependence on a range of related industries has resulted into the situation when many enterprises operating in this industry have been constantly searching the ways how to focus on high value-added production, how to enhance innovation, how to cope with competitive environment or with lingering worldwide crisis. In the area of Czech manufacturing industry operate under the code CZ-NACE 23, 5775 economically active subjects[3]. Many glass, porcelain and ceramic manufactured entities are often being restructured or joined to the multinational entities (hereinafter as MNEs) due to the above mention reasons. However, their participation in MNEs brings new problems, which has not been faced before, when the companies were not internationalized. Those problems are represented mainly in the form of the thin capitalization rules, know-how, royalties, and especially transfer prices and application of the arm's length principle and its impact on the tax base.

Transfer pricing represents an instrument which is used as tax planning tool by MNEs. Transfer pricing policy in MNEs can also help to achieve supplementary goals e.g. minimization of taxes, duties and tariffs, or sales and marketing goals. Properly chosen transfer pricing strategies can enable the distribution of the tax risks or profit-shifting – i.e. the largest part of the company profits is generated in low tax jurisdictions. Generally, corporate tax rates vary significantly between different tax jurisdictions and affect real investment decisions of MNEs which use the tax rate differential in order to reduce their worldwide tax payments by shifting income from high tax jurisdictions to low tax jurisdictions. As has been proved by (Overesch, 2009) the investment level in the high-tax host country should increase with a rising tax rate differential between the host country and the other location. Furthermore (Swenson, 2001) mentions while income shifting can be achieved through the reallocation of real investment, it can also be achieved by shifting reported income, as occurs when companies manipulate their transfer prices on international transactions. However, when using

[1] According to NACE classification glass, porcelain and ceramic industry is classified into subcategories of manufacture of other non-metallic mineral products (CZ-NACE 23). Manufacture of other non-metallic mineral products combines the production of glass, ceramic and building materials of various types and different uses. The manufacture of glass, glass products and other porcelain and ceramic products is classified under code 231 and 234 NACE.

[2] For details see Czech Statistical Office, *Financial indicators in industry – outputs, figure 16-09b*. Available from: http://vdb.czso.cz/vdbvo/tabparam.jsp?cislotab=16-09b&&kapitola_id=33&voa=tabulka.

[3] For details see Czech Statistical Office. Financial indicators in industry – outputs, figure 16-09a. Available from: http://vdb.czso.cz/vdbvo/tabparam.jsp?cislotab=16-09a&stranka=0&kapitola_id=33&voa=tabulka.

transfer pricing as a tool for tax planning, it is necessary to keep the rules laid down in the national income tax law, since the tax authorities may adjust the tax base of the entity, in cases that the taxable profit is not recorded in the source state due to a special relationship between associated entities. This can occur in cases, where the transfer prices do not fulfill the arm's length principle and there is a risk of the tax evasion with the elements of harmful tax competition. Generally, governments attempt to restrict profit-shifting opportunities through anti-avoidance legislation. Furthermore international transfer pricing is also subjected to strict tax regulations in order to protect tax revenues.

As defines (Van Herksen, 2009), transfer pricing is the specialization within the field of international and corporate tax law aiming to determine the arm's length transfer price for the products and services sold or rendered between associated companies. The term “arm's length“ means “fair value” or “market value” or a value that is not influenced upwards or downwards by the relation between companies. Associated companies/ related persons should be defined as including two or more companies/persons that are owned or controlled, directly or indirectly, by the same interests. The ability to set transfer prices that differ from market prices represents a good indicator of such relationships.

Further (Bronson, Johnson and Sullivan, 2010) mention that the price[4] at which intercompany transfers of tangible goods, intangible property, services, and financial instruments occur has an effect on the taxable income reported by the legal entities involved in the transaction and on the overall effective tax rate of the consolidated organization. The effect on overall effective tax rate of the consolidated organization occurs when business operations are shifted between jurisdictions with different statutory tax rates as mention (Tierney, De Grave, Moore, Vandervelden, Mathieu, 2009).

When MNEs set transfer prices for intercompany transactions they may seek to maximize their expected world income by manipulating the reported transfer prices upward or downward. As mentions (Swenson, 2001) the direction of manipulation of transfer prices depends on the tax system governing the MNEs, tax rate differential between the home and host country locations, and any relevant product tariffs. However, the author mentions that while this manipulation represents one of the options for income shifting, it is not responsible for large movements in reported income.

The arm's length principle was established against the manipulation of transfer price and represents the principle used on international tax field. Under this principle, associated enterprises must set transfer pricing for any intra-group transaction in the same amount as they would be unrelated

[4] These internal prices are called transfer price.

entities and all other aspects of the relationship would be unchanged. The international consensus is that the taxable profits realized by an enterprise from controlled transactions should not be distorted by the relationship that exists between the parties – these profits should be comparable to the profits that the enterprise would have realized if it had been dealing in comparable conditions with an independent party. Therefore, OECD member countries have agreed that for tax purposes the profits of associated enterprises may be adjusted as necessary to correct any such distortions and thereby ensure that the arm's length principle is met. OECD member countries consider that an appropriate adjustment is achieved by establishing the conditions of the commercial and financial relations that they would expect to find between independent enterprises in similar transactions under similar circumstances. The authoritative statement of the arm's length principle can be found in Art. 9(1) of the OECD Model Tax Convention on Income and on Capital (hereinafter as OECD Model Treaty):

"when conditions are made or imposed between two enterprises in their commercial or financial relations which differ from those which would be made between independent enterprises, then any profits which would, but for those conditions, have accrued to one of the enterprises, but, by reason of those conditions, have not so accrued, may be included in the profits of that enterprise and taxed accordingly."

The arm's length principle is also provided in Art. 9 of the United Model Double Taxation Convention between Developed and Developing Countries (hereinafter as UN Model Treaty) in an identical form. However, the article includes paragraph 3 which is not comprised in Art. 9 of OECD Model Treaty:

"The provision of paragraph 2 shall not apply where judicial, administrative or other legal proceedings have resulted in a final ruling that by actions giving rise to an adjustment of profits under paragraph 1, one of the enterprises concerned is liable to penalty with respect to fraud, gross negligence or willful default."

The purpose of the third paragraph is to cover the situation when a contracting state does not need to make a corresponding adjustment.

There are several reasons why OECD and UN member countries and other countries have adopted the arm's length principle. The main reason is that the arm's length principle provides broad parity of tax treatment for MNEs members and independent enterprises, avoids the creation of tax advantages or disadvantages that would otherwise distort the relative competitive positions of either type of entity therefore the arm's length principle promotes the growth of international trade and investment. In order to apply the arm's length principle in practice, the OECD has published the Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrations (hereinafter as

OECD TP Guidelines)[5] that provide guidance for the application of the arm's length principle to the pricing for tax purposes and to the cross-border transactions between associated enterprises. In revised OECD TP Guidelines from 22nd July 2010 the OECD has reaffirmed the position of its member countries that the arm's length principle is the fairest and most reliable basis for the determination where profits fall to be taxed.

As states (Miyatake, 2007) the OECD TP Guidelines are useful not only in interpreting a tax treaty provision similar to Art. 9 of the OECD and UN model conventions, but also in interpreting and applying the domestic tax law provisions of transfer pricing rules. Further, he states that the tax laws of all countries should have uniform transfer pricing rules, otherwise international double taxation cannot be avoided.

