



Anne Schäfer

International Company Taxation in the Era of Information and Communication Technologies

Issues and Options for Reform



GABLER EDITION WISSENSCHAFT

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With a foreword by Prof. Dr. Dr. h.c. mult. Otto H. Jacobs

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Dedicated to my parents

Foreword

The increased use of information and communication technologies (ICT) is leading to noticeable changes within the organisational structure of the economy. Geographical distances within companies as well as between companies and their customers can be bridged more easily with the use of ICT. Thus, economic activities are less dependent on time and place. Taking into account the manifold changes in the economic structures, it has to be questioned whether and to what extent the current rules of international company taxation are still applicable in a reasonable way. With regard to this issue, a need for the development of suitable reform approaches covering the whole system of international taxation still existed. The doctoral thesis of Mrs. Schäfer provides a major contribution to fulfill this need.

Mrs. Schäfer has worked out in a very comprehensive way the creation of new organizational structures as well as the resulting implications on tax law and the system of international taxation. Moreover, the existing literature on the subject at hand has been analyzed in a competent way. The special merit of the doctoral thesis of Mrs. Schäfer consists in elaborating reform proposals for international company taxation which cover the different relevant issues of international taxation. More in detail, reform proposals for the definition of a company's residence, the definition of the permanent establishment, the possibilities of profit allocation as well as the methods of avoiding international double taxation are covered by the analysis. Thereby, the interrelation between these issues is taken into account. The reform proposals are methodically well-founded and feasible in practice.

The doctoral thesis of Mrs. Schäfer is a diversified and well-founded work. It fulfills both methodical and tax law requirements and covers complex issues of international company taxation. The doctoral thesis of Mrs. Schäfer constitutes a major contribution to the discussion of the economic and tax implications of information and communication technologies as well as to the methodical development of international company taxation. It is not only of particular importance for international research in this field, but also of special interest for national governments as well as supranational organizations dealing with this issue, such as the OECD or the Commission of the European Communities. I therefore highly recommend the doctoral thesis of Mrs. Schäfer to this audience.

Prof. Dr. Dr. h.c. mult. Otto H. Jacobs

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Abbreviations

AG	Aktiengesellschaft
APA	Advanced Pricing Agreement
ASP	Application Service Providing
B2B	Business to Business
B2C	Business to Consumer
BB	Betriebs-Berater (Journal)
BIFD	Bulletin for International Fiscal Documentation (Journal)
BSiBl	Bundessteuerblatt
B.T.R.	British Tax Review (Journal)
CACM	Communications of the ACM (Journal)
CCBT	Common Consolidated Base Taxation
CDFI	Cahiers de Droit Fiscal International (Journal)
CESifo	Centre for Economic Studies Institut für Wirtschaftsforschung
CFC	Controlled Foreign Company
CHTB	Compulsory Harmonised Tax Base
CPM	Cost Plus Method
CTJ	Canadian Tax Journal (Journal)
CUPM	Comparable Uncontrolled Price Method
DB	Der Betrieb (Journal)
DBW	Die Betriebswirtschaft (Journal)
DIHK	Deutscher Industrie- und Handelskammertag
DSiJG	Deutsche Steuerjuristische Gesellschaft e. V.
DStRE	Deutsche Steuerrecht Entscheidungsdienst (Journal)
DStZ	Deutsche Steuerzeitung (Journal)
e.g.	For example
ECJ	European Court of Justice
e-commerce	electronic commerce
Ed.	Editor
Eds.	Editors
ET	European Taxation (Journal)
Et al.	Et alii
EU	European Union
EUCIT	European Union Company Income Tax
FA	FinanzArchiv (Journal)
FB	Finanz Betrieb (Journal)
FDI	Foreign Direct Investment
FR	Finanzrundschau (Journal)
GATT	General Agreement on Tariffs and Trade
GDP	Gross Domestic Product

GmbHR	GmbH-Rundschau (Journal)
HBR	Harvard Business Review (Journal)
HST	Home State Taxation
IAS	International Accounting Standards
IBFD	International Bureau of Fiscal Documentation
ibid.	ibidem
ICRT	International Communications Round Table
ICT	Information and Communication Technologies
IFRS	International Financial Reporting Standards
IJEC	International Journal of Electronic Commerce (Journal)
ISI	Institut für Systemtechnik und Innovationsforschung
ISP	Internet Service Provider
IStR	Internationales Steuerrecht (Journal)
IT	Information Technology
ITPF	International Tax and Public Finance (Journal)
IWB	Internationale Wirtschafts-Briefe (Journal)
JEP	Journal of Economic Perspectives (Journal)
JIBS	Journal of International Business Studies (Journal)
JILT	Journal of Information, Law & Technology (Journal)
JITE	Journal of Institutional and Theoretical Economics (Journal)
K&R	Kommunikation und Recht (Journal)
LAN	Local Area Network
mir	Management International Review (Journal)
MIT	Massachusetts Institute of Technology
No.	Number
NTJ	National Tax Journal (Journal)
OECD	Organization for Economic Cooperation and Development
OECD Model	OECD Model Tax Convention
p.	page
pp.	pages
PC	Personal Computer
R&D	Research and Development
RIW	Recht der Internationalen Wirtschaft (Journal)
RJF	Revue de Jurisprudence Fiscale (Journal)
RPM	Resale Price Method
SEC	Staff of the European Commission
SME	Small and Medium-Sized Enterprises
StbJb	Steuerberater-Jahrbuch (Journal)
StuB	Steuern und Bilanzen (Journal)
StuW	Steuern und Wirtschaft (Journal)
TLR	Tax Law Review (Journal)

TN	Tax Notes (Journal)
TNI	Tax Notes International (Journal)
TNMM	Transactional Net Margin Method
TPI	Tax Planning International (Journal)
TPI e-commerce	Tax Planning International e-commerce (Journal)
TPI Transfer Pricing	Tax Planning International Transfer Pricing (Journal)
TPSM	Transactional Profit Split Method
UK	United Kingdom
UN	United Nations
UN Model	UN Model Tax Convention
VAT	Value Added Tax
WiSt	Wirtschaftswissenschaftliches Studium (Journal)
WISU	Das Wirtschaftsstudium (Journal)
WPg	Die Wirtschaftsprüfung (Journal)
ZEW	Zentrum für Europäische Wirtschaftsforschung
ZfB	Zeitschrift für Betriebswirtschaft (Journal)
zfbf	Zeitschrift für betriebswirtschaftliche Forschung (Journal)
ZfCM	Zeitschrift für Controlling und Management (Journal)
zfo	Zeitschrift für Führung und Organisation (Journal)

1. Introduction

1.1. Motivation

In the last few years, *Information and Communication Technologies* (ICT) have spread with increasing speed in both private and business sectors. For example, in 2002, 64,9% of private households and 83,9% of businesses in Germany used the Internet.¹ The ICT sector contributed close to 10% of OECD business GDP in 2001 and employed over 6% of business employment.² In 2002, ICT goods represented 14% of total trade.³

The implementation of ICT is leading to noticeable changes within the organisational structure of the economy, such as in the market organisation and in the internal organisation of enterprises. *Market transactions* carried out by enterprises can be processed either completely or in part by ICT, thus creating digital markets. It is possible to participate in these markets from all over the world and the geographic distances between the participants become rather irrelevant. With respect to the *internal organisation* of a company, the implementation of ICT can lead to regional decentralisation, since the process of producing goods and services makes use of production factors situated in various locations. Also, organisational decentralisation can be observed within the enterprise, as a modularisation of the value added chain takes place. In addition, the application of ICT entails the creation of *hybrid forms of enterprise co-operation*, such as virtual organisations. Thus, the companies' boundaries are becoming blurred. To summarise, due to the utilisation of ICT, economic activities are becoming more mobile and international.

In general, international tax law is applied to the underlying organisational structures of the economy. Given the manifold ICT-induced economic changes outlined above, the question is raised whether and to what extent these changes have an impact on the *applicability of current international tax law*. The main developments influencing international taxation are, above all, the increasing regional independence and mobility of companies and their production factors as well as the increasing importance of firm-specific intangible assets and services. In addition, the data required for taxation may not always be available.

When applying international company tax law to the underlying economic structure, the tax law in general has to be consistent with the economic structure in question in order to arrive at a reasonable taxation. The tax system is considered to be reasonable when it meets various *normative criteria for optimal taxation*. For example, the tax system must provide efficiency and neutrality,

¹ See *OECD*, 2003b.

² See *OECD*, 2004b, p. 3.

³ See *OECD*, 2004b, p. 4.

equity between different taxpayers and between different jurisdictions as well as feasibility in practice.

However, since the use of ICT has an impact on the organisational structures of the economy, the current tax system may not always be in line with these modified business structures. Contrary to the often mobile, geographically independent and international activities of companies, the tax system is intended to be applied rather to traditional economic activities. Thus, the economic assumptions underlying tax law can differ from the real economic circumstances. For example, tax law is in part based on the assumption of immobile business activities, such as in the case of the definition of a permanent establishment or the place of effective management. Moreover, it is assumed that the business activities are normally conducted in a physical way. For instance, physical objects, whose location can be determined easily, serve as tax attributes, such as in the case of the definition of a permanent establishment. However, in contrast, the business structures changed by the use of ICT are less often based on physical attributes and tend to be rather mobile. In addition, some new business structures or ways of doing business may have to be incorporated into existing international tax law. Possible examples are new forms of co-operation or new forms of doing business on digital markets. To sum up, the famous quote “business goes global, taxes stay local” highlights the gap between tax law and the economic reality.⁴

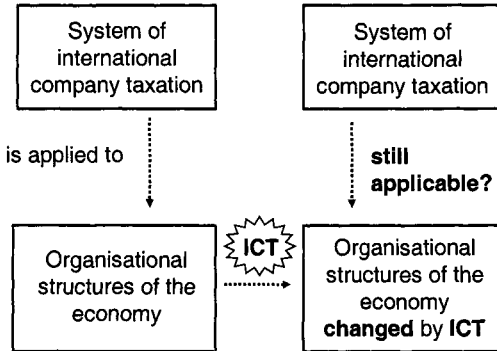
In light of these discrepancies between the international tax system and the underlying economic structures, various *consequences* may arise regarding the applicability of current international company taxation. Some aspects of the international tax system may prove to be more difficult to apply to the changed economic structure, or their application may lead to unreasonable results. Thus, with regard to various normative criteria for optimal taxation, international taxation may be less feasible or may not provide a neutral and equitable taxation. For example, inequalities between different taxpayers or increased incentives for tax planning and manipulation of the tax law may arise. In addition, an allocation of tax revenues that is not consistent with inter-nation equity may result. In extreme cases, the whole system of company income taxation may be deemed to be no longer applicable in a reasonable way.

Thus, since a tax system has to arrive at a taxation in accordance with normative criteria for optimal taxation, the possible incompatibility of international tax law with the underlying economic structures and the resulting scenario of an inefficient, unequal or unfeasible taxation constitutes a problem which might require the development of adequate modifications. Consequently, as shown in figure 1.1, if the economic structures change as outlined above, it is debatable whether and to

⁴ Inter alia, see *Endres*, 1996, p. 92. See also *Spence*, 1997, p. 146, who states that the implication of ICT for the tax

what extent a revaluation of the existing system of international company taxation will be required to ensure that taxation is in line with general taxation principles. Thus, to what extent the current system of international taxation can be upheld and to what extent modifications will be required to provide a reasonable taxation must be examined.

Figure 1.1: Motivation of the Thesis



Previous debate on the impact of ICT on the suitability of international tax law has been conducted by the economic and legal scientific communities, international organisations, such as the OECD and the European Commission, and national jurisdictions.⁵ The vast range of contributions shows that the subject-matter in question is up to date and relevant to a broad community. Still, previous contributions on ICT and international tax law can be completed with regard to different aspects as outlined below.

Firstly, regarding the subject under investigation, previous analyses have often focussed on one or only a few aspects of international taxation. For example, only issues regarding tax attributes in the source and the residence country or exclusively problems of transfer pricing have been considered.⁶ These analyses are all meaningful and have their own rationale. However, the various tax fields interfere with each other and they are all part of the system of international taxation. Thus, when developing possible reforms for a specific tax field, some taxation issues may be shifted to another

treatment of internationally active business is considered to be the most challenging strategic taxation issue.

⁵ See the quotations in footnotes 6 to 14.

⁶ For a focus on tax attributes in the source country, see inter alia *Utescher*, 1999; *OECD*, 2000; *ibid.*, 2001c; *ibid.*, 2003; *Pinto*, 2003. *Peter*, 2002, extended the analysis to tax attributes in the residence country. A comprehensive analysis is provided in *Brunsbach*, 2003, since the analysis of both the tax attributes in the source and in the residence country is further extended to an analysis of the choice between the source and the residence principle. For examinations focussed on issues regarding profit allocation, see *Kaminski*, 2001; *OECD*, 2001a; *ibid.*, 2001b; *Graf*, 2003.

tax field. For example, a re-definition of the permanent establishment may cope with the issues inherent to this tax attribute, but new issues with regard to profit allocation to a permanent establishment may then arise. Consequently, it is almost impossible to consider one tax field and to develop possible reforms without taking into account the interrelations with and the impact on other tax fields. This argument especially holds with regard to the underlying question of whether the tax system is still applicable. Therefore, it is reasonable and necessary to consider the whole system of international tax law consisting of different tax fields and to take their respective interrelations into account.⁷

Secondly, since the scope of the fiscal analysis may be restricted to specific fields, the economic analysis with regard to ICT-induced economic changes sometimes also considers only partial aspects. However, it is necessary to take the whole range of economic changes into account in order to provide a detailed analysis of the impact of ICT on international company taxation. Some systematisations of ICT-induced economic changes have already been developed⁸ and can be extended to produce a systematic analysis of the impact of ICT on international taxation.

Thirdly, also with regard to the evaluation criteria underlying the fiscal analysis, some of the previous analyses on ICT and international tax law have focussed on a restricted range of criteria.⁹ Thus, the analyses based on a diversified range of evaluation criteria still can be completed.¹⁰

Fourthly, and most importantly, although scientific debates on taxation issues raised by the advent of ICT have already been going on for some time, the search for suitable reforms still needs to be completed. Thus, even if several possible reforms for the various taxation issues have already been suggested,¹¹ further research is still required, especially with regard to the question of whether the whole system of international company taxation is still applicable.

1.2. Aim of the Thesis and Subject Under Investigation

In accordance with the underlying purpose and previous debates outlined above, the *aim* of the thesis first involves compiling the principal effects and issues of international company taxation resulting from the increased use of ICT. In a second step, the main aim of the thesis is to develop suitable reforms if required.

⁷ Examples for analyses including various tax fields are *Doernberg / Hinnekens / Hellerstein / Li*, 2001; *Li*, 2003.

⁸ For example, see *Brunsbach*, 2003, pp. 19-34; *Li*, 2003, pp. 2-17; *Knödler*, 2004, pp. 15-40.

⁹ For example, some analyses are more focussed on legal aspects. Inter alia, see *Fetzer*, 2000; *Spatscheck*, 2000; *Volckens*, 2001.

¹⁰ Some examples of studies conducted on the basis of several evaluation criteria are *Utescher*, 1999; *Brunsbach*, 2003; *Li*, 2003; *OECD*, 2003.

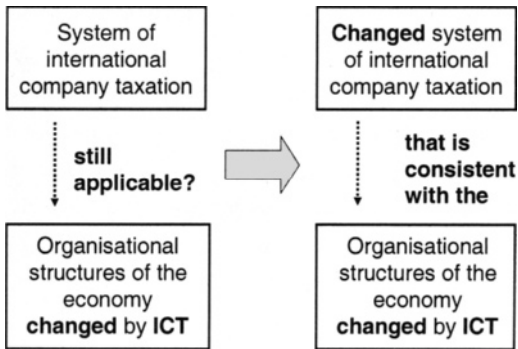
¹¹ Inter alia, see *United States Department of the Treasury*, 1996; *Utescher*, 1999; *Indian Ministry of Finance* (Ed.), 2001; *Kaminski*, 2001; *Brunsbach*, 2003; *Graf*, 2003; *Li*, 2003; *OECD*, 2003; *Pinto*, 2003; *Knödler*, 2004.

In order to achieve this aim, the impact of the changed organisational structures on the international tax planning activities of companies under the current tax system must first be examined. The goal of this step is to determine the relevant taxation issues resulting from the ICT-induced economic changes within the current international tax system. Based on these findings, each relevant taxation issue is analysed in relation to the evaluation criteria underlying the analysis. It is examined whether or not the application of the current tax system to the changed economic structures entails a taxation that is consistent with normative criteria for optimal taxation. The evaluation criteria considered here are efficiency and neutrality, equity among different taxpayers, inter-nation equity, which calls for an equitable division of tax revenues between the jurisdictions, and feasibility, meaning that the tax system has to be practicable and workable in an effective way. This stage of the analysis is necessary to find out whether or not the current international taxation regulations can be upheld and how far-reaching possible reform measures have to be. For example, it has at times been concluded that the current system of corporate income taxation is no longer workable with the advent of ICT and, therefore, should be replaced by a tax system based on a tax on consumption, e.g. a Bit-Tax on transactions.¹² Whether the tax issues are really that far-reaching can be established at the end of this stage.

Based on the compilation of the most important fiscal issues resulting from the organisational changes, the main focus and aim of the thesis consists in developing suitable reform scenarios for international company taxation. As shown in figure 1.2, the reform concepts have to be consistent with the underlying economic structure and must guarantee a taxation that is in line with the aforementioned evaluation criteria. At the same time, the analysis of possible reform scenarios should include the considerations developed in other countries or by supranational institutions, such as the European Commission or the OECD.

¹² This idea has first been presented by Cordell. See *Cordell, 1996; Soete / Kamp, 1996* for a detailed analysis and further quotations; *Ammann, 1999*, and the discussion in *ICRT, 1997; Fischer, 1998*, p. 12; *Basu, 2004*. See also *Rose, 1991*, pp. 7-34; *Wagner, 1999*, pp. 15-35; *ibid.*, 2003, pp. 369-390, who argue in general in favour of a consumption tax.

Figure 1.2: Aim of the Thesis



Bearing the aim of the thesis in mind, the analysis does not focus on the detailed examination of several international tax aspects, but rather, the outcome of the thesis involves a systematic analysis contributing to the debate on whether the entire system of international company taxation is still workable in the age of ICT and to what extent modifications are necessary in order to provide a reasonable and workable system of international company taxation. The outcome of the thesis is of importance to various parties. Firstly, the impact of an increased use of ICT on international taxation has implications for companies doing business internationally, as the possibilities for international tax planning may increase, but so may the tax risks. Secondly, with regard to the governments' point of view, the allocation of the tax base between different jurisdictions may change and, thus, some countries may worry about maintaining their tax base. Thirdly, since a tax system should be consistent with various normative criteria for optimal taxation, there are implications for national and international legislators and organisations as regards reforming national and international tax law.