In particular, international double taxation arises when governments use different transfer prices to allocate income between two tax jurisdictions. In this case MNEs probably manipulated transfer prices and tax authorities made an appropriate adjustment of tax base. As mentions (Swenson, 2001) when MNEs manipulate transfer prices they are likely to face a number of costs: expenses related to tax consultants for providing consultancy, penalties if tax authorities discover the manipulation of transfer price, and last probably costly litigation of disputes. As has shown the practice, the last mentioned point is very significant, for example in 2004 the firm GlaxoSmithKline was assessed a $2.7 billion U.S. tax deficiency notice arising from transfer pricing disputes.

In response to this situation, the U.S. has developed the bilateral advance pricing agreement (hereinafter as BAPA) which a lot of countries have implemented[6]. Through BAPA the taxpayer provides detailed information regarding the proposed transaction and its proposed transfer price to the tax authorities and in return, if tax authorities approve proposed transfer price, the taxpayer can be certain not to be subjected to double taxation. In addition, as mention (De Waegenaere, Sansing, Wielhouwer, 2007) BAPAs are more likely to be efficient when MNEs have a stronger incentive to shift income to the low-tax country due to large tax rate differential where increasing expected audit costs make the BAPA relatively more attractive.

[5] A limited update of OECD TP Guidelines was made in 2009, primarily to reflect the adoption of update of the *Model Tax Convention* in the 2008. In the 2010 edition, Chapters I-III were substantially revised and a new Chapter IX, on the transfer pricing aspects of business restructurings, was added.

[6] In the Czech Republic, there is only so called the binding consideration of the agreed price according to §38nc in the Czech Income Tax Act, that could be considered as a unilateral advance pricing agreement. Furthermore, the Ministry of Finance issued decree related to the binding Decree "D-333 Communication by the Ministry of Finance in respect of Art. 38nc of Act no. 586/1992 Coll., on income taxes – binding consideration over the transfer pricing policy used in related party transactions". However, this binding consideration does not provide all benefits such as the full-fledged BAPA procedure which has been developed in the U.S.

The OECD TP Guidelines have set forth a series of accepted methodologies for application of the arm's length principle, namely the comparable uncontrolled price method (hereinafter as CUP), resale price method (hereinafter as RPM), cost-plus (hereinafter as COST+) method, profit split method and transactional net margin method (hereinafter as TNMM). The selection of the suitable transfer pricing method depends on the circumstances of the case. For this purpose, the selection process should take into consideration the respective strengths and weaknesses of the methods recognized by OECD TP Guidelines. Furthermore the suitability of the method should be considered in the view of the nature of the controlled transaction and should be determined through a functional analysis. The selection process should also take into account the availability of reliable information needed for application of the selected method(s) and the degree of their comparability[7]. It is important to note that if there are material differences between controlled and uncontrolled transactions the reliability of comparability adjustments that may eliminate these differences between them should be considered.

When according to the circumstances of the case the most suitable method or methods are applied, the arm's length range is determined as the difference between the lowest and highest value of the range of results realized by the comparable companies. However, the statistical tools as for example the interquartile range, are more significant and might help to increase the reliability of the analysis and to eliminate extreme results[8]. At present, many tax administrations require the narrow range of results, so-called interquartile range in practice. The same practice can be also found in US law, Mexico and Germany law.

As state the OECD TP Guidelines, it may also be necessary to use multiple-year data in the comparability analysis of the controlled transactions of the test party with comparable uncontrolled transactions of either the same MNE or an independent enterprise in order to take into consideration effects resulting from temporary accounting differences, varying business and product life cycles, discrepancies in short-term economic conditions and long term arrangements which have an impact on profitability of controlled and/or uncontrolled transactions. The use of multiple year data does not necessarily imply the use of multiple year averages. Multiple year data and averages can however be used in some circumstances to improve reliability of the range[9]. Nevertheless, a number of OECD member countries have the rule of examining the fiscal years separately if it is used multiple year data. It is interesting as states (Lubick 2010) that there is no discussion regarding the

[7]The term of degree of their comparability is defined as comparability between controlled and uncontrolled transactions.

[8] For details see OECD TP Guidelines, Paragraphs 3.57.

[9] For details see OECD TP Guidelines, Paragraphs 3.76, 3.77, 3.79.

number of years to include in a multiple-year average. That issue is left to be assessed according to the particular conditions however it is usually used three years term in practice.

In general, as mention (Bronson, Johnson and Sullivan, 2010) the use of multiple-year data is considered to be suitable when there are variations in the year-to-year performance of the tested party and the comparable companies that are due to factors other than transfer pricing. Such variations can be short-term changes in market conditions, for example an economic downturn. To smooth out the fluctuations in short-term results, most tax jurisdictions allow taxpayers to use multiple-year data.

As states (Male, 2008) the globalization and achievement of efficiencies within the group structure have encouraged many MNEs to establish various forms of shared service centers, usually in locations with relatively low costs. Since MNEs often find out that it is impractical and inefficient to replicate a service function or capability within each of their legal entities. Some services might be freely available internally and/or externally as an alternative source of supply. Other services may be more complex or may be of such a special nature that they are only available internally within the group. This would usually be due to specific product knowledge or restricted access to secret intangibles available only to the service provider. These more complex services might include contract manufacturing, contract research and development, consignment (toll) manufacturing, agency sales, debt factoring, and technical support.

Currently, the worldwide crisis and recession accelerated the need for reposition function, assets and risks in many MNEs. As mentions (Wittendorff, 2009), some of the tax authorities have lost the tax revenue due to business restructurings relocating high-value-added functions, risks and assets as well as associated profit potentials to low tax jurisdictions. Furthermore, author states that relocation includes the transformation of a full-fledged manufacturer into a contract manufacturer or a toll manufacturer, the conversion of a full-fledged distributor into a limited-risk distributor or a commissionaire, the rationalization or specialization of operations, and the transfer of intangibles to a central entity.

Manufacturing entities perform routine functions, a toll or contract manufacturer are usually remunerated on a cost plus basis (COST+ method). However, in practice benchmarking difficulties may require the application of the cost-based TNMM method. This method is based on a modified COST+ method at the operating profit level, considering return on total costs rather than return on cost of goods sold which is measured if the COST+ method is applied at the gross profit level. In

generally, it is considered that the mark up on total costs ratio[10] based on the TNMM method is the most reliable indicator of the arm's length profits earned by independent manufacturers as mention (Clark, Mitra, Mensch, 2008; Bakker, 2009).

As mentions (Bakker, 2009) in the case of full-fledged manufacturer not using valuable intangible assets, it is also possible to apply COST+ or TNMM methods. However, when valuable intangible assets are used it is difficult to identify comparable independent manufacturers owning comparable intangible assets. In this case the author further mentions, that it is better to test only the distribution companies involved in transactions with full-fledged manufacturer where full-fledged manufacturer would be evaluated based on residual profits. As mentions (Kratzer, 2008), for testing the arm's length principle under TNMM method needs to be selected tested MNE. The selection process should be managed by the availability of the reliable data on the most closely comparable transactions. The tested MNE should only perform routine functions - e.g. a distributor, a sales agent, toll or contract manufacturer, or an enterprise responsible for contract research and development.

Furthermore, (Serles, 2009) and (Bakker, 2009) mention that the routine entities do not assume complex functions and risks within the group, respectively bear little or no risk, perform a few functions and generate stable operating profit.

The aim of the paper is to evaluate the impact of the different forms of the manufacturing subsidiary distributing own products through the distributing subsidiary in the form of commission agent on the total tax liability of the entity operating in the glass, porcelain and ceramic industry. And further to identify the most suitable legal form of manufacturing subsidiary for parent company with respect to the applied transfer pricing policy.

THEORETICAL BACKGROUND

To reach the aim of the paper, the research has been divided into five steps. Firstly, the mark up on total costs ratio has been quantified by using the data from the Amadeus Database[11]. Further, before the determination of the arm's length range itself, it was necessary to identify the form of the manufacturing subsidiary – i.e. whether it acts as toll, contract or full-fledged manufacturer. Following, the determination of the arm's length range for toll/contract manufacturer and full-fledged manufacturer for five years and the identification of the arm's length range on average and

[10] Total cost ratio is determined as *Operating profit or loss / Total costs*. Total costs are calculated by subtracting *Operating profit and loss* form *Operating Revenue/Turnover*. For details see chapter materials and method.

[11] Amadeus database contains comprehensive financial and basic textual information on European companies across Europe (45 European countries). Amadeus database has a few modules: Very Large & Large, Very Large & Large & Medium size and the last one All companies.

the mark up on total costs of the toll/contract manufacturers and full-fledged manufacturers has been done. Consequently, the transfer prices for the individual legal forms of subsidiaries (manufacturing and distribution), their tax liability, including the total tax liability of the group have been determined. Finally, the selection of the most suitable manufacturing subsidiary legal form was done.

A suitable method for evaluation of controlled transactions

For the evaluation of controlled transactions in the case of the manufacturers it is recommended by the OECD TP Guidelines to apply COST+ or TNMM methods. The arm's length transfer price should reflect the actual functions performed, risks assumed[12] and assets used[13]. Therefore, not all manufacturers may be comparable to the one being tested. Risks assumed, assets used and functions performed should always be analyzed together to determine how the business model operates in practice. There are different types of manufacturers: the toll manufacturer, the contract manufacturer and full-fledged manufacturer.

The toll manufacturer represents an entity with little or no risk which is not responsible for activities as production scheduling, procurement of raw material, quality control, logistics, consumer sales or collection of revenues. The toll manufacturer does not own valuable intangibles, operates based on a guaranteed volume arrangement and does not have title to the raw materials, work-in-process and the final products manufactured. The principal (parent company) binds itself by manufacturing contract to buy a certain quantity of goods over a certain time for a certain price. As mention (Clark, Mitra, Mensch, 2008) this “certain price” is typically set as standard cost plus a mark up). The toll manufacturer is considered as a service provider that is selling its services and manufactured products.

The contract manufacturer performs manufacturing functions on a contract basis for a principal company. The contract manufacturer takes title to finished products but may or may not hold title to the semi-finished product, buys raw materials and owns no valuable intangibles. It represents the form of hired or outsourced manufacturing where the contract manufacturer is responsible for holding current technology requirements, machinery and procedures in order to remain competitive. The contract manufacturer is also considered as a service provider. There are no differences between the toll and contract manufacturers, however from a functional perspective, the toll manufacturer does not take title to final products and the contract manufacturer has more responsibilities.

[12] Typical risks include inventory risk, market risk, operational risk, supply risk, warranty risk, credit risk, R&D risk, foreign exchange risk and liability risk.

[13] The type of assets and nature of the assets are relevant factors. Important assets include working capital, plant and equipment and valuable intangible assets. The nature of assets used includes property rights, age, market value and so on.

As mention (Bakker, 2009; Bronson, Johnson and Sullivan, 2010), the full-fledged manufacturer assumes a process where the relevant elements such as sourcing and purchasing raw materials, procurement and vendor qualification, engineering and design decisions, use of intangibles, research and development (hereinafter as R&D), production planning, responsibility for standards of production and quality control, environmental requirements, warehousing, logistics and invoicing of customers, are all handled by the manufacturing entity itself and performed for its own risk and reward.

Thus the toll/contract manufacturer is traditionally seen as a service provider and is remunerated on the basis of cost plus mark up as mention (Bakker, 2009; Clark, Mitra, Mensch, 2008; OCED TP Guidelines). Furthermore (Mehta, 2005) mentions that the COST+ method is typically used for evaluating the sale of services by the service provider to the service recipient, where the service recipients incurs limited economic rick in the transaction. The OECD TP Guidelines states, that the COST+ method is probably most useful where semi-finished goods are sold between associated parties, where associated parties have concluded joint facility agreements or long-term buy-and-supply arrangements, or where the controlled transaction represent rendering of services[14]. However, in case of benchmarking difficulties, TNMM method is probably most suitable and is applied as a modified COST+ method[15] or as net profit mark up as states (Wittendorff, 2010) at the operating profit level, considering return on total costs. In case of the full-fledged manufacturer that does not use valuable intangible assets, COST+ or TNMM method may be also applied. On the contrary, it will be better to test only the distributing companies involved in transactions with the full-fledged manufacturer, which would be evaluated based on the resulting residual profits. If both the full-fledged manufacturer and the distributor use valuable intangible assets, the profit split method should be applied.

In case that the distributing subsidiary acts as commission agent the application of COST+ method and cost-based TNMM method is not suitable, because the costs of goods sold are not arising to the commission agent. Thus, RPM[16] method under which the transfer price is determined after deducting the gross margin from the sales price or sales-base TNMM method, under which the transfer price is equal to the selling price minus cost of sales and net profit margin (in the case of the commission

[14] For details see OECD TP Guidelines, Paragraph 2.39.

[15] So-called cost-based TNMM method or accurate expression net profit mark up, net cost plus.

[16] Paragraph 2.21 OECD TP Guidelines states that the resale price method is probably most useful where it is applied to marketing operations however Art. 2(22) states, that where the reseller is carrying on a general brokerage business, where we can rank search activity and conducting business on behalf of a principal, the resale price margin may be related to a brokerage fee, which is usually calculated as a percentage of the sales prices of the product sold. The determination of the resale price margin should take into account whether the broker is acting as an agent or a principal. Moreover Art. 2(29) states, that the resale price margin is easiest to determine where the reseller does not add substantially to the value of the product.

agent zero costs enter into the calculation as commission agent never owns the goods, i.e. never purchase it) should be applied.

As mention (Tierney, De Grave, Moore, Vandervelden, Mathieu, 2009) return-on-sales or cost-plus mark up are determined based on factors such as the type of services or activities performed and the level of risk assumed, and can vary across industries and companies as the nature of the underlying determining factors may differ slightly or widely. Therefore entities perform a comparability analysis that compares the entity's transfer pricing return-on-sale or cost-plus percentage with those of its competitors, those in the same or similar industry or those with similar functional profiles. Based on the results of the comparability analysis, a range of acceptable percentages is provided and is called an arm's length range. According the arm's length principle the entity should use the return-on-sales or cost-plus percentage which falls within in range.

Profit level indicators under TNMM

There are a number of different profit level indicators available for an arm's length test under TNMM. The selection of the most suitable net profit indicator should be aimed at the selection of the most suitable method according to the circumstances of the case. The respective strengths and weaknesses of the various possible indicators should be considered. The suitability of the indicator should be considered in the view of the nature of the controlled transaction and should be determined through a functional analysis (with no respect to the fact whether the tested party is a service provider, production facility or sale organization). The selection of the most suitable net profit indicator should also take into account the availability of reliable information needed for application of the TNMM method based on that indicator. Furthermore, the degree of comparability between controlled and uncontrolled transactions should be considered, including the reliability of comparability adjustments that may eliminate differences between them, when applying the TNMM based on that indicator.