With regard to the *subject under investigation*, the analysis includes the following *fields of international taxation*: the definition and location of the tax attributes in the source country and in the residence country, the assignment of profits to the respective income category, the methods of profit and asset allocation between taxable entities, and, finally, the choice between a taxation according to the residence principle or to the source principle, i.e. the choice of methods to avoid double taxation. Both current and non-current aspects of international taxation are included in the analysis. Since the focus is on income taxation, issues related to VAT are not included here.¹³

¹³ For a detailed analysis of issues related to ICT and VAT, see Spatscheck, 2000, pp. 42-67; Doernberg / Hinnekens / Hellerstein / Li, 2001, pp. 93-161, 394-588; Knödler, 2004, pp. 177-238.

Moreover, issues with regard to procedural law or the law regarding fiscal offences are also not considered.¹⁴

As regards the *underlying legal basis*, the analysis of the system of international company taxation focuses on the OECD Model Tax Convention, since this model is the most important treaty and since most of the bilateral tax treaties are based on it. The UN Model and the domestic laws of different countries will be referred to where applicable. In general, the thesis is not limited to a specific geographic area, but where necessary, the focus is limited to the European Union, for example when discussing the appropriateness of a consolidation and apportionment approach for profit allocation between different jurisdictions.

The analysis looks at a variety of *economic changes* due to an increase in the use of ICT to consider all kind of business developments. In addition to the internal organisation of companies and groups, also relationships between different companies and market structures are considered.¹⁵

1.3. Approach and Organisation of the Thesis

Based on the aforementioned objectives of the thesis, the approach of the study as shown in figure 1.3 consists in the following: first of all, in an *economic analysis*, the various changes to the organisational structures of the economy resulting from the increased use of ICT are set out (chapter 2). They are categorised in changes resulting for the internal organisation of a company, changes in the market structure and changes with regard to the relationships between different companies. Once this economic analysis has been carried out, a *fiscal analysis*, which constitutes the central point of the thesis, is then conducted. To begin with, the fundamental system of international taxation forming the basis of the analysis is outlined to show the scope of the fiscal analysis (chapter 3). The general working of the international tax system is illustrated in this chapter and the tax regulations relevant to the following analysis are outlined, such as the definition of the tax attributes in the residence and the source country, the methods of profit allocation, and the residence and the source principle, i.e. the methods to avoid double taxation. The impact of the changed economic structures on the *international tax planning* of multinational companies under current tax law is examined next (chapter 4). The analysis includes various legal tax planning instruments. It is examined whether there are nowadays new opportunities to minimise the effective tax rate and to what extent new risks may occur with the use of ICT. The aim of this step is to determine the relevant tax fields to be focussed on in the thesis. Based on this analysis, a further examination is carried out on the consequences for the allocation of the international tax base. This

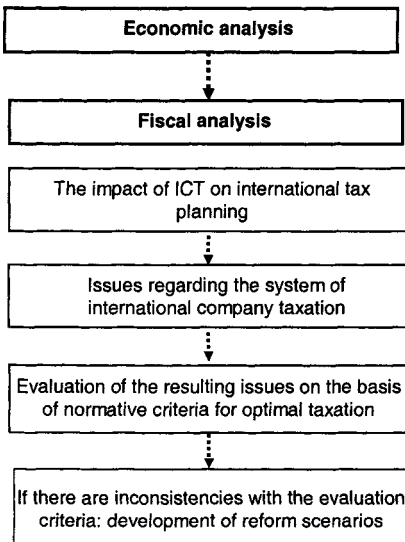
¹⁴ For an analysis of these questions, see inter alia *Spatscheck*, 2000, pp. 68-108.

¹⁵ For further details on the subject under investigation, see chapter 2.4.1.

analysis is required to determine whether arguments for possible reform scenarios can be based on a potential change in the allocation of the tax base between the jurisdictions.

Once the relevant issues of international taxation have been identified in the analysis of international tax planning, a *systematic fiscal analysis* is then conducted. Therefore, the underlying theoretical framework consisting of the aforementioned normative criteria for optimal taxation is first of all set out (chapter 5). For the purpose of the analysis conducted afterwards, each criterion is illustrated, defined and assessed in light of the changed economic structures. The international company taxation issues resulting from the ICT-induced economic changes are then compiled (chapter 6). To do so, each field of international company taxation is assessed in light of the relevant evaluation criteria. It is discussed whether the current rules of international tax planning are still adequate today or whether there is a need for a reform of certain tax fields in the age of ICT. Based on the outcome of this analysis, adequate reform scenarios are submitted for those areas in which tax law does not comply with the tax principles (chapter 7). The interrelations between different tax fields are taken into account in this step of the analysis. The thesis ends with a summary of the main results (chapter 8).

Figure 1.3: Approach of the Thesis



2. Changes to Economic Structures Through ICT

The aim of this chapter consists in showing the impact of the increased use of ICT on the organisational structures of the economy. Bearing this objective in mind, the chapter is organised as follows: To begin with, the term “information and communication technologies” is defined in the context of this thesis and the main technological trends caused by an increase in the use of ICT are shown. Next, the relevant organisational theories underlying the organisational structure are outlined in order to identify the most important factors influencing organisational forms of doing business internationally. The influence of ICT on these factors can then be identified. Finally, the resulting impact on the organisation of markets, intra-organisational aspects and the organisational forms existing between different firms are set out in more detail.

2.1. Defining ICT

In order to analyse the impact of the increased use of ICT on the main factors influencing doing business, the notion of “ICT” shall first be defined for the purpose of this study. Here, ICT include all kind of technologies which enable a geographical and temporal transmission of information and content, meaning the recording, conversion, storage, reproduction and transmission of information.¹⁶ Thus, ICT encompass the following components:

- information-processing objects, i.e. computer hardware such as PCs, laptops, digital memory, video and audio facilities and the respective software,
- telecommunication services such as e-mail or video conferencing, and
- telecommunication networks, such as local area networks (LANs), Intranets or the Internet.¹⁷

The *characteristics* of “modern” ICT, meaning those which have emerged in the last few years, include an increase in efficiency and capacity with regard to computers and networks, a miniaturisation of hardware, a strong reduction in information processing costs, a globalisation of the transmission of audible communication and data, a convergence of the formerly separate fields of media, telecommunication and IT due to digitalisation, and a tendency towards the virtualisation of products, firms or markets.¹⁸ Based on these characteristics of modern ICT, an increased use of such technologies leads to several *trends* with regard to their application:¹⁹

- increased mobility, which is due to the development of mobile computing and to the fact that

¹⁶ See *Fink*, 1998, p. 10.

¹⁷ For more details, see *Fink*, 1998, pp. 23-26.

¹⁸ For more details, see *Picot / Reichwald / Wigand*, 2003, pp. 145-165; *Brunsbach*, 2003, p. 7. “Virtual” characterises the object as something that may exist, but that does not exist physically but in the form of ICT-based structures. See *Scholz*, 1996, p. 204; *Fink*, 1998, pp. 15-16.

¹⁹ The following comments are based on the remarks in *Picot / Reichwald / Wigand*, 2003, pp. 165-189.

data can be transmitted all over the world,

- encouragement of co-operation and teamwork due to special hardware and software, i.e. data bases or workgroup systems such as joint editing, video conferencing or e-mail, as well as workflow management systems,
- decentralisation of the ICT infrastructure due to the increased transmission capacities of computer networks,
- division of functionalities and integration of different forms of hardware and software, i.e. network and data integration and the increasing standardisation accompanying this development, and
- dematerialisation, i.e. a trend of physical objects being transformed into mere electronic information and a disintegration of the information and the transmission medium used.

Information and communication are substantial factors making up companies and markets, and ICT constitute the technical basis for all kind of organisational forms.²⁰ Today, in the so-called information age, information and communication are factors of considerably increasing importance affecting a company's competitive position.²¹ Due to the economic advantages of ICT, such as the possibility to reduce costs and to save time, the use of ICT in all kinds of organisational structures has increased substantially over the last few years. In addition, it must be noted that an increased use of ICT is accompanied by a *changed competitive environment for companies* due to the globalisation and internationalisation of the economy. Moreover, changing social values have been observed in the last few years.²² One important aspect of a change in economic life is that the rising importance of information is accompanied by the increased relevance of human capital as a factor for the creation of value and generation of profits.

To conclude, the trends behind the application of modern ICT along with the consequences of a changed competitive environment may have a strong impact on the factors influencing doing business abroad, as shown below.

2.2. Theories on the Organisational Structure of Firms

To analyse the impact of ICT on the organisational structures of the economy, it is first necessary to identify the main factors influencing the way of doing business internationally. These factors are

²⁰ See Picot / Reichwald / Wigand, 2003, p. 5.

²¹ See Fink, 1998, pp. 8-10 for further quotations, and, for more details and economic implications, see Picot / Reichwald / Wigand, 2003, pp. 60-69. Regarding the definition of "information" in business economics, see the detailed analysis in Bode, 1997, pp. 449-468.

²² For more details, see Picot / Reichwald, 1994, pp. 548-549; Picot / Reichwald / Wigand, 2003, pp. 2-4.

derived from basic theories explaining the organisational structures of firms doing business internationally.

In general, companies optimise the organisational structure and the way of doing business by choosing the least expensive and most suitable co-ordination mechanism for their business operations. The most detailed theory explaining the degree and the pattern of the international activities of a company and the creation of multinational enterprises is the *eclectic theory of international production*.²³ Under this theory, three factors are relevant to the type and level of the cross-border value added activities of multinational firms: the existence, degree and nature of firm-specific or ownership advantages, of location-specific advantages abroad and of internalisation advantages.²⁴ If all three determinants exist, in accordance with the eclectic theory, a company will invest directly abroad. These determinants are subsequently illustrated in more detail.

The *ownership-specific inputs* constitute a company's special assets which give it a competitive advantage over other firms.²⁵ By use of such firm-specific inputs, a company can generate firm-specific rents.²⁶ The ownership advantages largely consist in possessing intangible assets which are – at least for a period of time – exclusive or specific to the firm, such as know-how, patents, and trademarks.²⁷ Also manufacturing processes, such as the joint use of shared service centres, or special entrepreneurial skills, such as management or marketing skills, rank among ownership advantages.²⁸ The use of such ownership or strategic advantages is not linked to a specific location, since the advantages are mobile between countries but not between firms.²⁹ Thus, the generation of firm-specific rents is independent of where the respective activities take place, since these rents are rather dependent on the company itself than on any physical location.³⁰

In addition, it is profitable for a company to make use of its strategic advantages in conjunction with *location-specific advantages*. Possible location-specific advantages which could exist in a country and offer an incentive for a company to invest there include the availability of necessary production factors, e.g. well-trained employees or a favourable environment for R&D, the potential for

²³ This theory goes back to Dunning, see *Dunning*, 1981, pp. 9-31; *ibid.*, 1981a, pp. 21-40; *ibid.*, 1991, pp. 1-139; *ibid.*, 1993, pp. 81-83; *ibid.*, 1993a, pp. 183-218; *ibid.*, 1995, pp. 76-88.

²⁴ See also the list of variables of ownership-specific advantages, internalisation advantages and location-specific variables in *Dunning*, 1981a, pp. 56-58; *Dunning*, 1993, pp. 98-101. For more details regarding the following remarks, see *Oestreicher*, 2000, pp. 101-103; *Göpffarth*, 2001, pp. 35-38; *Kreikebaum / Gilbert / Reinhardt*, 2002, pp. 76-83; *Brunsbach*, 2003, pp. 10-12, each with further quotations.

²⁵ See also *Teede*, 1986, p. 27 and *Göpffarth*, 2001, p. 35, who calls this factor the "strategic advantage factor".

²⁶ However, inputs which are available on the same terms to all firms do not involve any advantages from foreign production.

²⁷ See *Itaki*, 1991, p. 446.

²⁸ See *Göpffarth*, 2001, p. 35.

²⁹ See *Dunning*, 1981, p. 10.

³⁰ Similarly, see *Devereux / Pearson*, 1989, pp. 20-21, using the notion of "resident-specific" rents.

generating cost advantages, such as lower labour costs, or favourable investment conditions provided by the respective jurisdiction, for example a fully developed infrastructure. In addition, also the location of customers, suppliers, other business partners and even rival businesses rank among the factors specific to a location.³¹ The existence of location-specific advantages is decisive for doing business abroad and enables a company to generate location-specific economic rents. Such location-specific rents can only be achieved at a certain place of production, since the activities can only be carried out in one place.³² Moreover, if companies choose to operate in different location-specific environments, they can derive additional ownership advantages, such as the ability to engage in international transfer pricing, to shift liquid assets between currency areas, and to reduce risks by diversifying their investment portfolios.³³

In contrast to the two factors outlined so far which determine the geographical location of a company's activities, possible *internalisation advantages* influence a company's decision on the organisational form in which to do business. If there are internalisation advantages, it is better for a company to co-ordinate its activities through an extension of its own activities rather than relying on external co-ordination, such as licensing or similar contracts with independent firms. Thus, according to the eclectic theory, if there are internalisation advantages in addition to the location-specific and ownership-specific advantages, a company will invest directly abroad.

Whether an internalisation of a company's activities is favourable depends on the level of transaction costs. Thus, the implications of the eclectic theory with regard to the internalisation advantage are based on the *theory of transaction costs*.³⁴ This theory mainly focuses on explaining the boundaries of the firm, i.e. the choice of a particular organisational form, and of the creation of companies. In addition, the theory has been enhanced and extended to provide explanations regarding the internal organisation of companies and virtual companies.³⁵ The basic implications of the theory of transaction costs are briefly outlined below.

In general, markets and hierarchies are the two basic alternative ways of governing transactions. In between, there is a vast range of hybrid arrangements.³⁶ As a fundamental principle, firms always

³¹ See also *OECD*, 2003, section 147, and the empirical results regarding reasons for investing abroad in *Oppenländer*, 1997, pp. 215-228.

³² See also *Devereux / Pearson*, 1989, p. 20, who give the example of bridge building.

³³ See *Dunning*, 1981, p. 10.

³⁴ This theory goes back to *Coase* and has been advanced by *Williamson*. See the basic works in *Coase*, 1937, pp. 386-405; *Williamson*, 1985. See also *Picot*, 1982, pp. 267-284; *Malone / Yates / Benjamin*, 1987, pp. 485-487; *Büchs*, 1991, pp. 6-23; *Oestreicher*, 2000, pp. 78-97; *Picot / Reichwald / Wigand*, 2003, pp. 49-55 with further quotations; *Brunsbach*, 2003, pp. 12-15.

³⁵ For more details, see *Picot*, 1982, pp. 277-279; *Theuvsen*, 1997, pp. 971-996; *Picot / Reichwald / Wigand*, 2003, pp. 55, 260-262, 431-433.

³⁶ With regard to different forms of internal organisation, the degree of centralisation and organisational disintegration or the contracting policy regarding labour agreements can vary. See *Picot*, 1982, p. 277.

search for the most efficient organisational structure for their economic activities.³⁷ The theory of transaction costs is based on the analysis of single transactions and tries to find the most efficient organisational form depending on the nature of the respective transactions. In general, a transaction entails transaction costs which include costs related to the initiation, arrangement, co-ordination, carrying out, control, and adaptation of a transaction. Most transaction costs are information costs, such as observation, memory, communication, and processing costs.³⁸ The level of transaction costs depends on the characteristics of the activity to be performed and on the respective organisational form. It is assumed that transaction costs are the relevant benchmark to measure the efficiency of a transaction.

The level of transaction costs is influenced by several attributes of the *transaction environment*, such as the specificity of a transaction with regard to specific sites, physical assets or human capital, the degree of uncertainty and complexity, and the frequency of a transaction. For example, the more standardised the transaction is, the better it can be carried out on markets. However, a very specific transaction can be better carried out within a hierarchical organisational form. Further parameters which influence the level of the transaction costs are the underlying assumptions with regard to the *behaviour of the parties*. Thus, the parties of a transaction are supposed to act with a limited rationality and to behave in an opportunistic way. If there is asymmetric information, one party may take advantage of its informational edge. Thus, the more uncertainty and opportunistic behaviour affect a transaction, the higher the internalisation advantages, i.e. the better it would be to conduct the transaction within a hierarchical organisation. In addition, the transaction costs are influenced by the so-called *transaction atmosphere*, including the general framework of a transaction with regard to legal, social, and technological aspects, such as ICT. To sum up, the specific circumstances of a particular transaction determine which organisational form entails the lowest level of transaction costs. For example, if the transaction costs of an internal transaction are lower than conducting the transaction via markets, a company has an internalisation advantage and will probably invest directly abroad.

To conclude, on the basis of the eclectic theory of international production and the theory of transaction costs, which both deal with explaining the organisational structure of doing business, three principal factors influencing international economic activities to generate economic rents can

³⁷ Thus, an efficient organisational structure constitutes a decisive competitive advantage. See *Frese*, 1993, p. 1003 for further quotations.

³⁸ These costs are mainly generated by an asymmetric allocation of information between the partners of a transaction. See *Casson*, 1999, pp. 78, 86-87, 89, who also provides a detailed analysis of the theory of information costs explaining the organisational structures of multinational companies on the basis of information costs as the relevant efficiency criterion.

be identified:

- the choice of geographical location,
- the organisational form of doing business within a company and between different firms, i.e. the degree of decentralisation, and
- the main factors for the creation of value and the generation of profits.

The next chapter outlines the implications of an increase in the use of ICT on these three determinants.

2.3. The Impact of ICT on the Main Factors Influencing Doing Business Abroad

2.3.1. The Geographical Location

Firstly, the choice of geographical location is based on the trade-off between a company's aim to exploit location-specific advantages to maximise its profits and the issue of an increase in co-ordination costs if there is a more pronounced geographical disintegration.³⁹ Today, with the use of ICT, these co-ordination costs can be reduced. This is particularly due to the attributes of decentralisation, division of functionalities and encouragement of co-operation inherent to ICT. Thus, the scope of possibilities for communicating and transmitting information is extended to a large degree. Since information is in principle simultaneously accessible from everywhere and can be processed electronically by the use of ICT, the flow of information as well as the co-ordination of the production process of goods and services is facilitated. Consequently, geographical distances between different parts of a company and between companies and their customers can be bridged more easily by the use of ICT. Thus, geographical distances are becoming less important with regard to corporate planning or a company's cost calculations, since doing business in a geographically decentralised and international way is possible at lower transaction costs.