As states (Kratzer, 2008) common ratios as a number of different profit level indicators available for an arm's length test under the TNMM are *operating margin*, *Berry ratio*, *net cost plus*[17], and *return on operating assets*.

One of the possible profit level indicators for service companies or toll/contract manufacturers represents the mark up on total costs, which can be defined as

[1] *Operating profit / Total costs * 100*

and measures the profitability of an enterprise to its total costs which can be defined as

[2] *Operating Revenue/Turnover - Operating Profit or Loss*[18]

[17] Net profit mark up.

or as

[3] *Cost of goods sold + Operating Expenses*

Mark up on total costs ratio based on the TNMM method is the most reliable indicator of the arm's length profits earned by independent manufacturers. Furthermore (Wittendorff, 2010) mentions that one strength of this ratio is that "total costs" is well-defined concept which can be measured reliably and consistently across the enterprises and national borders, and this ratio is not sensitive to the accounting distinction between cost of goods sold and sale, general and administrative expenses[19]. However, the composition of the costs of the enterprises affects the reliability of the results. Costs associated with the value-adding functions of a service enterprise are primarily booked as cost of goods sold and sales costs rather than general and administrative expenses. A significant difference between these items may indicate the differences in the value-adding functions performed.

However, cost-based indicators should only be used in cases where costs are a relevant indicator of the value of the functions performed, assets used and risks assumed by the tested party. In addition, the determination of costs, which should be included in the cost base, should be derived from a careful review of the facts and circumstances of the case. When applying a cost-based TNMM under which the net profit indicator is weighted against costs, fully loaded costs (total costs) are often used. These costs include all the direct and indirect costs attributable to the activity or transaction together with an appropriate allocation and with respect to the overheads of the business.

Based on the foregoing discussion it may be concluded that determination of the appropriateness of a mark up on total costs requires careful consideration of factors such as the nature of the activity and the significance of the activity to the group, the functional analysis and the characterization of the intra-group transactions involved, as well as the relative efficiency of the entities and any advantage that the activity creates for the group.

Identification of the form of the manufacturing subsidiary

To identify the form of the manufacturing subsidiary, it is necessary to perform a deep research of all selected subjects in the Amadeus database. It has been checked that all the selected subjects do

[18] Hereinafter as Operating P/L.

[19] In financial accounting the terms of expenses and costs are used. Expenses mean costs charged against revenue in a particular accounting period (are used in external financial reports) and are not related to manufacturing process (in managerial accounting these expenses are called non-manufacturing costs and are classified as period costs). The second term costs mean costs which are attributed to manufactured product which consist of direct materials, direct labor and manufacturing overhead. On the contrary managerial accounting uses the term cost in many different ways and these costs are classified differently according to the immediate needs of management. Period costs, costs that can be more easily attributed to time intervals, will appear on the income statement as expenses in the time period in which they are incurred. Since data used in this paper are from financial statements both of terms are distinguished based on financial accounting principles.

record the absolute values of indicators for all selected years (five years[20]) in order to guarantee the validity of the indicators. Following indicators have been covered into the selection: cost of goods sold, other operating expenses and operating P/L according to the state of headquarters. The subjects with an average negative result of operating P/L over selected years have been excluded.

Further, it is necessary to determine the form of the subject – i.e. toll/contract manufacturer or full-fledged manufacturer. The determination has been done by the application of the following indicators:

[4] *Other operating expenses / total costs*, (hereinafter as OPEX / TC)

[5] *Total costs = operating Revenue – Operating P/*L,
(hereinafter as OPREV – Operating P/L)

[6] *Cost of goods sold / total costs*, (hereinafter as CGS / TC)

[7] *Cost of goods sold / operating Revenue*, (hereinafter as CGS / OPREV)

These above calculated ratios have been used to classify the subjects on the toll/contract manufacturer and full-fledged manufacturer. The relatively lower value of *other operating expenses / total costs* indicator and the relatively higher value of *cost of goods sold / total costs* indicator refer to the toll/contract manufacturer. The correlation analysis has revealed negative correlation (see Table 1), between OPEX/TC and CGC/TC. The correlation coefficient has been identified -0.999952. Furthermore, another very strong negative correlation has been indicated between OPEX/TC and CGC/OPREV. The value of the correlation coefficient is 0.895773. Based on the results of the correlation analysis it may be concluded that if indicator OPEX/TC tend to decrease, the other indicators namely CGC/TC and CGC/OPREV tend to increase through their negative correlation and consequently the last indicator Operating P/L / TC also tend to increase.

Table 1
The correlation analysis

Indicators	Correlation analysis N=60 Statistically significant values are highlighted.					
	Averages	**Standard deviation**	**OPEX / TC**	**CGC / TC**	**CGC / OPREV**	**Operating P/L / TC**
OPEX / TC	20.39617	18.17613	1.00000	**-0.999952**	**-0.895773**	**-0.445809**
CGC / TC	79.58062	18.17113	**-0.999952**	1.00000	**0.895808**	**0.445818**
CGC/ OPREV	75.03892	16.78032	**-0.895773**	**0.895808**	1.00000	0.017172
Operating P/L / TC	6.01630	9.57640	**-0.445809**	**0.445818**	0.017172	1.00000

Source: own calculation and processing.

[20] Generally, under normal circumstances, it is sufficient to include the period from two to three years. However, due to worldwide crisis which has started in 2007 it is suitable to include a longer period with data covering also the crisis.

This is connected mainly with the fact that the toll manufacturer does not own the raw materials, property rights for products/inventory or any specific intangible assets and does not bear any specific functions. He only performs the production function. See figure 1.

Figure 1

Income statements of manufacturing company

Toll manufacturer	*Contract/full-fledged manufacturer*
Sales	Sales
Cost of goods sold = cost of goods manufactured	Cost of goods sold
Direct labor	Beginning finished goods inventory Added cost of goods manufactured
Manufacturing overhead (indirect materials, indirect labor, machine rental, utilities)	Direct material Direct labor Manufacturing overhead (indirect materials, indirect labor, machine rental, utilities, insurance, depreciation and property tax of factory) Added Beginning work in process inventory Deduct Ending work in process inventory
	Goods available for sale
	Ending finished goods inventory
Gross margin	Gross margin
Less operating expenses (generally administrative expenses related to production function)	Less operating expenses (other expenses related to all function performed – marketing, selling expenses, administrative expenses)
Net income	Net income

Source: own calculation and processing.

From a legal perspective, the toll manufacturer is the service provider and produces pre-agreed number of customized products with little or no risk and generates stable operating profit. Thus, the ratio *cost of goods sold to total costs* should be of higher value (including almost all incurred costs) and ratio *other operating expenses to total costs* should be of lower value (including only nonmanufacturing overhead for instance generally administrative expenses) and ratio *operating profit to total costs* should be of .higher value.

Different methods of recording of manufacturing process in accounting in case of toll/contract manufacturer and full-fledged manufacturer have an impact on the amount of operating mark up on total costs, i.e. full-fledged manufacturer performs significantly lower operating mark up on total costs since performs more functions, bears more risks and uses more assets thus its total costs are higher.

Furthermore, the multiple regressions have been performed to learn more about the relationship between independent variables (OPEX/TC, CGC/TC[21] and CGC/OPREV) and dependent variable

[21] The independent variable CGC/TC has been excluded due to perfect negative correlation with the variable OPEX/TC.