One consequence of this fact is that the location of a company's activities is less dependent on location-specific aspects. Since companies and customers all over the world can be connected via ICT, the physical location becomes less important and physical contact is no longer always necessary for the purpose of doing business. For example, the location of external entities, such as customers or suppliers, and the location of other parts of a company are becoming less important, as a link can more often be provided totally or partly by ICT. Another consequence of reduced co-ordination costs with the advent of ICT is that the existence of favourable location-specific factors can be exploited more easily. Thus, some location-specific factors may become more important, such as the existence of human capital, favourable conditions for R&D or a well-developed

³⁹ See also *Brunsbach*, 2003, p. 16.

ICT-based infrastructure. To conclude, due to the trends inherent to an increase in the use of ICT, the geographical location of a company is tending to become more international and decentralised, as well as more mobile and geographically independent.

2.3.2. The Choice of the Organisational Form Between Different Firms and Within a Company

In addition, the organisational form of doing business within a company and between different firms is affected by an increase in the use of ICT and the resulting changes in the level of transaction costs. When considering the choice of the optimal *organisational form between different companies*, ICT form a part of the technological environment and therefore influence the level of transaction costs.⁴⁰ Firstly, due to an ICT-induced absolute decrease in transaction costs, new transactions which could formerly not be conducted efficiently have been made possible these days.⁴¹ Thus, the use of ICT can increase the efficiency of every organisational form.⁴² Secondly, since transaction costs constitute the efficiency criterion for the choice between different organisational forms and since cost reductions may differ for different organisational forms, the relative advantage of some organisational forms over others may change.⁴³

First, a tendency towards *hierarchical organisational forms* was assumed.⁴⁴ This may be due to the fact that the level of transaction costs within a company can be reduced, since the use of ICT makes it possible to perform intra-company transactions at lower costs. This effect is called the “electronic integration effect”.⁴⁵ Moreover, the increased importance of firm-specific intangibles and the resulting generation of firm-specific rents may also encourage hierarchical structures. This is because it is advantageous to internalise the benefits resulting from the existence of implicit knowledge within a hierarchical structure, since a transfer via a market organisation would entail high transaction costs.⁴⁶ Second, a move towards *market structures* was expected, meaning the tendency of companies towards outsourcing.⁴⁷ This effect can be traced back to a decrease in

⁴⁰ See chapter 2.2., and *Brunsbach*, 2003, p. 15.

⁴¹ See *Picot / Reichwald / Wigand*, 2003, pp. 73-75.

⁴² See *Malone / Yates / Benjamin*, 1987, p. 484.

⁴³ See *Picot / Reichwald / Wigand*, 2003, p. 72.

⁴⁴ For example, see *Malone / Yates / Benjamin*, 1987, pp. 493-496; *Gurbaxani / Whang*, 1991, p. 70; *Picot / Reichwald / Wigand*, 2003, pp. 72-73; *Brunsbach*, 2003, pp. 28-29.

⁴⁵ See *Malone / Yates / Benjamin*, 1987, pp. 488-489, 493-496, who discuss the establishment of hierarchies due to the electronic integration effect in more detail.

⁴⁶ See *Picot / Reichwald / Wigand*, 2003, p. 73 for further quotations; *Brunsbach*, 2003, p. 29.

⁴⁷ For more details, see *Malone / Yates / Benjamin*, 1987, pp. 489-493, also with further quotations with regard to empirical tests supporting this hypothesis; *Malone / Yates / Benjamin*, 1989, pp. 166-168 for several examples; *Malone / Rockart*, 1991, pp. 95-96; the detailed empirical analysis in *Brynjolfsson / Malone / Gurbaxani / Kambil*, 1993, who found substantial evidence for a relationship between increased levels of IT usage and smaller firm size; *Picot / Reichwald*, 1994, p. 563; *Bauer*, 1997, pp. 199-202; *Picot / Bortenlänger / Röhl*, 1997, pp. 110; *Lucking-Reiley / Spulber*, 2001, pp. 64-65.

co-ordination costs for market transactions with the use of ICT, since it is more cost effective to conduct market transactions totally or partly via ICT. In addition, since some asset-specific components are becoming less specific with the use of ICT, it is more efficient to conduct these rather standardised transactions via markets.⁴⁸ This move towards market co-ordination also implies an increase in the relative frequency of *hybrid forms of co-operation* between different companies which constitute a mixture between markets and hierarchies.⁴⁹ According to this so-called “move-to-the-middle“ hypothesis, a trend towards outsourcing, but with a small set of stable partnerships, is likely. It is argued that, with the increased use of ICT along the value adding chain, the link between different companies becomes stronger and thus creates hybrid forms of co-operation. Different forms of ICT play a major role in making these kinds of co-operation effectively feasible.⁵⁰ Further reasons for an increase in hybrid forms of co-operation include a changed competitive environment with an increased necessity of risk sharing.⁵¹ To conclude, even if it must be decided on a case-by-case basis which of the three alternative organisational forms is the most appropriate, and even if it is not possible to predict which form will be used more frequently, it has become obvious that an increase in the use of ICT has an influence on each of the three alternative forms.

In addition, the *degree of decentralisation within the internal organisation* of a company is also changed by an increased use of ICT.⁵² This is due to the fact that the use of ICT is accompanied by a decrease in communication and co-ordination costs making the efficient implementation of a more decentralised organisational structure possible.⁵³ Otherwise, the cost of a rise in transactions and the loss of control due to a decentralised structure would be too high. Furthermore, a trend towards *modularisation* within the firm can be observed, meaning that several business processes are bundled together into so-called modules. This organisational form reduces the transaction costs linked to interfaces which exist for functional or hierarchical organisational forms. Thus, with regard to the internal organisation of a firm, a kind of market organisation can be implemented in part. According to the theory of transaction costs, a centralisation of processes in specific modules is always profitable for an activity with a high specificity and of high strategic relevance. Moreover, a high element of frequency and of uncertainty would encourage this tendency. Since today, processes often constitute strategic factors, it is advantageous to bundle them together into modules.

⁴⁸ See *Malone / Yates / Benjamin*, 1987, pp. 489-490; *Picot / Reichwald / Wigand*, 2003, pp. 71-72.

⁴⁹ For a detailed analysis, see *Clemons / Reddi / Row*, 1993, pp. 9-35; *Gurbaxani / Whang*, 1991, pp. 69-70; *Malone / Rockart*, 1991, p. 95; *Picot / Reichwald*, 1994, p. 563; *Bauer*, 1997, pp. 206-210.

⁵⁰ See *Clemons / Reddi / Row*, 1993, p. 27; *Picot / Ripperger / Wolff*, 1996, p. 78; *Müller-Stewens* (Ed.), 1997, pp. 30, 50.

⁵¹ See *Brunsbach*, 2003, pp. 30-31.

⁵² See also *Buxmann*, 1999, pp. 714-727.

⁵³ For more details, see *Picot / Ripperger / Wolff*, 1996, pp. 75-76; *Picot / Reichwald / Wigand*, 2003, pp. 260-262.

To conclude, due to the increasing implementation of market mechanisms within companies and the degree of hierarchical links to inter-firm relations, the boundaries of the firm are becoming blurred.⁵⁴

2.3.3. The Main Factors for the Creation of Value

Third, the main factors for the creation of value and the generation of profits have also been addressed by various developments over recent years. An increased use of ICT, and especially a trend towards dematerialisation and mobility, along with the growing importance of information and human capital, have led to an increased emphasis on information- and knowledge-based assets and services.⁵⁵ Thus, instead of physical value added factors, intangible assets and services rendered constitute crucial factors for creating value and generating profits.⁵⁶

Intangible assets may be legally protected, such as patents or trademarks, or they may not be legally protected but consist of unprotected technical or business knowledge, such as know-how and customer or supplier data bases.⁵⁷ Intangibles are often firm-specific, as they are based on firm-specific know-how and information. By using ICT, the costs of transferring intangibles or providing services can be lowered, as some of these firm-specific inputs may be digitised and some services may be provided via ICT. Knowledge-based assets and the provision of information-based services are not dependent on a physical location and can in principle be located anywhere in the world. Consequently, many of the activities and functions of a company are mobile and not dependent on physical location factors, which again facilitates the formation of an international and organisationally decentralised company structure. Therefore, the firm-specific rents achieved by use of firm-specific intangible assets are also quite mobile. To conclude, the main factors for the creation of value are firm-specific intangible assets and related services, leading to an increased mobility in a company's activities.

A summary of the main changes in the three factors influencing doing business abroad induced by ICT is shown in figure 2.1 below.

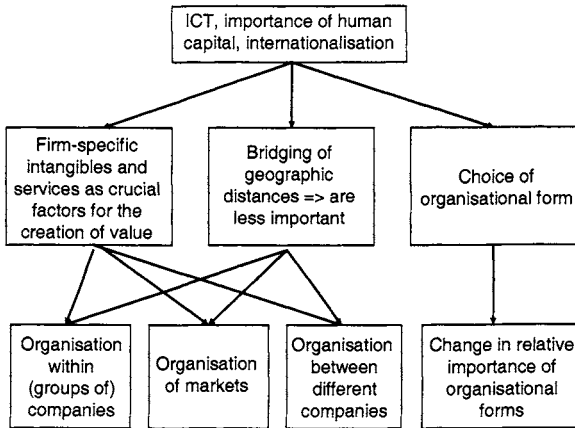
⁵⁴ See also *Picot / Ripperger / Wolff*, 1996, pp. 77-78; *Bauer*, 1997, pp. 202-206; *Picot / Reichwald / Wigand*, 2003, pp. 289-290; *Brunsbach*, 2003, p. 30.

⁵⁵ See also *Dunning*, 2000, p. 14, who states that the majority of global sales of multinational enterprises are in the knowledge and information sectors, or in their supporting sectors.

⁵⁶ See also *McLure Jr.*, 1997, pp. 861-862; *ibid.*, 2001, p. 334; *Tapscott / Ticoll / Lowy*, 2001, pp. 213-214; *Brunsbach*, 2003, pp. 24-25; *Picot / Reichwald / Wigand*, 2003, pp. 351-355 for further quotations. For empirical results for the film and media sector, see *Kütting / Zwirner*, 2001, p. 28, who show that intangibles amount between 41% and 99,7% of all assets. In 2000, the average percent of intangible assets compared to the total of all assets was 37,5% for NEMAX 50 companies.

⁵⁷ For example, the OECD distinguishes between commercial intangibles, such as patents, know-how or designs, and marketing intangibles, including trademarks and trade names that aid in the commercial exploitation of a product, customer lists, distribution channels or unique names. See *OECD*, 2001, sections 6.3-6.4.

Figure 2.1: ICT-Induced Changes in the Factors Influencing the Way of Doing Business Abroad



2.4. ICT-Induced Changes in the Organisational Structures of Companies and Markets

Due to the impact of ICT on the main factors influencing the way of doing business abroad, manifold changes are taking place within the organisational structures of the economy. The analysis below examines the consequences of these changes for three areas: the internal organisation of companies, the organisation of markets, i.e. the relationship between companies and its customers, and the organisational forms of co-operation between different companies. This classification is useful, since the fiscal analysis will refer to these three categories.⁵⁸

2.4.1. Subject Under Investigation

With regard to the different *organisational forms of doing business*, market organisations, hierarchies, and all kinds of organisational forms between the two, i.e. hybrid forms of inter-company co-operation, are taken into account. For each organisational form, the focus is on doing business abroad.

As regards the examination of different *statutory or legal forms*, the analysis includes sole entrepreneurships, single corporations and affiliated groups. An affiliated group is defined for the purpose of this analysis, and from a business economics point of view, as an economic entity encompassing several legal entities which have restricted autonomy of decision and are under

⁵⁸ This classification goes back to Brunsbach, 2003, pp. 19-34. See Jacobs / Spengel / Schäfer, 2003, pp. 215-217.

uniform control.⁵⁹ Due to the strong economic relationship between the various legal entities of an affiliated group, it is economically considered one firm.⁶⁰ It may be noted that, as a result of ongoing globalisation, European integration and the use of ICT, the number and the scope of groups of companies has increased.⁶¹ Today, they qualify as a standard organisational form. Often, the separate enterprises belonging to an affiliated group reside in different jurisdictions, thus creating a multinational group of companies.

The extent to which the different economic changes are important for companies depends on the *intensity* with which ICT are used to carry out business activities. Companies may use ICT only in specific fields, for instance as a channel of distribution or in order to support the internal organisation. ICT may also serve as a platform for the business activities of a company, for example if the supply of information and services constitute its main business activities. Moreover, companies may market ICT and the Internet itself, e.g. if they provide memory capacity or websites, as an Internet Service Provider (ISP).⁶² The analysis includes various levels of ICT use, i.e. multinational companies or groups with a pre-existing physical business structure using ICT more or less extensively and international virtual organisations organised mainly virtually.⁶³

2.4.2. Extra-Organisational Changes: Digital Markets

The impact of an increased use of ICT can be seen on the relationship between a company and its customers, i.e. the organisation of markets.⁶⁴ A market transaction includes different phases, such as the information, decision-making, agreement, and the termination phases.⁶⁵ With the use of ICT, market transactions can be processed either completely or in part by ICT, thus creating digital markets.⁶⁶ By “digital markets”, we mean all kinds of relationships between a company and its customers, which are either individuals or other businesses. One well-known example of a digital market place is eBay, an online auction platform.⁶⁷

⁵⁹ See *Theisen*, 2000, p. 15.

⁶⁰ See *Theisen*, 2000, pp. 17-19; *Sydow*, 2001, p. 249; *ibid.*, 2002, p. 694.

⁶¹ See *Doernberg / Hinnekens / Hellerstein / Li*, 2001, p. 81; *Commission of the European Communities*, 2001, p. 263. In 2000, about 90% of German public limited companies and more than half of German partnerships had relations with an affiliated group or equal relations. See *Theisen*, 2000, p. 21.

⁶² See *Müller*, 2001/2002, pp. 507-508. Whilst the former example of business activities is expected to be used more often by multinational groups with a pre-existing physical business structure also using the Internet in some way, the two latter examples may be found more often in virtual organisations.

⁶³ See also the examples of the M Group and the C Company in chapter 2.4.5.

⁶⁴ The relationship between businesses and private consumers is called B2C (business-to-consumer), whereas the relationship with other businesses is called B2B (business-to-business).

⁶⁵ See also *Picot / Bortenlänger / Röhrli*, 1997, pp. 111-112; *Picot / Reichwald / Wigand*, 2003, p. 338. For details on electronic cash systems, see *Fairpo*, 1999, pp. 6-8.

⁶⁶ See *Jacobs* (Ed.), 2002, pp. 405-406; *Brunsbach*, 2003, pp. 25-27; *Picot / Reichwald / Wigand*, 2003, pp. 337-350 for further details on various forms of digital markets.

⁶⁷ See also *Picot / Reichwald / Wigand*, 2003, p. 336. For providing an e-auction platform, the seller has to pay an agent's commission to eBay. For other forms of market places, see *Barron / Price*, 1999, pp. 413-414; *Eicker*,

Firstly, due to the growing importance of ownership-specific intangible assets and services for the generation of profits, new ways of making profits and new business models are emerging on digital markets.⁶⁸ New forms of communicating information or providing services include, for example, the licensing of software or digital information, Application Service Providing (ASP) or data warehousing.⁶⁹ Digital products, such as software, digital books, music or videos, are ideal for trading on digital markets. Their attributes differ from physical goods as they can be downloaded, sold and change owner without physical contact. In addition, services based on information delivery can be rendered via digital markets, such as IT-services, e-learning, travel services, banking services or professional services, e.g. accounting and consulting.⁷⁰ The provision of such “teleservices” is in most cases not dependent on a specific location. It is worth noting that the parties on digital markets can remain anonymous. Moreover, it may be hard to identify single transactions, as they can be performed without physical contact and may form part of a complex network of transactions.

Furthermore, on digital markets, the geographical distance between a company and its customers becomes less important and the transaction costs are in general not dependent on the geographical distance between the market partners.⁷¹ Foreign markets can, under certain circumstances, be opened up and run without the necessity of establishing a physical presence in the market, as the possibility of direct sales via the Internet renders a physical presence in the target country in certain cases unnecessary. Thus, long-distance sales can be made without any negative effects on the product sold, such as the quality of information.⁷² Particularly the various aforementioned forms of teleservices which used to be provided face to face can be provided digitally these days. Therefore, the costs of a company supplying foreign markets decrease significantly, since the costly

2001b, pp. 69-72. The emergence of digital markets can again be explained by the theory of transaction costs, since the transaction costs for several phases can be lowered by the use of ICT. For more details, see *Lucking-Reiley / Spulber*, 2001, pp. 56-57; *Picot / Reichwald / Wigand*, 2003, pp. 355-356; *Brunsbach*, 2003, p. 27. See also a detailed analysis of digital market places, e-shops, e-auctions and e-exchanges in light of the transaction cost theory in *Hummel*, 2002, pp. 713-733; an analysis of e-brokerage and e-auctions in light of transaction costs in *Lee / Clark*, 1996, pp. 127-149, and the analysis of B2B e-commerce in light of transaction costs in *Garicano / Kaplan*, 2001, pp. 463-485.

⁶⁸ For a detailed analysis of new business models, see *Wirtz / Kleineicken*, 2000, pp. 628-635; *Wirtz / Becker*, 2002, pp. 85-90; *Wirtz / Becker*, 2002a, pp. 142-148.

⁶⁹ See the list of possible new business models in *OECD*, 2001d, Annex 2, and for more details on the economic potential of ASP, see *Nolting / Nolte*, 2004, pp. 431-435.

⁷⁰ Services rendered via means of ICT include the provision of IT support (such as software maintenance or web-site hosting), information or data delivery (such as the exchange of R&D knowledge), and electronic access to professional advice (such as tax or legal consultancy). For more detail, see *Reichwald / Möstlein*, 1997, pp. 18-25, who provide numerous examples of teleservices; *Utescher*, 1999, pp. 57-66; *Picot / Reichwald / Wigand*, 2003, pp. 352-355, who show the substitution of physical products by information products and traditional services by information services.

⁷¹ See also *Brunsbach*, 2003, p. 26.

⁷² See also *Spence*, 1997, p. 145; *Satzger*, 1999, p. 40.

establishment of branches or subsidiaries is in certain cases not necessary.⁷³ These developments lead to a marked increase in cross-border transactions.⁷⁴

Moreover, intermediation is a central activity in a market-orientated economy which brings buyers and sellers together.⁷⁵ For example, intermediaries organise the matching of suppliers and customers, the exchange of goods and services and the gathering of information. The number of intermediaries on digital markets depends on whether structures without any intermediaries, structures with physical intermediaries, or structures with ICT-based intermediaries are most efficient for a business operation.⁷⁶ Three major developments are conceivable: firstly, if a distribution via intermediaries becomes inefficient, a “dis-intermediation” will take place. This means that some, or even all, steps in the value added chain are eliminated.⁷⁷ For example, it is possible to directly distribute goods from the producer to the customer by exclusion of retailing and wholesaling.⁷⁸ Secondly, if a structure with ICT-based intermediaries is the most efficient one, new and additional intermediation services emerge.⁷⁹ Thus, a re-intermediation takes place. Possible examples for intermediation services are information gathering and analysis (e.g. price information and comparison, search engines), online auctions, security services or payment processing.⁸⁰ Thirdly, if market structures with physical intermediaries are the most efficient solution, then the physical intermediaries will continue to exist. When predicting the overall effect, it was previously thought that a process of disintermediation would take place leading to a decreased number of intermediaries in the country where the consumer is located.⁸¹ However, the process of disintermediation is no longer deemed to take place on a large scale.⁸² This is due to the fact that, even in the age of ICT, intermediaries between a company and its consumers are necessary and that re-intermediation as outlined above is more likely to occur.⁸³

⁷³ See also *Eicker*, 2000, p. 123.

⁷⁴ See also *Satzger*, 1999, p. 40. Especially cross-border services constitute a fast-growing sector in world trade. For example, the ICT e-business services industry is growing at over 30% per annum. See *Commission of the European Communities*, 2001a, p. 22.

⁷⁵ See *Lucking-Reiley / Spulber*, 2001, p. 57.

⁷⁶ For example, an ICT-based intermediary may consist of a server and the respective software equipment.

⁷⁷ See *Malone / Rockart*, 1991, p. 96 for further examples.

⁷⁸ This is often the case if only a small portion of the value added is contributed by traditional intermediaries. See *Gareis / Korte / Deutsch*, 2000, pp. 35-36; *Picot / Reichwald / Wigand*, 2003, pp. 377-381. Particularly in the computer industry, manufacturers have given up the conventional means of distribution and offer their products over the Internet. See *Mangold*, 1999, pp. 30-31.

⁷⁹ See *Lucking-Reiley / Spulber*, 2001, pp. 57-61 for several examples.

⁸⁰ See *Berryman / Harrington / Layton-Rodin / Rerolle*, 1998, p. 152; *Bailey / Bakos*, 1997, p. 17.

⁸¹ See, among others, *Irish Revenue*, 1999, p. 45, and for further quotations chapter 4.3.1.

⁸² See also *Bailey / Bakos*, 1997, p. 18; *Gareis / Korte / Deutsch*, 2000, pp. 35-36; *Picot / Reichwald / Wigand*, 2003, pp. 378-381.

⁸³ For a detailed empirical analysis, see *Bailey / Bakos*, 1997, pp. 7-16; *OECD*, 1999, p. 15.

2.4.3. Intra-Organisational Changes

The changes within the intra-organisational structure of companies are again deduced from the effect of ICT on the three influencing factors for doing business as outlined above. Since, as stated, affiliated groups of companies constitute an economic entity, they are included in the analysis of an entity's internal organisation.

Firstly, since ownership-specific intangible assets and services are increasingly important and often constitute the main factors for the creation of value, the functions and activities of a company performed on the basis of these input factors are more mobile and can be relocated easily.⁸⁴ In addition, the products transferred and services rendered are not necessarily comparable to those of other companies.⁸⁵

Secondly, with regard to the geographical structure of a company, different parts of the company no longer have to be centralised in one country but can be located away from each other and be connected via means of ICT.⁸⁶ Thus, a *regional decentralisation* of a company's activities and a greater dispersion and fragmentation of a business's internal activities between different locations becomes effectively possible.⁸⁷ The process of producing goods and services is becoming more international, since it is possible to utilise factors of production in various locations. Consequently, along with the aforementioned fact that some activities of the company are more mobile, the physical locations of the company sites and production factors are less important. Thus, companies can better exploit the advantages of specific locations and competition between different locations and jurisdictions may become more intense.⁸⁸ In addition, spatial decentralisation leads to an increase in cross-border exchanges of goods and services.

Thirdly, as regards the organisational form as a factor influencing the way of doing business, *organisational decentralisation* may be observed within the firm.⁸⁹ Both the organisational and the operational structure are affected.⁹⁰ As regards the *organisational structure* of companies or groups of companies – i.e. the business structure with regard to current decision-making and control –, various new forms of group organisation are emerging. In addition to the basic model of a

⁸⁴ See also Westberg, 2002, p. 22; Brunsbach, 2003, pp. 24-25.

⁸⁵ See McLure Jr., 1997, pp. 861-862. For example, given digital products, production and distribution costs are – contrary to physical products – not proportional to sales. See Strunk / Wichmann, 2001, pp. 428-429; McLure Jr., 2001, p. 334.

⁸⁶ Thus, the spatial difference between several parts of the company becomes less important since the access can be realised by ICT. See Owens, 2002, p. 125.

⁸⁷ See Owens, 1997, p. 1836; Spence, 1997, p. 145; Brunsbach, 2003, pp. 20-21.

⁸⁸ See Müller-Stewens (Ed.), 1997, p. 31.

⁸⁹ See Eicker, 2000, p. 121; Brunsbach, 2003, p. 23.

⁹⁰ Regarding the connection between the organisational and the operational structure, see Krüger, 1994, pp. 119-121; Michel, 2001, pp. 54-55.

hierarchical structure, the organisation of a firm is often more decentralised. The organisational structure tends to be segmented into different economic entities such as business divisions, regions or lines of business. The organisational structure is not necessarily one-dimensional but can be bi- or multidimensional such as in the case of a matrix or tensor organisation based on regions and products.⁹¹ The separate entities, so-called modules or profit centres, often have the decision-making power and are responsible for their own results.⁹² Thus, a modularisation takes place within organisations.

Some central functions which are important for the whole organisation are often centralised in one particular country in “shared service centres” for the purposes of streamlining operations and achieving economies of scale.⁹³ Functions which may be performed in these shared service centres are R&D, management, financial, marketing or administrative services and the administration of intangible assets.⁹⁴ The fields of activities of these service centres vary due to the various activities and structures of the different organisations. In addition to the centralisation of services, the production and distribution functions are also often centralised. Thus, the coexistence of a centralisation of competencies with a decentralisation of the business structure may be noticed.⁹⁵ As a result of these organisational changes, along with the aforementioned increased importance of the firm-specific input factors, the internal structure of each organisation becomes increasingly unique and differs to a larger extent from other companies.⁹⁶ In addition, the organisational structure differs to a larger extent from the legal structure of the group.⁹⁷

With regard to the *operational structure* of companies, a tendency towards process-orientation may be observed, a development that is called business process reengineering.⁹⁸ The basic unit

⁹¹ Thus, functional, one-dimensional organisational structures are replaced by more object-orientated multi-dimensional organisational structures. For an overview of this development, see *Raupach*, 1988, pp. 499-501; *ibid.*, 1998, pp. 77-82 for several examples; and *Michel*, 2001, pp. 58-63, 72-73, and pp. 98-118 for a detailed discussion of the various organisational forms, such as an affiliated group with a head office, an affiliated group divided into lines of business, a management holding company and matrix structures. Regarding the debate on the implementation of a matrix structure in the Daimler-Benz AG, see *Raupach*, 1988, pp. 495-496.

⁹² See *Frese*, 1993, pp. 999-1002 for numerous examples and a historical overview; *Picot / Reichwald*, 1994, pp. 555-557; *Frese*, 1995, p. 942; *Michel*, 2001, pp. 69-70. Possible basic units for the modules are product lines, business areas or sales regions. See *Picot / Reichwald / Wigand*, 2003, pp. 229-235, 244-246. These profit centres may, but do not have to, constitute a separate legal entity in practice. See *Raupach*, 1988, p. 502; *ibid.*, 1998, pp. 86-87 for a discussion of the pros and cons.

⁹³ For further details, see *Töpfer*, 1996, p. 249; *Raupach*, 1998, pp. 76-77; *Miller*, 1999, p. 46; *Theisen*, 2000, pp. 174-176; *Jacobs*, 2003, pp. 117-118; *Li*, 2003, p. 13.

⁹⁴ See *Endres*, 1996, pp. 93-95; *Li*, 2001, pp. 778-780; *Jacobs*, 2003, p. 116.

⁹⁵ See *Kessler* (Ed.), 2000, pp. 443-444.

⁹⁶ For example, the cost structure and the risk structure of companies doing business in the field of e-commerce differ substantially from those of companies doing business in more traditional fields.

⁹⁷ The organisational structure is to a certain extent dependent on the legal structure. See *Raupach*, 1988, pp. 501-502; *Robock / Simmonds*, 1989, p. 253; *Michel*, 2001, pp. 88-90.

⁹⁸ See *Venkatraman*, 1991, pp. 137-140; *Theuvsen*, 1996, pp. 65-72; *Müller-Stewens* (Ed.), 1997, pp. 1-10; *Raupach*, 1998, pp. 72-74; *Michel*, 2001, p. 74. According to a survey conducted in 1995, 80% of firms stated that they wanted to create a more process-oriented organisational form. See *Theuvsen*, 1996, p. 66.

considered is the economic process which often includes the whole value added chain without interfaces.⁹⁹ The different value creation chains may be linked with each other and are thus hard to identify. They are often fragmented by the legal structure of the firm.

As a result of business process reengineering, modularisation and the exchange of goods and services between different profit centres, the conventional value added chain is turned into value added networks with mutual business relationships.¹⁰⁰ Thus, a tendency towards a market-style organisation within firms may be observed.¹⁰¹ Another development with regard to the operational structure of firms is the emergence of *intragroup networks* between various employees belonging to different entities of a company. In this case, not all services or know-how regarding a specific topic are centralised in one business centre, and the employees may be spread all over the world. For example, various researchers belonging to different entities and resident in different jurisdictions may work together in an intragroup R&D network.¹⁰² Other examples are data banks that are developed and accessed by employees working all around the world and global trading.¹⁰³ Thus, intra-organisational virtual networks are emerging. The advantage of all these networks lies in the fact that the work can be done independently of time and place on a 24-hour basis. Without ICT, such forms of intragroup networks would not be feasible in an efficient way. As the contribution of each partner to these integrated networks tends to be very small and often involves intangibles such as know-how, it may be hard to identify. Consequently, organisational decentralisation along with internationalisation has led to a rise in intra-organisational cross-border transactions with regard to both frequency and volume.¹⁰⁴

Furthermore, organisational and geographical decentralisation also have implications on the *management structure* of an organisation. Firstly, for affiliated groups with a matrix or tensor organisational structure subdivided into divisions and / or lines of business, the operational structure differs from the legal structure of the group. Therefore, the management of a subsidiary belonging to the group can in practice be carried out by several persons, such as the executive chairman of the subsidiary, the head of the line of business, the head of a particular function or of a region the subsidiary belongs to, depending on the operational structure of the group.¹⁰⁵ The management

⁹⁹ See Jacobs, 2003, pp. 114-115; Picot / Reichwald / Wigand, 2003, pp. 231-232.

¹⁰⁰ See Delfmann, 1989, p. 109; Müller-Stewens (Ed.), 1997, p. 35; Reichwald / Möslin, 1997, p. 6; Oestreicher, 2000, p. 4; Herzig, 2001, p. 29; Strunk / Wichmann, 2001, p. 429.

¹⁰¹ For details on internal markets, see Frese (Ed.), 2000, pp. 222-229; Barth / Kiefel / Wille, 2002, p. 22.

¹⁰² See Li, 2001, p. 778; Jacobs (Ed.), 2002, p. 950. Such cases are also called "global development", see Kaminski, 2000, p. 174; Sydow, 2002, p. 697. See also Rayport / Sviokla, 1995, pp. 79-80 for examples of intra-organisational virtual networks in practice.

¹⁰³ See Porter, 1995, pp. 358-359; Häuselmann, 1997, p. 858; OECD, 1997, p. 9; Selling, 1998, p. 418; Eicker, 2000, p. 122; Oestreicher, 2000, pp. 43-44.

¹⁰⁴ See Prinz, 2000, p. 537.

¹⁰⁵ See also Michel, 2001, pp. 116, 232-233.

structure of a decentralised organisation tends to be non-hierarchical but may consist of several management centres with equal rights which are linked to each other.¹⁰⁶ Due to a decentralised organisational structure and rather flat hierarchies, the different business management functions and the responsibilities within a management function are often conferred to several people.¹⁰⁷ Thus, the number of employees with decision-making powers is increased. In addition, the authority and decision-making powers within a polycentric company are based more on economic processes than on formal responsibility.¹⁰⁸ For these bi- or polycentric management structures, top management is often located in several different jurisdictions. Using ICT tools, such as video-conferencing or e-mail, decisions which are relevant to the company can be taken either in different locations or at the same time in different places.¹⁰⁹ In addition, the management of a company may often be situated elsewhere and not in the company itself. For example, the manager of a subsidiary may work at the holding company in another country or work on a mobile basis.

With the strong increase in services provided, the provision of services by use of the personnel's know-how often constitutes the main factor for the creation of a company's profits these days. In addition, ICT allow for providing services independently of time and place. Thus, geographic distances between several parts of a company and between the company sites and its employees become irrelevant, since the necessary link can be effected by use of ICT. As a consequence of these two developments, there are a strongly increasing number of cases in which employees of a company installed in one country are working in another country without any physical presence of the company installed there. Thus, with the decentralised internal organisation of firms, the increased use of digital infrastructure and the growing importance of human capital for the creation of value, employees can nowadays work distantly from the company's premises for all or part of the working time by use of *telecommuting*.¹¹⁰ Since a connection between different workplaces can be provided by ICT, the distances between workplaces become less important. Thus, employees are not that dependent on their employer's location and the spatial structure of the organisation is

¹⁰⁶ See also Kolde, 1974, pp. 120-121; Gomez, 1992, p. 172 for references to empirical studies; Raupach, 1998, p. 85; Breuninger / Krüger, 1999, pp. 80-83.

¹⁰⁷ See Brunsbach, 2003, p. 81.

¹⁰⁸ See Brunsbach, 2003, p. 81.

¹⁰⁹ This fact is also called "telemanagement". See Reichwald / Möslin, 1997, pp. 25-31. See also Reichwald / Möslin, 1997, pp. 32-34; Picot / Reichwald / Wigand, 2003, pp. 410-411, who provide examples for studies with regard to the "telecommunication paradox", signifying that an increase in the use of ICT does not lead to a substitution of business trips by managers.

¹¹⁰ See also Jacobs (Ed.), 2002, p. 412. The expression "telecommuting" encompasses all forms of working organisation in which the employee works distantly from the company. The average percentage of teleworkers in Europe in 1999 amounted to 6% of the European work force. The number of all teleworkers in Germany in 1999 amounted to 2,130,000 employees. See empirica, 2000, pp. 21, 26. For further prognoses on the spread of telecommuting, see Utescher, 1999, pp. 48-49.

becoming more flexible.¹¹¹ One can distinguish between different forms of telecommuting.¹¹² The most widespread type of remote work is home-based telecommuting, meaning that the employee works at home. Centre-based telecommuting means that the employees work in telecommuting centres – establishments that offer workplaces to employees of one or more organisations. Mobile teleworkers are those who work distantly from home and from their main place of work, e.g. on business trips. Additionally, it is also conceivable that employees work on a more or less permanent basis at the customer's premises or at the premises of another group company. In principle, the employees could perform various tasks for their company, for example the development of software programs, the administration of databases, or marketing, translation, hotline, and all kind of administrative services. Often, these activities constitute the core activities of the company and the employees contribute to a great extent to the creation of value.¹¹³ In addition, employees may work in relation to customers, such as providing IT-related, consulting or professional services, e.g. lawyers or accountants.¹¹⁴ Possible mobile activities are journalist activities or other kinds of providing information. In addition, due to the legal decentralisation of a company and the decentralised management structure,¹¹⁵ a manager of a company might perform his tasks distantly from the company. The importance of telecommuting is reinforced by the major role played by firm-specific human capital in the creation of value. In short, these developments have led to a marked increase in intragroup cross-border trade, especially in services.¹¹⁶ Those kinds of working structures could not be implemented to such a great extent in an effective way before the increased use of ICT provided for a changed economic structure.

2.4.4. Changes with Regard to the Relations between Different Organisations

Due to the influence of ICT on the choice of an optimal organisational form, hybrid forms of co-operation are becoming more widespread.¹¹⁷ In the case of contractual joint ventures, business partners only enter into contractual obligations and do not have to bundle legal resources together into a new separate legal entity.¹¹⁸ These forms of business co-operation are in general long-term co-operations, based on treaties or simply on trust. Thus, business partners remain legally independent and – except for the co-operation – they also mostly remain economically

¹¹¹ For the historical context, see *Mokyr*, 2001, pp. 9-14.

¹¹² For more details, see *Reichwald / Möslein*, 1997, pp. 13-16; *empirica*, 2000, pp. 8-11; *Picot / Reichwald / Wigand*, 2003, pp. 405-409.

¹¹³ See also *Brunsbach*, 2003, p. 128.

¹¹⁴ For examples of teleservices, see *Utescher*, 1999, p. 45; *Picot / Reichwald / Wigand*, 2003, pp. 414-417.

¹¹⁵ See also *Sieker*, 2001, pp. 87-88 for further examples.

¹¹⁶ See *Reichwald / Möslein*, 1997, p. 20, and also footnote 74.

¹¹⁷ The notion of hybrid forms of co-operation does not include affiliated groups but only co-operations without equal interests.

¹¹⁸ See also *Michel*, 2001, p. 134; *Jacobs* (Ed.), 2002, pp. 1201-1202; *Endres*, 2003, p. 197; *Picot / Reichwald /*

independent.¹¹⁹ Often, the pooling of profits and losses between business partners is stipulated in the contract. As links between different companies can be created using ICT, it is possible to co-operate internationally without needing to centralise all activities in one location. Thus, business activities are no longer dependent on geographical distances.¹²⁰

Some examples of contractual joint ventures are strategic alliances, strategic networks and joint ventures.¹²¹ A strategic alliance is a horizontal co-operation between two or more entities at the same level in the value adding process for the purpose of gaining a competitive advantage.¹²² Another form of a contractual, vertical co-operation is an extra-organisational network, i.e. a network between entities that do not belong to the same affiliated group.¹²³ A further development of a network between different legal entities is the virtual network, which constitutes the latest model of a flexible organisational structure.¹²⁴ A virtual network is a dynamic, temporary network between various legally and economically independent entities that come together quickly in order to develop a specific product or project or to make use of specific market opportunities.¹²⁵ The sole link between the various network partners within a virtual network is created by using ICT.