Operating P/L/TC. The results of regression analysis for full-fledged and toll/contract manufacturers are stated in Table 2 below. The both regression models (see table 2) where R-square is close to 1.0 indicate that it has been accounted for almost all of the variability with the variables specified in the model (91 % in case of full-fledged and 95 % in case of toll/contract manufacturers have been explained). In both cases the independent variables (OPEX/TC and CGC/OPREV) with dependent variable Operating P/L / TC are nearly perfectly correlated.

Table 2

The multiple regression of full-fledged and toll/contract manufacturers

Independent variables	The results of multiple regression with the dependent variable: Operating P/L / TC Statistically significant values are highlighted.						
	full-fledged manufacturer			**toll/contract manufacturers**			p-level
	R^2 = .91159560			R^2 = .94539532			
	b	Standard Error from b	t(22)	b	Standard Error from b	t(32)	
Constant	**169.9833**	**11.59794**	**14.6563**	**109.2711**	**4.308191**	**25.3636**	**0.000000**
OPEX / TC	**-1.7145**	**0.11499**	**-14.9102**	**-1.1485**	**0.070009**	**-16.4054**	**0.000000**
CGC/ OPREV	**-1.6947**	**0.11915**	**-14.2229**	**-1.0695**	**0.046922**	**-22.7925**	**0.000000**

Source: own calculation and processing.

Based on the multiple regression of full-fledged and toll/contract manufacturers it may be concluded that if manufacturing entity has a higher value of indicator Operating P/L / TC then an indicator OPEX/TC has a low value. An indicator CGC/TC due to the perfect negative correlation with the variable OPEX/TC has a higher value and CGC/OPREV has a low value.

However, important to note that the toll/contract manufacturers bear little or no risk, their total costs are significantly lower than in the case of full-fledged manufactures and generate stable operating profit. Based on these circumstances their indicator Operating P/L / TC reaches higher value and consequently indicator CGC/OPREV reaches also higher value since the cost of goods sold represent almost all incurred costs and revenues reflect the compensation for functions performed and risk borne connected with generating stable operating profit. On the other hand, the full-fledged manufacturer performs all functions and bears all risks thus its total costs reach significantly higher value and its indicator Operating P/L / TC reaches lower value than in case of toll/contract manufacturer.

A determination of arm's length range

The determination of arm's length range represents the last step in transfer pricing methodology. As mentions (Kratzer, 2008) the application of interquartile range is required by many tax administrations and also recommended, because it eliminates extreme results. And as is added by (Bronson, Johnson and Sullivan, 2010) the use of the interquartile range of results is meant to

exclude potential outliers and, consequently, increase the reliability of the comparison of results. The interquartile range represents a range from the 25th to the 75th percentile of the results derived from the uncontrolled transactions – only those 50 percent of observations which are closest to the median are considered as a reliable range of arm's length results. If the margin of the tested party (in this case the mark up on total costs) falls within this interquartile range, it can be concluded that the arm's length principle is met.

The transfer price is determined by cost-based TNMM[22] method, under which the transfer price is equal to the mark up on total costs considering the volume of the sale in case of the manufacturer. In case of the commission agent the transfer price is determined under RPM[23] method, where the transfer price is equal to the commission fee since the commission agent never owns the goods, has no cost of goods sold and records only commission fee as a profit.

The selection of the most suitable legal form of manufacturing subsidiary is performed by the comparison of the total tax liabilities of the group with the various forms of manufacturing subsidiaries with the aim to optimize the tax liability for a group.

RESULTS AND DISCUSSION

Manufacturing company focused on the processing of glass, porcelain and ceramic products is based in Austria. The company decided to establish a manufacturing subsidiary in the Czech Republic and distributing subsidiaries in the form of commission agents in Lithuania, Bulgaria and Ireland. After the establishment, the parent company in Austria would perform only specific functions. The reason for the establishment of the manufacturing company in the Czech Republic represents the lower income tax rate in the amount of 19%[24], lower costs on labor force and suitable background[25] for glass, porcelain and ceramic manufacturing. The reason for the establishment of the distribution company in the form of commission agent represents the aim of the parent company to transfer of selected distribution functions to subsidiaries (distribution, administrative, marketing functions). The rest of the functions and risks are still borne by parent company in Austria.

The parent company when establishing the subsidiaries (manufacturing and distributing) must consider the functions of the subsidiaries which are going to be performed. It is necessary to adopt

[22] See point 1 – the expression of the mark up on total costs.
[23] For details see OECD TP Guidelines, Paragraphs 2.21 a 2.22.
[24] The current income tax rate in Austria is 25%.
[25] During worldwide crisis and crisis aftermath a lot of companies operating in glass, porcelain and ceramic industry fell into bankruptcy or were demerged from the group, so there are easily available production capacities for renting.

contract and organizational structure, and consequently the method of transfer pricing according to the functions and risks of subjects in the group. The subsidiary of the parent company in Austria could be established for the production process in the form of a toll/contract manufacturer[26] or full-fledged manufacturer and for the distribution in the form of an agent (commission agent)[27].

The distributing subsidiary of manufacturer in Austria located in the Lithuania, Bulgaria and Ireland represents a commission agent. In case of the commission agent, the ownership rights are never transferred unlike the distributor. The relationship between the parent and subsidiary company would be regulated by commission contract, where the subsidiary as an agent would conclude by its name on behalf of principal (parent company) sales contracts with customers. It can be considered as rendering of services for the commission, when most of the risk is still borne by a principal. In this situation the commission agent cannot realize a loss. The commission agent (subsidiary) would actively search for customers, would sell products (including the administration – i.e. invoicing and payments) and would advertise products and keep the payroll, accounting and tax agenda.

The determination of the net mark up on total costs of manufacturers through comparability analysis represents the crucial fact for the calculation of the price in accordance with the arm's length principles. Amadeus Database has been used as data source for quantifying the net operating margin and consequently the net mark up on total costs. Firstly, it was necessary to filter the data according to the selected criteria stated in the Table 3. The companies of similar manufacturing process[28] according to NACE classification code 231 and 234(i.e. manufacture of glass, glass products and other porcelain and ceramic products), active companies operating in the EU (27) including Norway, Sweden, Switzerland and Russian Federation[29] has been selected as the filtering criteria. As another filtering criteria has been selected the independency of subjects and the availability of the necessary financial data (operating P/L, other operating expenses and cost of goods sold). The application of the above described filtering criteria has generated 52 similar market subjects.

Table 3

Filtering criteria

No.	Search strategy	Total of selected companies
1.	BvD Independence indicator – A+, A, A-	361,639

[26] s toll/contract and full-fledged manufacturers see chapter Materials and methods.

[27] There are several types of the subjects in the group for performing of distribution i. e. full-fledged distributor, limited-risk distributor, commission agent. Differences between the full-fledged distributor and commission agent have been surveyed by Solilová, V., Nerudová, D. (2011): Transfer pricing in agricultural enterprises. Agricultural Economics – in print.

[28] The companies of similar manufacturing process are important for performing comparability analysis that compares entities from similar industry (NACE code 231and 234) with similar functional profiles.

[29] Region/country has been enlarged due to the insufficient number of subjects.