The main factors for the creation of value of these kinds of co-operation are firm-specific intangible assets, such as know-how. For example, international co-operations are often set up for R&D projects.¹²⁶ Given the different forms of co-operation, the contribution of each partner to the added value tends to be very small and hard to identify. Thus, there is a major increase in inter-company transactions. Since the important decisions are often taken jointly, the management structure of these inter-organisational networks is rather non-hierarchical and poly-centric.¹²⁷ With the emergence of hybrid forms of co-operation, the legal boundaries of the firm – well defined by regional and temporal aspects or by the workforce and know-how – are no longer clearly

Wigand, 2003, pp. 288-290.

¹¹⁹ See *Büchs*, 1991, p. 3; *Michel*, 2001, pp. 119-120.

¹²⁰ See also *Brunsbach*, 2003, p. 31.

¹²¹ Since these different forms are often similar, it is difficult to clearly distinguish between them. See *Lange*, 1998, p. 446.

¹²² For more details, see *Moss Kanter / Myers*, 1991, pp. 331-333; *Backhaus / Meyer*, 1993, p. 332; *Byrne / Brandt / Port*, 1993, p. 38; *OECD*, 1999, pp. 85-86; *Michel*, 2001, p. 133.

¹²³ See the example given in *Sydow*, 2001, pp. 241-243. For the scenario of large networks between companies as a possible common organisational form in the future, see *Laubacher / Malone*, 1997, pp. 6-9; *Mertens / Faisst*, 2000, pp. 37-46.

¹²⁴ This organisational form is often called a virtual organisation. To emphasise the fact that it constitutes an intercompany form of co-operation, the notion "virtual network" is used here in contrast to the intra-organisational virtual networks mentioned in chapter 2.4.3. For further details, see *Davidow / Malone*, 1992, pp. 5-7; *Byrne / Brandt / Port*, 1993, pp. 36-40; *Scholz*, 1996, pp. 207-208; *Li*, 2001, p. 780; *Bea / Jäggle*, 2002, pp. 362-364; *Picot / Reichwald / Wigand*, 2003, pp. 418-428, and the example in *Matthäus*, 2003.

¹²⁵ See *Malone / Laubacher*, 1999, p. 148; *Behrens*, 2000, p. 159; *Schloßmacher*, 2002, p. 96.

¹²⁶ The sectors most commonly involved are electronics, aerospace, telecommunications, computers, and automobiles. See *OECD*, 1996, p. 44.

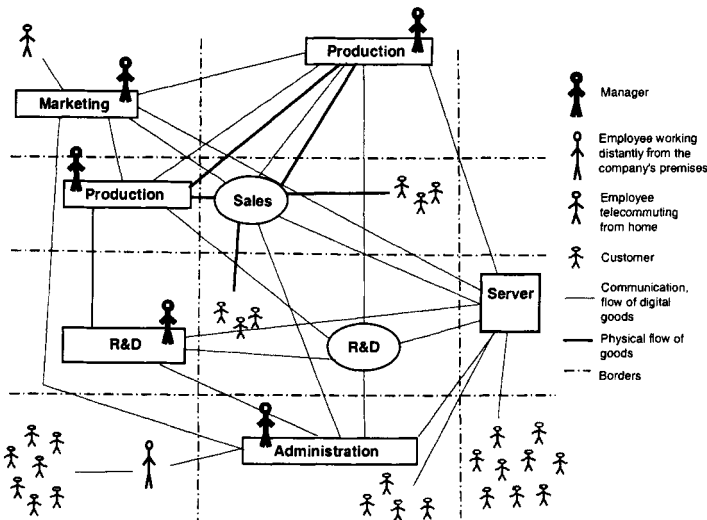
¹²⁷ See *Badaracco Jr.*, 1991, p. 316; *Davidow / Malone*, 1992, p. 162; *Breuninger / Krüger*, 1999, p. 82.

distinguishable.¹²⁸ Thereby, also the distinction between the internal organisation of a company and its external relations is becoming blurred.

2.4.5. Typical Patterns of Doing Business with the Advent of ICT

The various economic changes due to an increase in the use of ICT are illustrated in the following two examples of a multinational group and a virtual organisation which are, in some respects, rather extreme but they have been chosen to illustrate and visualise the economic changes.

Figure 2.2: Economic Structure of the M Group

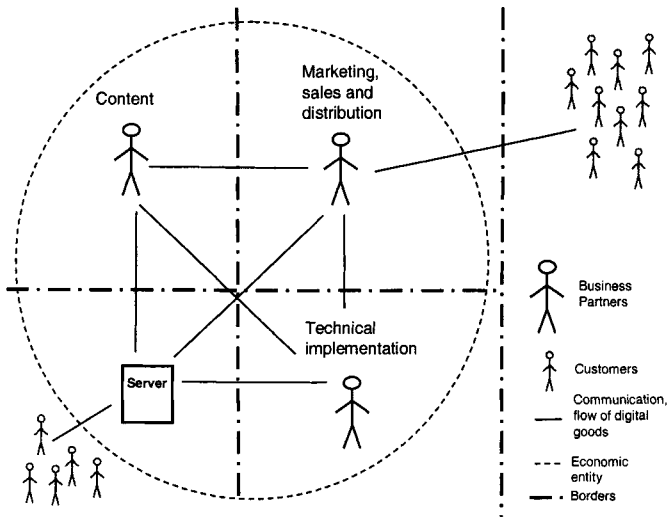


The M Group (see figure 2.2 above) is a multinational group which produces computer hardware and software. The group uses ICT as a supporting tool for the purposes of communicating between different entities in the group, streamlining organisational processes, and as a tool for customer relationship management, marketing, and sales. The group disposes of a decentralised organisational structure with production sites and service centres providing R&D, marketing or administration services. Due to its organisational decentralisation, the management structure of the M Group is non-hierarchical and is made up of several management centres with equal rights which are linked to each other. The key managers reside and work in different countries. The distribution

¹²⁸ For more details on the boundaries of the firm, see *Badaracco Jr.*, 1991, pp. 302-306, 312-318; *Moss Kanter / Meyers*, 1991, p. 329; *Ashkenas / Ulrich / Jick / Kerr*, 1995, pp. 199-204; *OECD*, 1996, pp. 43-45; *Müller-Stewens* (Ed.), 1997, pp. 46-49; *Ernsthafer / Gesmann-Nuissl*, 2000, p. 2265; *Sydow / Windeler*, 2001, p. 134; *Schloßmacher*, 2002, p. 96; *Brunsbach*, 2003, p. 30.

of software is partly carried out by means of a server from which customers can directly download the software. In addition, employees are providing IT-related services to customers while working at the customer's premises. Furthermore, employees can telecommute from home while performing functions such as marketing services.

Figure 2.3: Economic Structure of the C Company



The C Company (see figure 2.3 above) is a virtual organisation with business partners working as software engineers and resident in different countries.¹²⁹ Together, they develop e-learning software for natural sciences supplemented by a database containing relevant background information. Every researcher works in a different field: one is responsible for the content, another for the technical implementation and the third for the marketing, sales and distribution of the software. As the requisite data can be provided via ICT, they communicate solely by means of ICT in order to perform the work. All three business partners are responsible for the management and administration of the business, with the chair moving between the three partners on a rotating basis. For management purposes, the business partners of the C Company either communicate via e-mail or meet on a rotating basis in the different jurisdictions. The e-learning tools are sold over a server where customers can directly download these tools.

¹²⁹ This example is based on Peter, 2002, pp. 301-302. For more examples, see Breuninger / Krüger, 1999, pp. 82-83.

2.5. Summary

On the basis of the eclectic theory of international production and of the transaction cost theory – two theories on the organisational structure of firms –, three principal factors influencing international economic activities to generate economic rents have been identified: the choice of geographical location, the organisational form of doing business and the main factors for the creation of value. These three factors are all influenced by the increased use of ICT. For example, the geographical location has become more decentralised, since geographical distances can be bridged. In addition, the crucial factors for the creation of value are often firm-specific intangibles and services. Moreover, the relative importance of organisational forms has changed.

Based on this analysis, different ICT-induced changes in the organisational structures of companies and markets are deduced. For example, digital markets with new ways of making profits and new business models emerge. In addition, the organisational and regional structure within a company becomes more decentralised. Furthermore, new forms of working organisation emerge, such as different forms of telecommuting or a polycentric management structure. Moreover, hybrid forms of co-operation are emerging, such as virtual networks. Even if the degree of the aforementioned developments depends on each individual case, the general trends are valid for the whole economy. The majority of these developments are not completely new but have accelerated substantially over recent years.

In general, international taxation is based on the underlying economic structure. Therefore, it has to be examined to what extent these economic changes have an impact on the applicability of international company taxation. In the following, the impact of these changes in the economic structures on the tax planning of companies will be analysed.

3. Fundamental Concepts of International Taxation

The subject under investigation in this thesis is the international tax framework. Thus, the aim of this chapter is to set out the fundamental concepts and principles of international income taxation which are relevant to the following analysis. After outlining the general framework of international income taxation, each field of international taxation is described in more detail.

3.1. The Tax Framework for International Company Taxation

The fundamental components of international taxation which are relevant to cross-border transactions can be listed as follows:¹³⁰

1. Whether a jurisdiction has the right to tax income from a cross-border transaction;
2. How the income is allocated between different taxable entities, i.e. to what extent a jurisdiction has a right to tax;
3. Which concept should be chosen with regard to the prevention of double taxation, either the tax exemption method, along with the source principle, or the tax credit method, along with the residence principle.

As a first component, the circumstances under which a country has the right to tax are considered, i.e. when a company is liable to tax in a jurisdiction.¹³¹ The country where a business is established is normally regarded as the residence country, while the country in which a business conducts its trade and earns its income is usually referred to as the source country. Basically, a right to tax can either be based on residence or on source which are both seen to express the principle of economic allegiance.¹³²

According to the *concept of residence*, the jurisdiction in which the company is resident has a right to tax the income of the company. The definition of residence is based on the personal status of a taxable entity and should ideally reflect sufficient economic connections between the company and the particular jurisdiction.¹³³ The company is subject to unlimited fiscal liability in the residence jurisdiction, meaning that the company's world-wide profits are subject to tax. There are in principle two aspects to be considered with regard to residence taxation: Firstly, it must be determined whether an entity is qualified as a taxable entity, which is particularly relevant to

¹³⁰ See *Doernberg / Hinnekens / Hellerstein / Li*, 2001, p. 73 for a similar list.

¹³¹ For further details on the economic, legal or geographical affiliation as a requirement for a country's right to tax, see *Zuber*, 1991, pp. 82-89; *Fohr*, 2001, pp. 76-77; *Jacobs* (Ed.), 2002, pp. 6-7.

¹³² In addition to this jurisdictional allocation of tax revenues, an income allocation of tax revenues between different source countries is important for an equitable division of the tax base. For further details and quotations, see chapter 5.1.2.

¹³³ See also *Doernberg / Hinnekens / Hellerstein / Li*, 2001, p. 73; *Li*, 2003, p. 83.

partnerships. Secondly, a company's place of residence has to be identified. Moreover, under the concept of *source taxation*, a company is liable to tax in the source jurisdiction if it is doing business there. This liability for taxation of non-residents is typically limited to the income generated in the source country and having a reasonable nexus with the source country.¹³⁴ Whether an item of income is subject to tax, where the source is located, or the methods of tax collection and the tax rate, differ depending on the respective income category.

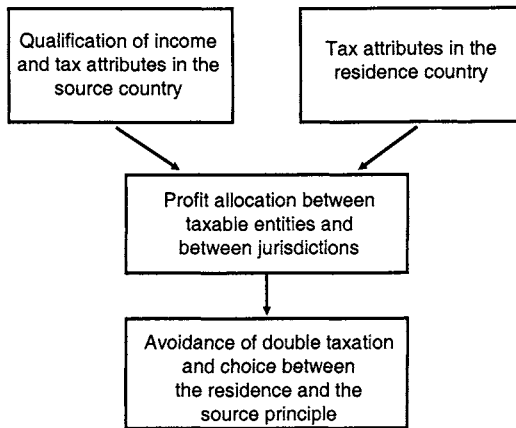
Once the residence and source country in which the business entity is liable to tax have been determined, the second fundamental issue of international taxation is the *allocation of the tax base* between these different tax attributes and the various jurisdictions. Thus, the issue of profit allocation is crucial for both the taxable entities and the tax authorities in order to levy taxes. There are two basic approaches to the allocation of profits between different entities: the separate entity approach along with the arm's length principle based on separate transactions – which is the currently prevailing approach – and the consolidation approach along with formula apportionment. The issue of profit allocation arises for permanent establishments and within associated enterprises.

Subsequent to the jurisdictional nexus in the residence and the source country and to the allocation of the tax base between these nexuses, it must be decided which principle should be applied to tackle the possible issue of *double taxation*, i.e. at which level the final taxation of income should take place. The reasons for the occurrence of a double taxation of profits differ depending on the legal form of the investment abroad. Given a permanent establishment, double taxation arises for the profits generated by the permanent establishment since the same tax subject is liable to tax in the source country under the limited tax liability and again in the residence country according to the unlimited tax liability. Given a subsidiary representing a separate legal entity, a double taxation of profits only arises if the profits are distributed to the parent company. In general, when source and residence jurisdictions overlap, the source country has a prior right to tax and any possible double taxation should be mitigated or prevented by the residence country. Thus, either the residence principle, along with the tax credit method, or the source principle, along with the tax exemption method, may be applied to prevent any legal double taxation.

The system of international taxation as considered in this thesis is illustrated in figure 3.1. The thesis goes on to explain each field of international taxation in more detail.

¹³⁴ See also Doernberg / Hinnekens / Hellerstein / Li, 2001, pp. 74, 76.

Figure 3.1: The System of International Taxation



3.2. Jurisdiction to Tax

3.2.1. Tax Attributes in the Residence Country

A company's residence country is in general the jurisdiction where the centre of the company's activities is located and where the company makes use of the benefits provided by the residence country. It is assumed that the residence jurisdiction provides public benefits to the resident company, such as economic resources, security or legal, financial, physical and social infrastructure and thus shall have the right to tax the resulting profits.¹³⁵

In order to implement residence taxation, after defining whether a tax subject exists, it must be determined where the taxable entity is resident. Examples of formal tests to determine the fiscal residence of a company on the basis of its legal allegiance are the place of incorporation or the place of a company's statutory seat.¹³⁶ The place of incorporation is the place where the company was

¹³⁵ Thus, the residence country's right to tax can be based on the benefit theory. See also *Musgrave*, 1969, p. 116; *ibid.*, 2000a, pp. 79-80; *Neumark*, 1970, p. 87; *OECD*, 2001c, section 5; *Brunsbach*, 2003, pp. 170-171; *Li*, 2003, p. 52. Thus, a country's right to tax is deduced from the benefit principle, but not the level of taxation. Regarding the level of taxation, see the discussion on taxpayer equity and the ability-to-pay principle in chapter 5.1.1.

¹³⁶ Which of the two criteria is applied depends on the regulations of the company law of the respective jurisdiction. Thus, a company may be recognised as an entity legally distinct from its incorporators because of its incorporation under the law of a given country, under the "incorporation doctrine", or because a company has its administrative seat in a given country, according to the "seat doctrine". For further details, see *Rivier*, 1987, pp. 50-51; *Mössner*, 1998, pp. 72-73; *Schaumburg*, 1998, pp. 302-304; *Breuninger / Krüger*, 1999, pp. 85-93; *Schaumburg / Schloßmacher*, 2001, pp. 392-393 for an outline of the historical background to the seat theory; *Jacobs* (Ed.), 2002, pp. 525-526; *Haase*, 2003, pp. 533-540; *Meilicke*, 2003, pp. 794-804. The applicability of the statutory seat doctrine is limited, since it is deemed to be incompatible in certain areas with the freedom of establishment as set

formed, i.e. where the articles of a company have been registered.¹³⁷ Since the statutory seat as laid down in the articles of the company is also situated in a country if it was established under the laws governing that country,¹³⁸ in principle, both legal criteria lead to the same result. The determination of a company's residence based on these legal criteria is often a rather elusive concept, since the determination of residence is not dependent on actual economic reality.

In order to avoid this rather arbitrary determination of a company's residence based on legal allegiance, the determination of a company's residence can instead be based on the principle of economic allegiance and on a facts-and-circumstances test.¹³⁹ Thus, a company's residence is defined according to economic criteria to provide a determination of residence in accordance with the place where the company's real business is carried on. The *place of management* acts as an economic criterion to identify a company's residence. However, this concept is far from being a uniform concept. Under Anglo-Saxon law, the *central management and control* concept is applicable. The place of central management and control refers to the highest level of management and is defined as the place where top management is located, i.e. where the highest functions of management and control are performed.¹⁴⁰

Alternatively, the *place of effective management* constitutes another concept to identify the place of management which is often used in Continental Europe. It is located at the centre of gravity of top management, meaning where the will determining the running of a company's business takes shape.¹⁴¹ Unlike the place of central management and control, the identification of the place of effective management may take also lower levels of management into account.¹⁴²

The *OECD Model* does not stipulate a particular definition of residence, but refers in paragraph 1 of Article 4 of the *OECD Model* to the definition under the laws of the contracting jurisdictions. Since different countries apply different approaches in order to identify a company's residence, cases in

forth in Articles 43 and 48 of the EC Treaty in line with two recent decisions of the European Court of Justice (ECJ). See the "Überseering" decision in 2002, the "Centros" decision in 1999, and further discussions in Thömmes, 2002, pp. 631-632; Birk, 2003, pp. 472-473; Haase, 2003, pp. 542-546.

¹³⁷ See Griemla, 2003, p. 43. Inter alia, this criterion is applied in the United States and – as a criterion among others – in Australia, Canada, Denmark, the Netherlands, India, New Zealand, Switzerland, and the United Kingdom. See Rivier, 1987, pp. 52-53; *IBFD* (Ed.), 2004, pp. 104, 167, 471, 603, 704, 727.

¹³⁸ Inter alia, this criterion is applied in Austria, Belgium, Germany, Italy, Portugal, Spain, and Switzerland. See Rivier, 1987, p. 55; Griemla, 2003, pp. 39-40; *IBFD* (Ed.), 2004, pp. 53, 71, 243, 359, 519, 603, 653.

¹³⁹ See Li, 2003, p. 83.

¹⁴⁰ See Doernberg / Hünnekens / Hellerstein / Li, 2001, p. 76; Griemla, 2003, p. 42. Inter alia, this criterion is applied in Canada, New Zealand, and the United Kingdom. See Rivier, 1987, pp. 53-54; *IBFD* (Ed.), 2004, pp. 104, 704.

¹⁴¹ This test is often applied as an alternative criterion to the statutory seat of a company, for example in Austria, Belgium, France, Germany, Italy, Portugal, Spain, and Switzerland. See Rivier, 1987, p. 55; *IBFD* (Ed.), 2004, pp. 53, 71, 218, 243, 359, 519, 603, 653. It is assumed here that the administrative centre according to civil law coincides with the place of central management. For the discussion with further quotations for this point of view and for the opposite view that these two criteria do not lead to the same place of residence, see Schaumburg, 1998, pp. 304-305; Griemla, 2003, pp. 53-56.

¹⁴² See Staringer, 1999, p. 137; Griemla, 2003, p. 41.

which a company is deemed to be domiciled in several countries may occur with more frequency.¹⁴³ In such cases, paragraph 3 of Article 4 of the OECD Model stipulates the *place of effective management* as a tie-breaker rule if a company is resident in two countries according to their respective national laws. The place of effective management is in general located where the key management works and where decisions necessary for conducting a business are made.¹⁴⁴ This is normally the place where the most senior persons, such as the Board of Directors, meet to make decisions concerning the management of the company. For the identification of the place of effective management, all major facts and circumstances must be examined. According to the OECD, there can only be one place of effective management at any one time. However, the German Supreme Tax Court has ruled that a company can have several places of effective management.¹⁴⁵ To conclude, although the characteristics of the place of management concept vary according to their respective implementation, they all have in common that the location of management, and the place of decision-taking, plays a central role in identifying the place of management.

Another criterion to determine a company's residence is the place where the company's *main activities* are conducted.¹⁴⁶ Note that not just a specific location within a particular country, but all actual and real activities carried out within a country are considered.

3.2.2. Taxation in the Source Country

As mentioned above, the source country also has a fair claim to tax the income produced within its borders because the investors benefiting from its services should be made to bear their share of the costs.¹⁴⁷ Firstly, the *characterisation of income* is important when levying taxes at source, i.e. the identification of the source of income, the jurisdictional nexus, the methods of tax collection and the tax rates. In general, in accordance with both domestic and treaty law, a distinction can be made between active income, including business profits and income from services, and passive income, including dividends, interests and royalties.¹⁴⁸ In the context of this thesis, the main income category to be considered is business income, including income from services, and royalties.

¹⁴³ See *Hinnekins*, 2001, p. 324. Even if the same criterion is applied, a dual resident company may exist. See also *Rivier*, 1987, pp. 61-63; *Staringer*, 1999, pp. 33-35; *Griemla*, 2003, pp. 46-51, who give an overview of the reasons for dual residency.

¹⁴⁴ For the following comments, see paragraph 24 of the Commentary on Article 4 of the OECD Model; *Doernberg / Hinnekins / Hellerstein / Li*, 2001, pp. 301-302. The place where the decisions are implemented is irrelevant. See *OECD*, 2001c, section 28 for the example of German case law; *Schloßmacher*, 2002, p. 97.

¹⁴⁵ See German Supreme Tax Court, 1997, p. 233; German Supreme Tax Court, 1998, pp. 437-439, and also the discussion in *Kessler / Müller*, 2003, pp. 365-366.

¹⁴⁶ Inter alia, this criterion is applied in Italy and Israel. See *Rivier*, 1987, p. 56; *Griemla*, 2003, pp. 43-44; *IBFD* (Ed.), 2004, p. 359.

¹⁴⁷ See chapter 3.1., and *Sprague / Hersey*, 2003, p. 305.

¹⁴⁸ For more details and further quotations, see *Li*, 2003, p. 86.

The source of *capital income*, including royalties, is in general located at the payer's residence. According to Article 12 of the OECD Model, only the residence country has the right to tax income from royalties. However, many double tax conventions in practice deviate from this rule and provide for source taxation in the form of a withholding tax of about 5 to 20 percent.¹⁴⁹ The source rules for *business profits* and *income from services* in general refer to the location of the income-earning activities. Domestic law may define the source of business income to be the place where business is carried out or services are performed, the place of conclusion of a contract, the place of payment, the location of business activities or the activities of a dependent agent.¹⁵⁰

In order to determine the *source country's right to tax*, an appropriate threshold must be defined. Under the principle of source country entitlement, the source country should have a prior right to tax profits generated by activities carried out within its jurisdiction if the taxable entity participates actively in economic life.¹⁵¹ For business income or income from independent services, the OECD Model follows the permanent establishment rule. The permanent establishment indicates the threshold that must be met by the business activities in the source country in order to entitle the country to tax the resulting business income. This concept allows the source country to tax profits attributable to business establishments which show the characteristics of permanence, substance, and continuity of operation.¹⁵²

According to Article 5 of the OECD Model, a permanent establishment is defined as a fixed place of business through which the business of an enterprise is wholly or partly carried out.¹⁵³ The company must have the right to use the permanent establishment, i.e. the permanent establishment has to be at the disposal of the head office.¹⁵⁴ Moreover, the overall activity of the permanent establishment must go beyond mere preparatory or auxiliary activities and must not fall under one of the exceptions mentioned in paragraph 4 of Article 5 of the OECD Model.¹⁵⁵ In addition,

¹⁴⁹ See also *Eicker*, 2001, p. 152.

¹⁵⁰ See *Doernberg / Hinnekens / Hellerstein / Li*, 2001, p. 79, and *Sprague / Boyle*, 2001, pp. 31-41 for a detailed comparative analysis of national source rules for e-commerce.

¹⁵¹ For a historical overview of this principle in several states, see *Flick*, 1961, p. 173.

¹⁵² See *Musgrave*, 1972, p. 398. The adoption of the permanent establishment concept goes back to the draft convention published by the League of Nations in 1927. For a more detailed outline of the history of the permanent establishment concept, see *Skaar*, 1991, pp. 72-101.

¹⁵³ See paragraph 1 of Article 5 of the OECD Model. The location of the customer base is irrelevant.

¹⁵⁴ See *Skaar*, 1991, pp. 155-158; *Utescher*, 1999, pp. 101-103; *Skaar*, 2000, p. 190; *Jacobs* (Ed.), 2002, p. 380; *Peter*, 2002, pp. 55-57 and paragraphs 4 to 4.1 of the Commentary on Article 5 of the OECD Model.

¹⁵⁵ Exceptional activities include the use of facilities solely for the purpose of storage, display or delivery of goods or merchandise, the maintenance of a stock of goods or merchandise solely for the purpose of storage, display or delivery or for the purpose of processing by another company, or the maintenance of a fixed place of business solely for the purpose of purchasing goods or merchandise or of collecting information. These activities mentioned in subparagraphs 4 a) to 4 d) of Article 5 of the OECD Model do in general not entail the creation of a permanent establishment, even if they would constitute more than auxiliary or preparatory activities. This legal effect is contrary to the intention underlying paragraph 4 of Article 5 of the OECD Model to prevent taxation if only activities of a purely preparatory or auxiliary nature are carried on. See also paragraph 21 of the Commentary on

according to paragraph 5 of Article 5 of the OECD Model, a permanent establishment is deemed to exist if a company carries out business through a *dependent agent* who habitually exercises the authority to enter into contracts in the name of the company. The criterion of a dependent agent is subsidiary to the basic rule permanent establishment and shall take the company's personnel connection to a jurisdiction into account.¹⁵⁶

If the permanent establishment rule is not met, the taxpayer carries out *direct business* in the source country, meaning that the company works the market in the source country without actually setting up a fixed establishment there.

3.3. Allocation of Profits

3.3.1. General Overview

In general, the issue of allocating profits among different entities arises for permanent establishments and subsidiaries belonging to an affiliated group. In both cases, the allocation of profits is based on the same rationale: the division of income must take place according to the origin of the profits, i.e. depending on where they are generated in the first place.¹⁵⁷ The origin of profits is determined in a functional analysis which identifies the functions performed by the various entities, for example purchasing, sales and distribution, production or R&D, and the risks borne, such as currency, sales or product risks. Based on the functional analysis, the approximate contribution of each entity to the creation of value is calculated and the profits and assets are allocated respectively.

In general, an *affiliated group* represents an economic entity. The profit, however, must be calculated for each of every legal entity within the group. Also a permanent establishment forms an inseparable part of the rest of the company, but is considered a separate entity for the purpose of dividing income between the permanent establishment and the head office. Thus, from an economic point of view, an affiliated group representing an economic entity is comparable to a head office along with a permanent establishment. There are two basic theoretical approaches for the allocation of profits between different entities: the separate entity approach, along with the arm's length principle, and the consolidation approach, along with formula apportionment.

Under the *separate entity approach*, the profits of each separable entity, such as a permanent establishment or a legal entity, are calculated separately. This approach works on the premise that each entity is faced with differing economic circumstances and therefore has to be treated

Article 5 of the OECD Model, and *Utescher*, 1999, p. 114.

¹⁵⁶ This rule emphasises the employees' link to the jurisdiction and does not require a fixed place of business. See *Jacobs* (Ed.), 2002, pp. 397, 412; *Scheffler*, 2002, p. 183.

¹⁵⁷ For the following comments, see *Scheffler*, 2002, pp. 279-281.

differently. Intercompany transactions, such as the internal transfer of goods and services, are recognised for tax purposes. Since the different entities belonging to an economic entity have common interests and do not act as third parties on the markets, the issue of calculating a suitable transfer price for each transaction conducted between the entities arises. Thus, a benchmark must be found which indicates a range of adequate transfer prices in the form of a bandwidth. Under the *arm's length principle*, the price that would have been negotiated between independent third parties constitutes the benchmark for calculating appropriate transfer prices. The intention behind is that the valuation of transactions between related parties shall not differ from the one between unrelated parties to avoid the creation of tax advantages or disadvantages distorting the competitive positions of either type of entity.¹⁵⁸ Thus, affiliated entities carrying out cross-border business must do so on market principles.¹⁵⁹ One advantage of this approach is that it is, in theory, considered to provide the closest approximation of the economic contribution of each related entity.¹⁶⁰

The *consolidation approach* is based on the idea of the economic entity. The entire economic entity – defined either on the basis of legal control or in economic terms – is considered a single taxable entity, whereas the separate legal entities do not constitute tax subjects.¹⁶¹ It is assumed that this economic entity is divided into legal entities for formal reasons only, such as the organisational structure.¹⁶² The profits are supposed to be generated at the level of the economic entity through transactions with third parties.¹⁶³ Thus, profits are calculated at the level of the economic entity and intercompany transactions are either – for a permanent establishment – not considered, or are – for an affiliated group – consolidated under a particular scheme. Since intercompany transactions between members of the group are in general eliminated when calculating the income, issues of transfer pricing do not arise. Subsequently, under *formula apportionment*, this income is allocated to the respective jurisdictions using a predetermined formula which attributes a fraction of the company's total income to the taxing jurisdiction equal to the weighted average of the jurisdiction's share in the economic activities of the company.¹⁶⁴ The factors typically included in the formula are property, payroll and sales.¹⁶⁵ Also a formula based on value added has been discussed. In general, the main drawback of the consolidation and apportionment method consists in the definition of the allocation rule. The main advantage of the method of formula apportionment is not the fact that it

¹⁵⁸ See *OECD*, 2001, section 1.7; *Oestreicher*, 2000, p. 14; *ibid.*, 2003, pp. 35-36; *Li*, 2003, pp. 108-109.

¹⁵⁹ See *Commission of the European Communities*, 2001, p. 256.

¹⁶⁰ See *OECD*, 2001, section 1.13; *Li*, 2003, p. 109.

¹⁶¹ Thus, the (legal) independence of each company is ignored. See *Jacobs* (Ed.), 2002, p. 947.

¹⁶² See *Oestreicher*, 2002, p. 348.

¹⁶³ See *Oestreicher*, 2000, p. 125.

¹⁶⁴ See *McLure Jr. / Weiner*, 2000, p. 251.

¹⁶⁵ See *Miller*, 1984, pp. 133-136; *Oestreicher*, 2000, p. 149; *Multistate Tax Commission*, 2004, Reg. IV.9.(a). For Germany, see sections 28-31 and 33 of the German Trade Tax Act. In Canada, only a two-factor formula that includes payroll and sales is used.

can provide an exact allocation of profits, but that it can be implemented relatively simply and constitutes a workable method to allocate profits approximately in relation to the inputs involved.¹⁶⁶

In theory, these two basic approaches of income allocation are applicable to both a permanent establishment and a subsidiary belonging to an affiliated group. The following shows in more detail which rules are currently applicable to these two forms of doing business abroad.

3.3.2. Methods of Profit Allocation within a Multinational Group

Under the current system of international company taxation, the separate entity approach, along with the arm's length principle, constitutes the prevalent method to allocate profits between different tax subjects belonging to a multinational group of companies. In most OECD countries, the alternative consolidation approach, along with formula apportionment, is currently regarded as a lower-ranking method.¹⁶⁷

3.3.2.1. The Separate Entity Approach and the Arm's Length Principle

The separate entity approach in combination with the arm's length principle is currently codified in paragraph 1 of Article 9 of the OECD Model.¹⁶⁸ This approach is recognised by the international tax community and represents the international norm, since it has been adopted world-wide.¹⁶⁹

The arm's length principle is applied using three different methods, the "traditional transaction methods".¹⁷⁰ They are all based on separate transactions and on the assumption that comparable transactions can be found. According to the *comparable uncontrolled price method* (CUPM), the price for goods or services transferred in a transaction between affiliated entities is compared to the price charged for the same goods or services transferred in a comparable transaction between independent parties.¹⁷¹ A transaction is deemed to be comparable if there are no differences between the transactions being compared which could materially affect the respective conditions under examination, or if any differences existing can be eliminated through reasonably accurate adjustments.¹⁷² Attributes of a transaction that must be comparable include the characteristics of the goods or services transferred, the functions performed, the assets used and risks assumed by the

¹⁶⁶ See also *Doernberg / Hinnekens / Hellerstein / Li*, 2001, pp. 82-83.

¹⁶⁷ It has been stated that in recent years, there has been a historical movement towards formula apportionment so that the current practice reflects a combination of the separate entity approach and formula apportionment. See *Li*, 2003, p. 108.

¹⁶⁸ See also the historical overview of the development and the justification of the arm's length principle in *Oestreicher*, 2003, pp. 8-29.

¹⁶⁹ See *Li*, 2003, pp. 108, 109.

¹⁷⁰ Also on this subject in more detail, see *Jacobs* (Ed.), 2002, pp. 926-934; *Vögele / Borstell / Raab / Diessner*, 2004, chapter D, sections 1-236.

¹⁷¹ See *OECD*, 2001, section 2.6.

¹⁷² See *OECD*, 2001, section 1.15.

respective parties, the contractual terms, the economic circumstances of the parties, and the business strategy pursued by them.¹⁷³ As the CUPM is deemed to be the most direct and reliable method, it is preferred to all other methods.¹⁷⁴ Alternatively, the *resale price method* (RPM) is based on the price at which a product purchased from an associated enterprise is resold to an independent enterprise. This resale price is reduced by the appropriate gross resale price margin calculated by comparing it with the gross margin of an uncontrolled transaction. The remainder constitutes the arm's length price for the transaction between the associated enterprises.¹⁷⁵ The *cost plus method* (CPM) starts with the costs incurred by the supplier in a transaction between affiliated companies for products transferred or services provided to a related purchaser.¹⁷⁶ A cost plus mark up that is consistent with mark ups in uncontrolled transactions is then added to raise the price to the level that would have been agreed between unrelated parties.¹⁷⁷

In addition to the traditional transaction methods, the OECD Transfer Pricing Guidelines include two transactional profit methods. Both methods are deemed to be consistent with the arm's length principle, but only applicable as a last resort if the traditional transaction methods cannot reliably be applied.¹⁷⁸ Under the *transactional profit split method* (TPSM), in a first step, the combined profit that arises from a controlled transaction between associated enterprises is identified. In a second step, the profit is split among the relevant parties on a basis reflecting the division that would have been concluded between uncontrolled parties.¹⁷⁹ The *transactional net margin method* (TNMM) examines the net profit margin relative to an appropriate base (for example costs, sales or assets) that a taxpayer realises from a controlled transaction and compares this figure to the net profit margin between uncontrolled parties.¹⁸⁰ The appropriate transfer price is then calculated by either subtracting the net profit margin or by adding it to the total costs. Thus, the TNMM operates in a manner similar to the CPM and the RPM.¹⁸¹ As the case may be, appropriate adjustments might be

¹⁷³ See *Musgrave*, 1972, p. 403, and *OECD*, 2001, sections 1.17-1.35 for further details.

¹⁷⁴ See *Commission of the European Communities*, 2001, p. 258.

¹⁷⁵ See *OECD*, 2001, section 2.14; *Commission of the European Communities*, 2001, p. 258.

¹⁷⁶ See *OECD*, 2001, section 2.32.

¹⁷⁷ See *Commission of the European Communities*, 2001, p. 258.

¹⁷⁸ See *OECD*, 2001, sections 3.49-3.50.

¹⁷⁹ See *OECD*, 2001, section 3.5; *Portner*, 1995, p. 357; *Oestreicher*, 2000, pp. 67-70; *Commission of the European Communities*, 2001, p. 258; *Li*, 2001, p. 784; *Jacobs* (Ed.), 2002, pp. 941-942; *Vögele / Borstell / Raab / Diessner*, 2004, chapter D, sections 311-317. For the different methods of profit split, such as the contribution analysis and the residual analysis, see *OECD*, 2001, sections 3.16-3.25; *Kaminski*, 2001, pp. 162-166; *Jacobs* (Ed.), 2002, pp. 942-943; *Li*, 2003, pp. 111-112; *Vögele / Borstell / Raab / Diessner*, 2004, chapter D, sections 318-337.

¹⁸⁰ See *OECD*, 2001, section 3.26, and also *Jacobs* (Ed.), 2002, pp. 938-939; *Li*, 2003, pp. 112-113. For an overview of the similarities and differences between the TNMM and the comparable profit method originated in the United States, see *Portner*, 1992, pp. 868-869; *Kaminski*, 2001, pp. 138-144; *Vögele / Borstell / Raab / Diessner*, 2004, chapter D, sections 268-275.

¹⁸¹ See *OECD*, 2001, section 3.26. The TNMM compares net margins, whereas the CPM and the RPM compare gross margins. See *Commission of the European Communities*, 2001, p. 258, and for a detailed example, see *Jacobs* (Ed.), 2002, pp. 940-941.

necessary to make the data truly comparable and to obtain reliable results.