2.	NACE Rev. 2 (primary codes only) – 231 (manufacture of glass and glass products), 234 (manufacture of other porcelain and ceramic products)	650
3.	Region/Country – European Union, enlarged (27), Norway, Russian Federation, Sweden, Switzerland	627
4.	Legal status – active	612
5.	Operating P/L – 2009 (all companies with an available value)	101
6.	Years with available accounts (2009, 2008, 2007, 2006, 2005)	101
7.	Other operating expenses, Cost of goods sold – all companies with an available value, 3 years for at least	52
Boolean search (1 and 2 and 3 and 4 and 5 and 6)		**52**

Source: (Amadeus, Bureau Van Dijk).

This above described methodology has resulted into the list of the 52 companies. Those have been reviewed by formatting a report of financial data. This screening resulted in an exclusion of 40 companies. The reasons were following:

1) 1 company was excluded for having an average negative result of operating P/L over the selected years 2005 to 2009.
2) 10 companies were excluded for missing reports between selected years 2005 to 2009.
3) 29 companies were excluded for having another secondary NACE codes, not primarily related to code 231 (manufacture of glass and glass products) and 234 (manufacture of other porcelain and ceramic products).

Further, it was necessary to select the financial indicators, which are mentioned in Table 4. These indicators were used for the determination of the type of the subject – (i.e. toll/contract manufacturer or full-fledged manufacturer) under the methodology already described above.

Table 4

Key financial indicators

Co.	Country	Years	OPREV	Operating P/L	TC	CGS	OPEX	OPEX / TC	CGS / TC	CGS / OPREV
			(€ 1.000)					Percent		
A1 F[30]	DE	2009	1012741	63979	948762	734964	213798	22,53	77.47	72.57
		2008	1088422	65739	1022683	766843	255840	25,02	74.98	70.45
		2007	980878	66045	914833	692605	222228	24,29	75.71	70.61
		2006	658806	29899	628907	474143	154764	24,61	75.39	71.97
		2005	490547	-16655	507202	343815	163387	32,21	67.79	70.09
B2 F	DE	2009	741915	-86109	828024	495232	332792	40,19	59.81	66.75
		2008	871004	23991	847013	513005	334008	39,43	60.57	58.90
		2007	868883	38405	830478	506692	323786	38,99	61.01	58.32
		2006	847713	33943	813770	484131	329639	40,51	59.49	57.11
		2005	931560	24092	907468	547088	360380	39,71	60.29	58.73
C6	FR	2009	115310	-14707	130017	33619	96398	74,14	25.86	29.16

[30] F – full-fledged manufacture, T – toll manufacturer, C - **c**ontract manufacturer.

F		2008	138719	-6005	144724	41459	103265	71,35	28.65	29.89
		2007	145400	6388	139012	43028	95984	69,05	30.95	29.59
		2006	146857	15172	131685	67826	63859	48,49	51.51	46.19
		2005	130879	5238	125641	65490	60151	47,88	52.12	50.04
D10 C	UK	2009	85918	9627	76291	63687	12847	16,84	83.48	74.13
		2008	91446	7329	84117	69217	13803	16,41	82.29	75.69
		2007	100028	9456	90572	75743	14567	16,08	83.63	75.72
		2006	103805	7515	96290	79750	16590	17,23	82.82	76.83
		2005	97090	8269	88821	72264	16514	18,59	81.36	74.43
E19 F	UK	2009	31367	268	31099	21848	9256	29,76	70.25	69.65
		2008	49557	197	49360	34764	14556	29,46	70.43	70.15
		2007	50465	347	50118	33692	16408	32,74	67.23	66.76
		2006	57240	1524	55716	38319	17413	31,25	68.78	66.94
		2005	65949	1862	64087	44096	19997	31,20	68.81	66.86
F23 T	RU	2009	22085	924	21161	21151	11	0,05	99.95	95.77
		2008	27263	2685	24578	24580	0	0	100	90.16
		2007	26218	5467	20751	20753	0	0	100	79.16
		2006	19672	3205	16467	16466	0	0	100	83.70
		2005	6295	189	6106	6106	0	0	100	97.00
G29 F	UK	2009	17966	193	17773	11366	6411	36,07	63.95	63.26
		2008	28365	-888	29253	19385	9867	33,73	66.27	68.34
		2007	39539	390	39149	28625	10524	26,88	73.12	72.40
		2006	44406	-1193	45599	35374	10224	22,42	77.58	79.66
		2005	41917	269	41648	31544	10106	24,27	7574	75.25
H31 C	RU	2009	16128	749	15379	13452	1928	12,54	87.47	83.41
		2008	26406	1210	25196	22289	2908	11,54	88.46	84.41
		2007	22534	1038	21496	19446	2050	9,54	90.46	86.30
		2006	13716	1015	12701	11645	1056	8,31	91.69	84.90
		2005	7235	151	7084	6571	512	7,23	92.75	90.82
I32 C	RU	2009	15049	120	14929	14250	679	4,55	95.45	94.69
		2008	23915	2513	21402	20677	727	3,40	96.61	86.46
		2007	125866	9658	116208	114805	1407	1,21	98.79	91.21
		2006	30485	2344	28141	27614	527	1,87	98.13	90.58
		2005	12728	416	12312	12018	292	2,37	97.61	94.42
J42 C	RU	2009	9079	835	8244	7029	1217	14,76	85.26	77.42
		2008	11160	-305	11465	9526	1939	16,91	83.09	85.36
		2007	12920	860	12060	10008	2052	17,01	82.98	77.46
		2006	13316	1575	11741	9987	1754	14,94	85.06	75.00
		2005	11642	508	11134	9122	2009	18,04	81.93	78.35
K45 T	RU	2009	8089	601	7488	7489	0	0	100	92.58
		2008	13944	2895	11049	11052	0	0	100	79.26
		2007	14422	4419	10003	10005	0	0	100	69.37
		2006	12559	1792	10767	10767	0	0	100	85.73
		2005	7996	1485	6511	6504	0	0	99.89	81.34
L94 C	RU	2009	737	-249	986	970	16	1,62	98.35	131.61
		2008	6978	640	6338	5506	833	13,14	86.87	78.91
		2007	7326	630	6696	5760	937	13,99	86.02	78.62
		2006	6698	457	6241	5399	842	13,49	86.51	80.61
		2005	5671	191	5480	4609	869	15,86	84.11	81.27

Source: (Amadeus, Bureau Van Dijk).

Based on the above mentioned research companies D10, F23, H31, I32, J42, K45 and L94 were identified as toll/contract manufacturers and the rest of the companies as full-fledged manufacturers.

Finally, it was necessary to determine the arm's length range for the five selected years (weighted average interquartile range) for toll/contract manufacturers and full-fledged manufacturers. In this analysis the financial ratio in the form of net mark up on total cost has been used, which is typically used when evaluating the profitability of manufacturing entities. The results are summarized in the Table 5 and 6.

Table 5

Mark up on total cost of toll/contract manufacturer

Co.	**Country**	**2009**	**2008**	**2007**	**2006**	**2005**
	Net Mark up total costs = operating profit/total costs (%)					
Median	UK, FR, RU, DE	4.87	10.10	9.92	8.33	4.02
Average		2.22	9.97	17.63	11.57	7.77
First quartile		**2.59**	**6.76**	**7.72**	**7.90**	**3.24**
Second quartile		4.87	10.10	9.92	8.33	4.02
Third quartile		**11.38**	**18.97**	**35.26**	**18.06**	**16.06**
Lower Limit		-25.28	-2.66	4.83	7.32	2.13
Upper Limit		12.62	26.20	44.17	19.47	22.81
D10		12.62	8.71	10.44	7.80	9.31
F23		4.37	10.93	26.35	19.47	3.09
H31		4.87	4.80	4.83	7.99	2.13
I32		0.80	11.74	8.31	8.33	3.38
J42		10.13	-2.66	7.13	13.42	4.56
K45		8.02	26,.0	44.17	16.65	22.81
L94		-25.28	10.10	9.40	7.32	3.49

Source: (Amadeus, Bureau Van Dijk).