3.3.2.2. The Consolidation and Apportionment Approach

With regard to the allocation of profits between separate legal entities, the method of formula apportionment is clearly rejected by the OECD, since it is not deemed to be consistent with the arm's length principle.¹⁸² So far, the consolidation approach, along with formula apportionment, has not been applied between countries but only between local taxing jurisdictions, such as between federal states in the United States, provinces in Canada and – as regards trade income tax – federal states in Germany.¹⁸³ However, these consolidation and apportionment methods are becoming increasingly important in particular for single economic markets such as the European Union. In 2001, the European Commission released a study on Company Taxation in the European Union containing various suggestions of reforming and harmonising company taxation in the European Union in the long run which are all based on the approach of a consolidated tax base.¹⁸⁴ The concept with the lowest level of harmonisation is the concept of Home State Taxation (HST). Under this approach, multinational groups compute their taxable base according to only one single tax system, the tax code of the home state of the parent company. The Member States administrations accept, under a form of mutual recognition, the tax codes of the other Member States.¹⁸⁵ A second proposal is a Common Consolidated Base Taxation (CCBT). This approach is now preferred by the European Commission as the long term goal for harmonising tax bases in the European Union.¹⁸⁶ The difference compared to HST is that the tax base of multinational groups is calculated according to an optional new code which is adopted across the whole European Union. In both concepts, the tax rate is set by the individual Member States. The third approach is the so-called European Union Company Income Tax (EUCIT), which requires the draft of a new, single corporate tax code with a single tax rate to be applied across the European Union. Forth, a Single Compulsory Harmonised Tax Base (CHTB) has been suggested. Under this approach, a single corporate tax code would replace the existing 25 domestic tax codes and would be applied to all enterprises within the

¹⁸² See *OECD*, 2001, sections 3.63-3.74.

¹⁸³ See *McLure Jr. / Weiner*, 2000, p. 251; *Oestreicher*, 2000, pp. 126-157; *OECD*, 2001, section 3.58.

¹⁸⁴ For an outline of the different concepts, see *Commission of the European Communities*, 2001, pp. 373-378. For a discussion of this study, see among others *Mintz*, 2002, pp. 6-9; *Mors*, 2002, pp. 22-23; *Schön*, 2002, pp. 284-286; *Weiner*, 2002, pp. 10-15; *Weiner / Mintz*, 2002, pp. 347-348; *Westberg*, 2002a, pp. 322-330; *Frebel / Spengel*, 2003, pp. 786-792; *Mintz / Weiner*, 2003, pp. 696-709; *Devereux*, 2004, pp. 71-78. The integration of personal and corporate taxes is not referred to in the study. For comments on this fact, see *Devereux*, 2004, pp. 84-86.

¹⁸⁵ For the European Commission's proposal of an experimental HST pilot scheme for SMEs, see *Commission of the European Communities*, 2003, pp. 12-16; *ibid.*, 2003a, *ibid.*, 2004b. The HST approach is intended to provide pragmatic short or medium term assistance for smaller companies, for example by addressing the specific tax compliance issues of SMEs in the Internal Market.

¹⁸⁶ For more details, see *Commission of the European Communities*, 2004c. In general, the more likely a political consensus for an approach can be achieved, the less preferable it is under economic aspects. Therefore, the CCBT may constitute the alternative that complies best with these two requirements in a medium term.

European Union, including enterprises that only operate domestically.

3.3.3. Methods of Profit Allocation to a Permanent Establishment

Under paragraph 2 of Article 7 of the OECD Model, the currently favoured method for allocating profits to a permanent establishment is the arm's length principle. Thus, the price for transactions conducted between the permanent establishment and the head office has to be the same as between third parties.¹⁸⁷ However, the arm's length principle is not implemented for all kinds of transactions between the permanent establishment and the head office. Depending on the kind of intra-company transaction, the fiction of the permanent establishment being a separate entity is interpreted differently. It is debatable whether and up to which amount a market price including a profit mark-up can be applied.¹⁸⁸ In addition, under paragraph 4 of Article 7 of the OECD Model, a consolidation and apportionment approach can only be applied where, exceptionally, it has as a matter of history been customary in a contracting jurisdiction in the past and is accepted by the tax authorities and taxpayers as being satisfactory. The method of apportionment adopted shall, however, implicate that the result is in accordance with the result achieved under the arm's length principle.¹⁸⁹ It is considered that this result is very hard to achieve in practice.¹⁹⁰

The application of the arm's length principle to permanent establishments has been refined recently by the OECD in a working hypothesis which has now become the authorised OECD approach.¹⁹¹ In contrast to the previous situation as described above, under the new "functionally separate entity approach", the arm's length principle is more consistently considered as a separate entity.¹⁹² The aim of this approach is to assimilate the rules for profit allocation applicable to subsidiaries and

¹⁸⁷ See *OECD*, 2001b, section 179. Thus, the OECD Model limits the taxing right of the source country in two ways, i.e. by the definition of a permanent establishment and by the rule of the allocation of profits to a permanent establishment. See *Scheffler*, 2002, p. 349.

¹⁸⁸ For example, under paragraph 17.7 of the Commentary on Article 7 of the OECD Model, a sharing of costs is proposed for the provision of services. For further details on the treatment of different kinds of transactions, see paragraphs 13-14, 17-17.7 of the Commentary on Article 7 of the OECD Model; *Jacobs* (Ed.), 2002, pp. 632-641. Also the capitalisation of the permanent establishment does not follow the arm's length principle. For more details, see paragraphs 18-20 of the Commentary on Article 7 of the OECD Model; *Jacobs* (Ed.), 2002, pp. 641-648. This lack of consensus may lead to double or undertaxation. See *OECD*, 2001b, section 3; *OECD*, 2004, section 2, and also *Ditz*, 2002, p. 211; *Graf*, 2003, pp. 25, 217; *Konrad*, 2003, p. 786; *Förster / Naumann*, 2004, p. 1778.

¹⁸⁹ See paragraph 4 of Article 7 of the OECD Model; paragraph 25 of the Commentary on Article 7 of the OECD Model.

¹⁹⁰ See *OECD*, 2004, section 299; *Ditz*, 2004, pp. 403-404.

¹⁹¹ See *OECD*, 2004, section 3.

¹⁹² See *OECD*, 2001b, section 63; *OECD*, 2004, section 169, and *Graf*, 2003, p. 219; *Förster / Naumann*, 2004, p. 1778. Thus, a profit mark-up always has to be charged if it would have been charged between third parties. See *OECD*, 2001b, section 82; *OECD*, 2004, section 188; *Baron*, 2001a, p. 8; *Ditz*, 2002, p. 212; *Konrad*, 2003, p. 788; *Ditz*, 2004, p. 130. An exception from this rule is made for the capitalisation of the permanent establishment. See *OECD*, 2004, section 150; *Förster / Naumann*, 2004, pp. 1786-1787. For an analysis of conflicts between the functionally separate entity approach and the determination of taxable income under German tax law, see *Ditz*, 2005, pp. 39-43.

permanent establishments to provide a more neutral taxation.¹⁹³ The profits to be attributed to the permanent establishment are the profits that the permanent establishment would have earned at arm's length as if it were a distinct and separate enterprise performing the same or similar functions under the same or similar conditions.¹⁹⁴ To calculate the amount of profits attributable to a permanent establishment, firstly, a functional and factual analysis has to be conducted to delineate the permanent establishment as a hypothesised distinct and separate entity and to determine the functions performed by this entity.¹⁹⁵ Subsequent to this functional analysis, the profits of the hypothesised distinct and separate enterprise have to be determined based upon a comparability analysis according to the arm's length principle.¹⁹⁶

The recently developed authorised OECD approach states that there is no continuing need for paragraph 4 of Article 7 of the OECD Model, with the exception for enterprises carrying on an insurance business.¹⁹⁷ This preference of the arm's length principle over the apportionment of the total profits of the enterprise to its various parts to determine the profits attributable to a permanent establishment is not in line with the idea of a consolidation and apportionment method to tax affiliated groups.¹⁹⁸

Based on these general principles for attributing profits to a permanent establishment, the OECD has examined special items in an electronic commerce environment. For the examples of a single server,¹⁹⁹ multiple servers,²⁰⁰ technical support staff in permanent establishments²⁰¹ and a web site fully developed in a permanent establishment,²⁰² the functional and factual analysis is conducted on the basis of which the attributable profits are determined under the arm's length principle.²⁰³

¹⁹³ See *OECD* 2001b, section 40; *OECD*, 2004, section 50, and also paragraph 11 of the Commentary on Article 7 of the OECD Model; *Sprague / Hersey*, 2003, p. 322; *Naumann / Förster*, 2004, p. 248.

¹⁹⁴ See paragraph 2 of Article 7 of the OECD Model; *OECD*, 2001b, section 22; *OECD*, 2004, section 19, and *Konrad*, 2003, p. 786; *VanderWolk / Sprague*, 2003, p. 22; *Förster / Naumann*, 2004, p. 1778.

¹⁹⁵ See *OECD*, 2004, sections 56, 72-168. The facts and circumstances to determine the extent to which the company's assets are used by the permanent establishment are also examined. In addition, the risks assumed by the permanent establishment and the amount of capital necessary to support the functions performed have to be determined. See *OECD*, 2004, sections 58-60, 83-165; *Förster / Naumann*, 2004, pp. 1779-1788.

¹⁹⁶ For more details, see *OECD*, 2004, sections 169-287.

¹⁹⁷ See *OECD*, 2001b, section 180; *OECD*, 2004, section 300. Holding the same view, see *Ditz*, 2004, pp. 406-407.

¹⁹⁸ For more details on the consolidation and apportionment approach, see chapter 7.3.2.

¹⁹⁹ See *OECD*, 2001a, sections 41-110.

²⁰⁰ See *OECD*, 2001a, sections 111-117.

²⁰¹ See *OECD*, 2001a, sections 118-128.

²⁰² See *OECD*, 2001a, sections 129-138.

²⁰³ The profits resulting from activities taking place on servers such as the use of software, intangibles, and computer hardware, are due mainly to the exploitation of these assets and should be attributed to the economic owner of the assets. Thus, the legal ownership of assets is ignored. In addition, only little profit should be attributed to transaction processing functions taking place on a server. For comments on the discussion draft, see *Hardesty*, 2001, pp. 13-18; *Strunk*, 2001, pp. 1528-1536; *Ditz*, 2002, pp. 213-216; *Graf*, 2003, pp. 224-232.

3.3.4. Transfer of Assets

For a transfer of assets, the transferring party in general has the right to be remunerated at the market price, i.e. the arm's length price that would have been negotiated between third parties. Thus, hidden reserves amounting to the difference between the book value and the market price are realised and taxed. In general, profits are only realised in the case of transactions with other legal entities. Therefore, the issue of realisation of hidden reserves immanent to the assets transferred is particularly relevant to the transfer of assets to a subsidiary. Regarding the transfer of assets between a permanent establishment and another part of the company, the assets remain in the same company.

If a transfer of assets is comparable to an outright sale between independent companies, under the authorised OECD approach, the fair market value of the asset at the time of transfer has to be established. This value provides the basis upon which an allowance for depreciation would be computed in the country to which the asset has been transferred.²⁰⁴ However, the OECD approach does not override domestic legislation on whether the profits are taxed immediately in the jurisdiction from which the asset has been transferred.²⁰⁵ In general, a realisation of hidden reserves can be avoided by transferring the asset at the arm's length price but offsetting the difference between the market price and the book value using a correcting item.

3.4. Methods to Avoid Double Taxation

Since a company's income may be liable to tax in two jurisdictions, a double taxation of profits may arise.²⁰⁶ For an *overlapping source and residence jurisdiction*, as a general rule, the source country has a prior right to tax the income arising within its jurisdiction according to the principle of source country entitlement. It is then up to the residence country to prevent or mitigate double taxation of profits.²⁰⁷ The two main methods to prevent double taxation due to overlapping jurisdictions are the

²⁰⁴ See *OECD*, 2004, section 207-208.

²⁰⁵ See *OECD*, 2004, sections 207-212; paragraph 15 of the Commentary on Article 7 of the OECD Model; *Konrad*, 2003, pp. 787-788. For a detailed discussion of the example of the German practice, see *Haß*, 2000, pp. 186-192; *Jacobs* (Ed.), 2002, pp. 636-639; *Eisele*, 2003, pp. 205-207; *Roth*, 2003, pp. 189-195. However, it is debatable whether the rules on the taxation of a transfer of assets are consistent with the freedom of establishment in the European Union, since they are in general only applicable if the asset is transferred abroad. For more details, see *Thömmes*, 2003, pp. 552-553. The ECJ recently stated that a French ruling regarding the expatriate taxation of individuals is an infringement of the freedom of establishment. See the "Hughes de Lasteyrie du Saillant" decision in 2004; *Kessler / Spengel*, 2003, p. 363; *ibid.*, 2004, p. 7. However, a similar application to corporations is not expected. For more details, see *Thömmes*, 2003a, pp. 656-658.

²⁰⁶ Potential causes of double taxation are double residence taxation, concurrent residence and source taxation, double source taxation or the divergent characterisation of facts for tax purposes and divergent personal attribution of income. For more details, see *Doernberg / Hinnekens / Hellerstein / Li*, 2001, pp. 85-86; *Jacobs* (Ed.), 2002, pp. 8-9; *Li*, 2003, p. 95.

²⁰⁷ It is reasonable to confer this obligation to the residence jurisdiction, since the residence country in general takes into account the world-wide income. See *Jacobs* (Ed.), 2002, p. 11.

tax credit method and the tax exemption method. The OECD Model does not stipulate which of the two methods to avoid double taxation should be preferred.²⁰⁸

Under the *tax exemption method*, foreign income is excluded from the domestic tax base. If the tax rate structure is progressive, the income of the source country may be taken into account to determine the tax rate applicable in the residence country. In general, the tax exemption method provides for capital import neutrality.²⁰⁹ If the *tax credit method* is applied, the residence country grants a credit for the taxes levied by the source country and thus offsets the foreign taxes against the tax due in the residence country. The tax credit method, in theory, provides for capital export neutrality.²¹⁰ In practice, the credit may be capped at the amount of tax payable in the residence jurisdiction without a refund being granted if a higher amount of taxes is payable in the source country. Consequently, the final tax rate applicable is whichever rate is higher between the residence and the source jurisdiction.²¹¹

In general, the restriction of the source country's right to tax and – consequently – the obligation of the residence country to avoid double taxation depends on the category of income. Thus, the final tax level at which a particular form of doing business abroad is taxed also depends on the way of doing business. If a company generates *royalties*, the withholding tax imposed by the source country on royalties earned within its borders may usually be credited against the tax due in the residence country. Consequently, the royalty is taxed at the tax rate in the residence country, except for excess tax credits.

If a company generates *business profits* abroad but does not set up a permanent establishment or a subsidiary there, the source country has no right to tax. Instead, the income generated in the source country is taxed in the residence country. Thus, a lower tax rate in the source country does not have any impact. If a permanent establishment or subsidiary is set up abroad, the method used to avoid double taxation in the residence country is crucial.

A *subsidiary* in the source country constitutes a separate legal entity and is subject to unlimited tax liability there. The income of the subsidiary is taxable in the source country independently of whether the profits are retained or distributed. If the income of the subsidiary is retained, a tax shelter effect results, since no further taxation takes place and the source country's tax rate applies. In the case of a distribution of dividends to the parent company, the dividends may be subject to a

²⁰⁸ See Articles 23A and 23B of the OECD Model. The tax exemption method is the traditional continental European method, whereas the tax credit method was implemented in the Anglo-American jurisdictions. For more details on the history of the two methods, see *Bühler*, 1959/1960, pp. 156-163; *Vogel*, 1996, pp. 1-2.

²⁰⁹ This way of avoiding double taxation corresponds to the "source principle" outlined in chapter 5.2.

²¹⁰ This way of avoiding double taxation corresponds to the "residence principle" discussed in chapter 5.2.

²¹¹ In practice, the tax credit is often limited. Possible limitations are the overall limitation, the per-country limitation,

withholding tax under the limited tax liability of the parent company.²¹² In addition, the parent company is subject to unlimited tax liability in its residence country. Under the *tax exemption method* laid down in a double tax treaty or according to a domestic participation privilege, the dividends distributed by the subsidiary are exempt from taxation. Apart from repatriation costs and withholding taxes on dividends that cannot be credited, the tax rate of the source country is applied.²¹³ If the *tax credit method* is applied in the residence jurisdiction of the parent company, the withholding taxes on the dividends distributed are credited against the tax due in the residence country. Consequently, income is taxed at the tax rate of the residence country at least. However, given an overall limitation and averaging of foreign tax credits, the lower tax rate in the source country may enable the crediting of other excess tax credits.²¹⁴

If a company invests in the form of a *permanent establishment* in the source country, the head office is subject to limited tax liability there. As a consequence, the income generated through the permanent establishment is taxable in the source country in terms of non-resident taxation.²¹⁵ In addition, the head office is subject to unlimited tax liability in its residence country. If the tax exemption method is applied, the income generated by the permanent establishment in the source country is exempted from taxation. Thus, the tax rate of the source country is applied. Under the tax credit method, taxes paid in the source country on the profits of the permanent establishment are credited against the tax due in the residence country. Thus, the income is taxed at least at the tax rate of the residence country of the head office.

If double taxation arises due to an *overlapping residence jurisdiction*, the OECD Model avoids any possible double taxation by providing a tie-breaker rule.²¹⁶ Thus, an overlapping residence taxation is transformed into concurrently residence-based and source-based taxation. Possible double taxation due to an *overlapping source taxation* may be reduced according to the OECD Model by providing for standard source rules.²¹⁷

and the per-item-of-income limitation. See *Jacobs* (Ed.), 2002, pp. 45-46, and footnote 642.

²¹² For dividend distributions to the parent company which take place within the EU, the dividends are not subject to a withholding tax under the "Parent-Subsidiary Directive".

²¹³ In Germany, for example, 5% of the dividends received by a corporation from abroad are liable to tax. If the tax rate in the source country is higher than in the residence country, the tax exemption method is not advantageous, as it provides for final taxation at the higher tax level in the source country. Therefore, an investment in the form of doing direct business might be advantageous. See section 8 b) subsection 5 of the German Corporate Income Tax Act.

²¹⁴ See *Jacobs* (Ed.), 2002, pp. 834-838, and the example given in *Spengel*, 2003, pp. 51-52; *ibid.*, 2005, pp. 13-14.

²¹⁵ The profits of a permanent establishment abroad may also be subject to a branch profit tax.

²¹⁶ See section 3 of Article 4 of the OECD Model, and *Doernberg / Hinnekens / Hellerstein / Li*, 2001, pp. 87-88; *Li*, 2003, p. 97.

²¹⁷ See *Doernberg / Hinnekens / Hellerstein / Li*, 2001, pp. 88-89.