Table 6

Mark up on total cost of full-fledged manufacturer

Range	**Country**	**2009**	**2008**	**2007**	**2006**	**2005**
	Net Mark up Total costs = operating profit/total costs (%)					
Median	UK, FR, RU, DE	0.86	0.40	4.60	4.17	2.65
Average		-2.60	0.50	3.63	4.11	1.42
First quartile		**-10.85**	**-3.60**	**0.85**	**0.03**	**-1.32**
Second quartile		0.86	0.40	4.60	4.17	2.65
Third quartile		**3.92**	**4.63**	**5.92**	**8.14**	**3.54**
Lower Limit		-11.31	-4.15	0.69	-2.62	-3.28
Upper Limit		6.74	6.43	7.22	11.52	4.17
A1		6.74	6.43	7.22	4.75	-3.28
B2		-10.40	2.83	4.62	4.17	2.65
C3		-11.31	-4.15	4.60	11.52	4.17
E19		0.86	0.40	0.69	2.74	2.91
G29		1.09	-3.04	1.00	-2.62	0.65

Source: (Amadeus, Bureau Van Dijk).

The arm's length range for toll/contract manufacturer has been identified in the interval from 5.64 % to 19.95 % on average with median of 7.45 %. The arm's length range for full-fledged manufacturer has been identified in the interval from -2.98 % to 5.23 % on average with median of 2.54 %. The results are presented in the Table 7.

Table 7

The average arm's length range for manufacturer

Net operating profit/total costs (%)		
	toll/contract manufacturer	full-fledged manufacturer
1. quartile	5.64	-2.98
Median	7.45	2.54
3. quartile	19.95	5.23

Source: (Amadeus, Bureau Van Dijk).

The Table 7 shows that the net operating mark up on total costs for tool/contract manufacturer should oscillate around the median value i.e. 7.45 %, in comparison with the full-fledged manufacturer, where the net operating mark up on total costs oscillates around the value of the 3rd quartile – i.e. 5.23 %.

Based on the above stated table, the current toll/contract manufacturer, who does not perform any specific production or bears no specific function and risks should reach the net operating mark up on total costs in the amount of 7.45 %, which is the median value, while full-fledged manufacturer should reach the net operating mark up on total costs in the amount of 5.23 %.

The observed difference in net operating mark up on total costs for the tool/contract manufacturers and the full-fledged manufacturers is mainly caused by differences in recording of manufacturing process in the accounting. The toll manufacturer[31] does not own the raw materials, products/inventory or any specific intangible assets and does not bear any specific functions; he only performs the production function. Therefore, the cost of manufactured goods include only incurred costs (direct labor and manufacturing overhead). Cost of goods sold does not include beginning/ending finished goods inventory. Other incurred costs, which are included in total costs represent the operating expenses in the form of administrative expenses, selling expenses, are borne by the customer (parent company[32]). As the toll manufacture performs only the production function, he should have very low proportion of other operating expenses on total costs while the proportion of cost of goods sold on total costs is very high. From a legal perspective the toll manufacturer represents the service provider, in comparison with the full-fledged manufacturer owning the raw materials and products/inventory, performing production, storage, distribution, sale and performing

[31] In the case of toll manufacturer the value of the other operating expenses on total costs is amounted to almost zero percent (as direct and indirect costs of manufacturing process are involved in the cost of goods manufactured and only production function is performed) and value of cost of goods sold on total costs is amounted almost to 100 percent. In case of the contract manufacturer (which owns raw materials and products and bears risk of inventory and production) is value of the other operating expenses on total costs higher than zero percent and value of cost of goods sold on total costs lower than 100 percent.

[32] Other operating expenses borne by parent company relate to the other function performed with the exception of production function.

other functions. However he does not produce pre-agreed number of customized products. The proportion of other operating expenses on total costs is higher while the proportion of cost of goods sold on total costs is lower.

Specific net mark up on total costs needed for the calculation of the transfer price is 5.23 % in case of the full-fledged/strategic manufacturer and 7.45 % in case of the toll/contract manufacture.

In consideration of the pros and cons of the legal forms of subsidiary, it is also necessary to consider the tax impact for manufacturer in the Czech Republic, parent company in Austria and distributors in Lithuania, Bulgaria and Ireland. Table 8 indicates the tax liability of manufacturing subsidiary and its transfer price.

Table 8

The tax liability of manufacturer in the group and transfer pricing

Glass products	The tax liability of manufacturer in the Czech republic	
	toll/contract manufacturer	**full-fledged manufacturer**
Sales (transfer price)	9.5 % gross mark up on total costs 3mil. units * 1 EUR/unit * 1.095 = 3,285mil. EUR	20.5 % mark up on total costs 3mil. units * 2 EUR/unit * 1.205 = 7,23mil. EUR
Costs of goods sold	3mil. EUR	6mil. EUR
Gross margin	285,000 EUR thus 8.7 %	1,23mil. EUR thus 17 %
Other operating expenses	9,000 EUR	842,000 EUR
Profit/income	276,000 EUR	388,000 EUR
Tax liability (19 %)	276,000 * 0.19 = 52,440 EUR	388,000 * 0.19 = 73,720 EUR
Net profit mark up	223,560 EUR / 3mil. EUR = 7.45 %	313,800 EUR / 6mil. EUR = 5.23 %
Transfer price	3,285mil. EUR	7,23mil. EUR

Source: own calculation and processing.

As can be seen from the table 8, the toll/contract manufacturer uses 7.45% net mark up on total costs and its gross margin reaches 8.7% in comparison with the full-fledged manufacturer with 5.23% net mark up on total costs and almost 17% gross margin. In this case when the full-fledged manufacturer bears complex functions, risks and greater responsibilities, higher gross margin is reached and its cost per manufactured unit are valued on 2 EUR. Due to the above mention factors the transfer price of the full-fledged manufacturer and its tax liability reach higher values in comparison with the toll/contract manufacturer.

Table 9 indicates the tax liability of subsidiaries ensuring the distribution of glass products and their transfer prices. The commission agent has no costs of goods sold because he does not own the goods. In the profit and loss account only the commission (commission fee is 10% from sales on the basis of contract) and other related operating expenses are recorded. Thus the transfer price equals

to the commission fee. The tax rates in individual states are 15% in Lithuania, 12.5% in Ireland and the lowest 10% in Bulgaria.

Table 9

The tax liability of distributors in the group and transfer pricing

Glass products	The tax liability of distributors - commission agent		
	Lithuania	**Ireland**	**Bulgaria**
Commission fee	10 % gross margin 1 mil. units * 0.10 * 3.5 EUR/unit = 350,000 EUR per company		
Costs of goods sold	0 EUR		
Gross margin	350,000 EUR per company thus 100 %		
Other operating expenses	150,000 EUR		
Profit/income	200,000 EUR		
Tax liability (15 %, 12.5 %, 10 %)	200,000 * 0.15 = 30,000 EUR	200,000 * 0.125 = 25,000 EUR	200,000 * 0.10 = 20,000 EUR
Transfer price	commission fee 0.35 EUR per unit = 350,000 EUR		

Source: own calculation and processing.

Table 10 below indicates the tax liability of parent company and the total tax liability for the group. As can be seen the tax liability in Austria from the perspective of a parent company and a separate entity without any expansion in the form of the subsidiaries (i.e. the original condition) is very different. The parent company records sale of glass as its revenue and commission fee with other expenses (other operating expenses and transfer price paid to manufacturer) as its expenses in the statements of profit and loss. In case of the toll/contract manufacturer and commission agents as distributors the parent company reaches the lowest tax liability (416,250 EUR and 543,690 EUR for the all group) due to higher other operating expenses because the parent company bears almost all functions and risks. In case of the full-fledged manufacturer and commission agents when the parent company bears a few functions and risks are its other operating expenses lower but on the other hand its transfer price which is paid to full-fledged manufacturer is higher. Despite of all the above mentioned, its tax liability is higher in comparison with the first alternative. The highest tax liability arises in the last alternative (original condition) when the parent company does not expanded. In this situation the parent company would have lower other operating expenses because its total costs would not include commission fee paid to the distributors and transfer price paid to the manufacturer. All its income would be taxed in Austria by 25% corporate tax rate, i.e. the tax liability would amount to 875,000 EUR (i.e. by 61 % more in comparison with the first alternative). Based on the above mentioned calculations, the most suitable legal form of manufacturing subsidiary for parent company with respect to the applied transfer pricing policy has been indicated the toll/contract manufacturer that distributes own products through distribution subsidiaries in the form of commission agents. In this case the tax liability has reached the lowest value of 543,690 EUR.

Table 10

The tax liability of parent company in the group and transfer pricing

Glass products	Parent company – Austria				Original condition[33]
	Commission agents and toll manufacturer		Commission agents and full-fledged manufacturer		
Sales of goods sold	3 mil. units * 3.5 EUR/unit = 10,5mil. EUR	-	3 mil. units * 3.5 EUR/unit = 10,5mil. EUR	-	10,5mil. EUR
Operating expenses	4,5mil. EUR		500,000 EUR		7mil. EUR
Commission fee	3 * 350,000 EUR = 1,050mil. EUR	-	3 * 350,000 EUR = 1,050mil. EUR	-	-
Transfer price (net COST+)	-	3,285mil. EUR	-	7.230mil. EUR	-
Total costs	8,835mil. EUR		8,78mil. EUR		7mil. EUR
Profit/income	1,665mil. EUR		1,720mil. EUR		3,5mil. EUR
Tax liability (25 %)	416,250 EUR		430,000 EUR		875,000 EUR
Total tax liability for the group	52,440 + 75,000 + 416,250 = 543,690 EUR		73,720 + 75,000 + 430,000 = 578,720 EUR		875,000 EUR

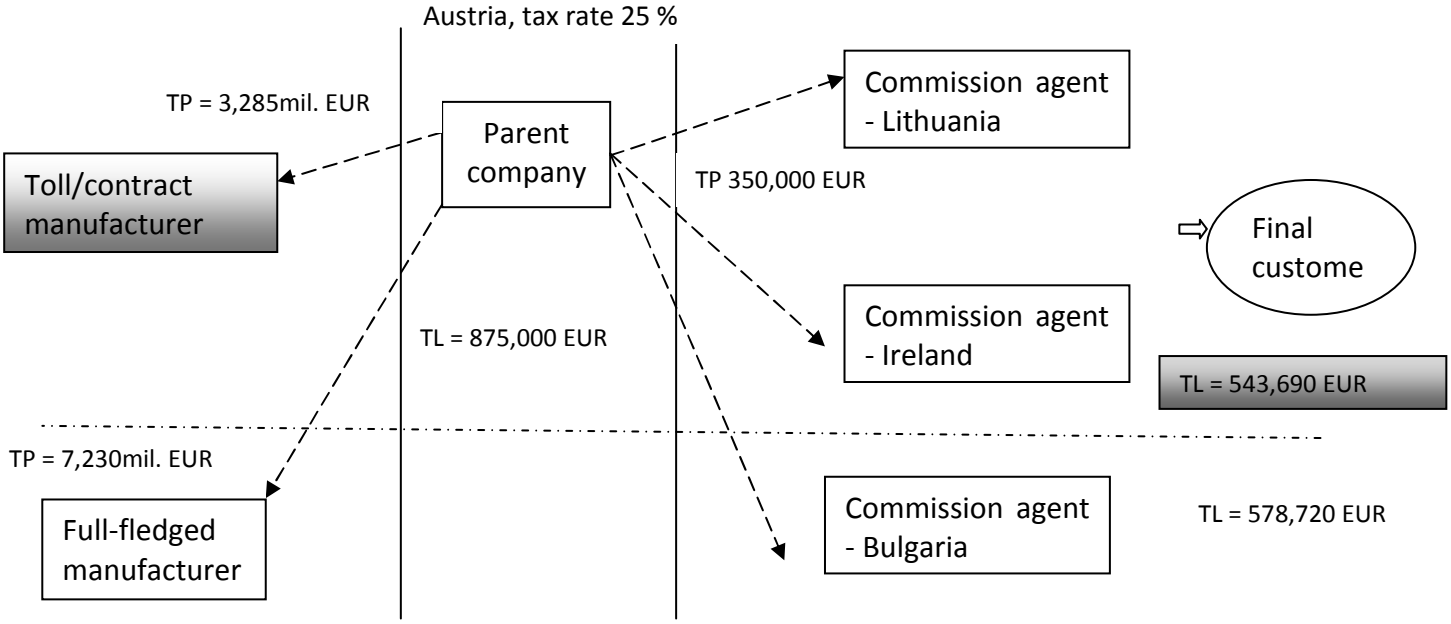
Source: own calculation and processing.

The impact of different variants is summarized in the following figure 2. The selected variant of the toll/contract manufacturer, under which the total tax liability is 543,690 EUR (in case of the sale of 1 million units of glass) is highlighted.

[33] Original condition means the situation when the manufacturing process and distribution of products are performed in Austria by parent company without subsidiaries.

Figure 2

Typology of subjects in the group, their transfer prices and tax liability[34]



Source: own calculation and processing.

CONCLUSION

The research and the above stated discussion have shown that various factors need to be taken into account when considering the transfer pricing strategy. During the research, the model which was used has revealed that the structure of the group of Austrian enterprise that optimize the tax base is the manufacturing subsidiary in the form of the toll/contract manufacturer in the Czech Republic and its distribution subsidiaries in the form of commission agent in Lithuania, Ireland and Bulgaria. The manufacturing subsidiary should fulfill the role of the toll/contract manufacturer in the group, for it decreases the risks and the total tax liability of the group. It had been proved that properly selected transfer pricing strategies can achieve the distribution of the tax risks and reduce the total tax liability. The aim of the paper to evaluate the impact of the different forms of the manufacturing subsidiary distributing own products through distribution subsidiaries in the form of commission agents on the total tax liability of the entity operating in the glass, porcelain and ceramic industry which, including the identification of the most suitable legal form of manufacturing subsidiary for parent company with respect to the applied transfer pricing policy, has been fulfilled and summarized in the Figure 2 above. The most suitable legal form of manufacturing subsidiary for parent company with respect to the applied transfer pricing policy has been the toll/contract

[34] TP= transfer pricing TL=tax liability = TL.

manufacturer that distributes own products through distribution subsidiaries in the form of commission agents. In this case the tax liability has reached the lowest value of 543.690 EUR.

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