4. International Tax Planning in the Era of ICT

The aim of this chapter is to analyse the impact of the increase in the use of ICT on international tax planning opportunities under the current tax law. Thus, the relevant tax fields in the age of ICT can be compiled. To achieve this aim, this chapter is organised as follows: To begin with, the basic international tax planning theories are outlined. The company's fiscal aim to reduce the overall effective tax rate is illustrated here in more detail and the most important means for achieving this objective, such as making use of the international differences in tax rates, are defined. Next, several tax planning instruments are analysed to determine whether there are new opportunities for minimising the effective tax rate and to what extent new risks arise with the use of ICT. The analysis includes instruments such as the location of a company's residence, the allocation of functions and risks, the implementation of an optimal transfer pricing system, the choice of form and location of investments abroad, and the use of hybrid forms of co-operation. For each instrument, current and non-current tax issues are considered. Based on the identification of the relevant changes in the international tax planning of companies, we then move on to analyse the effects of the changed business patterns of multinational companies on the allocation of tax revenues between different countries.

4.1. Theory of the International Tax Planning of Companies

4.1.1. Defining International Tax Planning

The basic aim of investors is to maximise their profits. Since the tax expenses of a company in general reduce the profits, it is in the company's interest to minimise the taxes due. However, the minimisation of the total tax burden is not an end in itself and is in general subordinate to the primary aims of a company to optimise the overall economic position, such as profit maximisation, the continuity of a company's operations or the expansion of its business activities.²¹⁸ Thus, tax planning has its limits when it comes into conflict with other higher-ranking entrepreneurial objectives. A precondition for tax planning is that the underlying economic circumstances can be arranged in such a way that tax expenditure is legally minimised.²¹⁹

The bases of tax planning at the international level are the current differences in the tax systems of various countries, and the ways in which the tax systems are linked to each other.²²⁰ If a company is undertaking international business, these differences can be used to achieve the company's fiscal

²¹⁸ See also Klöne, 1980, p. 4; Wagner / Dirrigl, 1980, p. 3; Kratz, 1986, pp. 35-36; Rödder, 1988, p. 356; Kessler, 1996, p. 74; Schänzle, 2000, p. 42; Gassner, 2001, p. 614; Jacobs (Ed.), 2002, p. 711; Grotherr, 2003, p. 10. See also Wagner, 1980, pp. 553-555 with regard to the need for integrating taxes into general corporate planning.

²¹⁹ See Wagner / Dirrigl, 1980, p. 3; Grotherr, 2003, p. 6.

²²⁰ See Jacobs (Ed.), 2002, p. 708.

aims.²²¹ In addition to these quantitative aims for international tax planning, a company also pursues qualitative aims. Some possible examples of qualitative aims are temporary flexibility, the quantitative adaptability, and the minimisation of risks.²²² Thus, international tax planning does not only take the opportunities related to specific transactions or investments into account, but also the respective risks.

Boundaries for international tax planning can be seen in the abuse of the tax law and in illegal actions. Thus, a distinction has to be drawn between legal tax planning and the misuse of the tax law and illegal tax fraud or tax evasion. Legal avoidance of tax expenditure without committing fraud is the responsibility of the managers. The taxpayer may legally arrange business affairs to attract the lowest possible incidence of tax and is not obliged to arrange his business affairs so that a tax liability occurs.²²³ However, the abuse of legal rights, colourable transactions or even illegal tax evasion or tax fraud are not acceptable for international tax planning.²²⁴ An abuse exists if the structure of a business transaction is not suitable for achieving the economic aim and if there are no economic and other non-fiscal reasons. To conclude, international tax planning is, for the purposes of this analysis, defined as the systematic taking into account of tax effects during the overall corporate planning and decision-making process with the aim of planning the company's activities in such a way that taxes are minimised without interfering with the economic development of a company or missing any opportunities for success.²²⁵

4.1.2. Minimising the Effective Tax Rate

As shown above, the increase in the use of ICT particularly has a bearing on multinational groups. Therefore, a special focus of the analysis on international tax planning in the era of ICT is on multinational groups. From 2005 (or at the latest 2007) on, European parent companies have to draw up their consolidated financial statements under IAS / IFRS. Under IAS 12, companies are obliged to record their overall effective tax rate. Thus, the overall effective tax rate is a more and more important benchmark to measure the tax burden of the company or group. As a consequence, this figure is used as a benchmark for the following analysis. The effective tax rate is calculated by dividing the sum of the total income tax expenses, including both current and deferred income tax

²²¹ Often, an international tax situation is more flexible than a national tax situation, but there are also more tax and non-tax factors to be taken into account. See also *Spitz*, 1983, p. 83. Moreover, especially for a company doing business abroad, the costs related to taxation must be minimised, such as information or compliance costs. See *Steimel*, 2001/2002, p. 491; *Grotherr*, 2003, p. 12.

²²² See *Paulus*, 1978, pp. 97-98; *Rödder*, 1988, p. 357; *Steimel*, 2001/2002, p. 491; *Grotherr*, 2003, pp. 12-13.

²²³ See also *Gassner*, 2001, pp. 609, 620, 624; *Jacobs* (Ed.), 2002, p. 712; *Endres*, 2003a, p. 730.

²²⁴ See the discussion in *Grapperhaus*, 1977, pp. 533-534, and also *Rödder*, 1988, pp. 358-359; *Jacobs* (Ed.), 2002, p. 713; *Grotherr*, 2003, pp. 7-10.

²²⁵ See also *Bogenschütz*, 1998, pp. 4-5; *Schänzle*, 2000, p. 42.

costs, by the company's pre-tax earnings.²²⁶

$$\text{Effective Tax Rate} = \frac{\text{Actual Tax Expenses} + \text{Deferred Taxes}}{\text{Earnings Before Tax}} \times 100$$

With the companies' shifting towards capital markets, the importance of the effective tax rate has recently increased significantly. Since the effective tax rate directly influences the earnings per share, this measure is of crucial importance for analysts and shareholders.²²⁷ Moreover, the above-mentioned obligation to record the effective tax rate under international accounting standards also magnifies the importance of this figure.²²⁸ The main functions of the effective tax rate are to provide interested third parties, i.e. financial analysts and investors, with information on the company's tax policy.²²⁹ The effective tax rate is a measure based on past data. It shows the tax burden of a particular company or group and, therefore, does not measure the tax burden for a specific jurisdiction. Since the importance of the effective tax rate for the analysts, shareholders, management, and tax department of a company has increased recently, the fiscal aim of a company is more and more focussed on minimising the overall effective tax rate of the whole company or group.

The effective tax rate is influenced by various tax drivers. Firstly, income tax rates are taken into account for the calculation of current tax expenses. Secondly, the corporate tax system of a jurisdiction is relevant as the corporate tax burden depends on the distribution policy of the company. Among currently valid corporate tax systems, this is only the case for corporate imputation systems.²³⁰ Thirdly, the importance of the tax base depends on the compensatory effect of the deferred taxes. In general, deferred income tax expenses equal the taxes associated with the temporary difference between earnings before tax and taxable income.²³¹ Thus, this difference does not influence the effective tax rate.²³² Temporary differences include differences regarding current depreciation, inventory valuation or the setting up of accruals. However, non-temporary differences

²²⁶ Deferred taxes are not discounted. For a presentation of the calculative interrelations between the effective tax rate and the pre-tax income, see *Kröner*, 2003, pp. 564-566.

²²⁷ It has been shown for the United States that a sustainable reduction in a company's effective tax rate can have a significant impact on market capitalisation and shareholder value. For more details and further quotations, see *Bauman / Schadewald*, 2001, p. 178. See also *Kröner*, 2003, p. 562.

²²⁸ See *Herzig / Dempfle*, 2002, p. 1; *Spengel*, 2005, pp. 90-91; *ibid.*, 2005a, p. 175.

²²⁹ In addition, by using the company's effective tax rate, the performance of the tax department can be assessed by comparing it to previous tax rates or to other companies doing business in the same field. See *Herzig / Dempfle*, 2002, p. 1; *Herzig*, 2003, p. S 80; *Spengel*, 2005, p. 90; *ibid.*, 2005a, p. 176.

²³⁰ In the European Union, a full corporate imputation system is being implemented in Malta and was applied in Finland and in France up to 2004. For more details, see *Ernst & Young / ZEW*, 2004, pp. 9-10; *Spengel*, 2005, p. 92.

²³¹ See *Bauman / Schadewald*, 2001, p. 179.

²³² See *Herzig / Dempfle*, 2002, pp. 3-4; *Spengel*, 2005, pp. 93-95; *ibid.*, 2005a, p. 178.

are not marked off and thus have an impact on the effective tax rate. Permanent differences include tax-exempt income, such as non-taxable dividends or capital gains, and non-deductible operating expenses, such as depreciation of goodwill if fiscal depreciation is not allowed.²³³

In order to show the calculation of the effective tax rate, a tax reconciliation is obligatory under IAS.²³⁴ Under the so-called home-based approach, the statutory tax rate of the home country of the parent company which is applied to all earnings serves as the starting point and benchmark. The reasons for the effective tax rate diverging from this benchmark are then given. Tax reconciliations show the main drivers of the effective tax rate, which are also the starting point for tax planning strategies.

*Table 4.1: Tax Reconciliation for the Purpose of Calculating the Effective Tax Rate*²³⁵

	Starting point: statutory tax rate in the country of domicile of the parent company applied to the total earnings of the company or group (percentage)
+ / -	<p>Modifications due to structural factors inherent to the company</p> <p>Regular modifications due to:</p> <ul style="list-style-type: none"> - Tax-exempt domestic income - Differences in domestic tax rates - <i>Differences in international tax rates</i> - Non-deductible operating expenses - <i>Foreign withholding taxes that cannot be credited</i> <p>Occasional modifications due to:</p> <ul style="list-style-type: none"> - Tax-exempt income from the sale of shares - Goodwill-depreciation disregarded for tax purposes
+ / -	Other modifications due to external factors, e.g. tax reforms
=	Effective tax rate

The company's fiscal aim is to lower the effective tax rate permanently. Since the effective tax rate is mainly calculated using international tax rates and the permanent difference between book income and taxable income, the company's tax planning aims to achieve a lower combined tax rate or permanent difference. Consequently, the most effective and most important international tax planning strategies considered here are as follows. By optimising the tax base allocation and the group structure, an investor can make use of the international tax differential, of tax exempt income

²³³ See Spengel, 2005, p. 96 with further examples; *ibid.*, 2005a, p. 179.

²³⁴ See IAS 12.81 (c).

²³⁵ See Spengel, 2005, pp. 100-101; *ibid.*, 2005a, p. 185. In this thesis, the focus is on the regular international structural factors which reduce the effective tax rate and which are in italics. For an alternative list of tax drivers, see Haarmann, 2001/2002, pp. 370-374; Hannemann / Peffermann, 2003, pp. 728-729. It must be noted that the force of expression of the effective tax rate is limited, particularly with regard to comparisons between different companies. This is also due to the fact that tax reconciliations have not yet been standardised. See Herzig / Dempfle, 2002, p. 8; Hannemann / Peffermann, 2003, p. 733; Spengel, 2005, p. 97. For an example of a tax reconciliation and divers tax planning strategies, see Endres, 2005, pp. 166-184.

and of qualification conflicts to lower the effective tax rate.²³⁶

Unlike the tax planning strategy to minimise the effective tax rate, the *traditional* international tax planning strategy focuses more on minimising the cash value of tax expenses.²³⁷ Due to the resulting interest effect, the aim is to defer tax payments. Therefore, it is preferable to realise expenses and losses as soon as possible by means of a tax accounting policy and loss utilisation. In general, under the precondition that losses are set off without restrictions, instruments minimising the current value of the tax expenses do not have a bearing on the effective tax rate.²³⁸ Thus, these tax planning strategies are not opposed to the minimisation of the effective tax rate.

The *instruments* for optimising the tax base allocation and the group structure are illustrated in more detail below. The starting point for international tax planning is the choice of the parent company's *country of residence*. The tax level in the home country of the parent company determines the effective tax rate for the income generated there. Moreover, it shows the potential for tax planning by using the international tax differential.²³⁹ In addition to the economic aspects of choosing a location, such as political stability, a fully developed infrastructure, and low administrative requirements,²⁴⁰ the tax aims for the choice of a company's country of domicile consist in the following: the tax rate for currently assessed income tax must be relatively low, there must be a large network of double tax treaties to guarantee a sufficient level of treaty protection – to avoid or reduce withholding taxes or to guarantee a favourable definition of permanent establishment –, and expenses for refinancing and losses of permanent establishments should be deductible.²⁴¹ With regard to non-current tax aspects, e.g. for the relocation of residence, the tax burden resulting from the realisation and taxation of hidden reserves shall be minimised.

In addition, the *international allocation of the taxable base* is optimised by means of legal income shifting to make use of the international differences in tax rates. This can be achieved by using instruments such as the optimal allocation of assets, functions, and risks between different parts of the company and the legal planning of transfer prices for the inter-company supply of goods and provision of services. For a transfer of assets due to the reallocation of functions and risks, the realisation of hidden reserves and the resulting taxation of the respective profits have to be minimised to lower the effective tax rate.

²³⁶ See also *Herzig / Dempfle*, 2002, pp. 6-8; *Herzig*, 2003, pp. S 85-S 86.

²³⁷ See *Eisenach*, 1974, p. 260; *Paulus*, 1978, pp. 45-46; *Marettke*, 1982, pp. 176-178; *Bogen*, 1994, pp. 119-121.

²³⁸ This is valid if a perfect capital market and complete certainty is assumed. In addition, these tax planning strategies do not have an impact on the effective tax rate as long as deferred taxes are not discounted. For examples and further remarks, see also *Haarmann*, 2001/2002, p. 372; *Herzig / Dempfle*, 2002, pp. 3-5; *Herzig*, 2003, pp. S 84-S 85; *Kröner*, 2003, pp. 566-567; *Spengel*, 2005, pp. 93-94; *ibid.*, 2005a, pp. 178-179.

²³⁹ See *Spengel*, 2005, p. 100; *ibid.*, 2005a, p. 186.

²⁴⁰ For more details, see chapter 2.2., and *Jacobs* (Ed.), 2002, p. 841; *Laudan*, 2003, p. 129.

²⁴¹ See *Baumgartner / Storck*, 1997, pp. 8-9; *Eicker*, 2001, p. 151; *Jacobs* (Ed.), 2002, p. 841; *Laudan*, 2003, p. 129.

Based on the tax base allocation, the *legal structure of the company or group* is optimised at an international level by the creation of tax attributes in lower-taxing countries. The location of the investment, its legal form, financing and legal structure, and the shareholding relationship within the whole company or group, must be considered here. Then, it is possible to take advantage of international differences in the tax rates, make use of qualification conflicts and avoid double taxation and excess foreign tax credits.²⁴² In general, investments abroad can be made in the form of a subsidiary, a permanent establishment or doing direct business.²⁴³ In addition to the tax planning aspects of the internal organisation of a company, some forms of *external co-operation* may also constitute a part of the planning of the legal structure of a company, since qualification conflicts can be used to lower the effective tax rate.

Subsequently to the definition of international tax planning, the effective tax rate, the relevant tax planning strategies, and the main instruments of international tax planning for companies and groups doing business abroad, in the following chapter, the impact of ICT on international tax planning and on the minimisation of the effective tax rate is analysed.

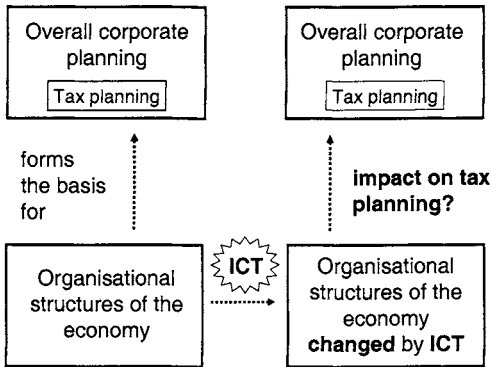
4.2. The Impact of ICT on International Tax Planning

The *link* between ICT and the international tax planning of companies, as illustrated in figure 4.1, consists in the following: In general, as shown in chapter 2.4, an increase in the use of ICT has an influence on the economic climate for companies. The economic situation faced by companies constitutes the basis for general corporate planning. Since international tax planning is part of general corporate planning, ICT-induced economic changes also have an impact on the applicability of international tax planning instruments.

²⁴² See *Jacobs* (Ed.), 2002, pp. 709-710.

²⁴³ See chapter 3.2.2. for the general tax consequences of these kinds of investments. Investment in the form of a partnership is not considered separately here, since it is not a predominant form of investment. For details on the theory on the choice of the form of investment abroad, see chapter 2.2.

Figure 4.1: Link Between ICT and Tax Planning



Possible effects of changes in the economic climate on various tax planning instruments include an increase or decrease in opportunities to optimise tax strategies and in potential risks and thus an increasing or decreasing relative importance of some tax fields. Based on an analysis of these effects, strategies are outlined on how to achieve the tax objectives in the best way possible. The analysis focuses on multinational groups and on virtual organisations, as illustrated by the two examples given in chapter 2.4.5.

4.2.1. Choice of Location and Relocation of Residence

A company's residence, under current practice, is in general determined by *legal criteria*, such as the statutory seat or the place of incorporation, or by economic criteria, such as the place of central or effective management.²⁴⁴ If a legal criterion is applied in order to determine a company's residence, the act of incorporation may be purely administrative and may require no corporate presence. Thus, if such legal criteria are the sole requirements for a company to be resident in a specific country, the location of residence can be freely chosen to some extent. In this case, the determination of the company's residence is not dependent on any economic aspects, and is not particularly related to the use of ICT and its impact on the organisation of the economy but in general holds for any corporation. Therefore, since an increase in the use of ICT does not really have a bearing on the determination of a company's residence based on legal criteria, these are not examined further.

In contrast, an increase in the use of ICT has a bearing on *economic criteria* when defining a company's residence. With the use of ICT, companies – particularly virtual organisations, as shown

²⁴⁴ For more details on these criteria, see chapter 3.2.1.

in the example of the C Company in chapter 2.4.5. – are less dependent on physical location and on the location of customers or suppliers and other business partners. The choice of residence thus tends to be more flexible and, potentially, more importance might be attached to fiscal considerations.²⁴⁵

The currently prevalent economic criterion is the *place of effective management* which is based on the location of a company's management. Since the management structure may consist of a poly-centric network that is spread across several countries,²⁴⁶ it may not be possible to unambiguously identify a single person with the greatest decision-making powers. Consequently, as in the examples of the C Company and the M Group in chapter 2.4.5., the place of effective management may be mobile or there may be several places of effective management in different countries, which is a new phenomenon in the age of ICT.²⁴⁷ In addition, with the increased legal mobility of many functions, the decisions taken into account to determine the place of management can be influenced to a greater extent than before.²⁴⁸

A decentralised management structure, along with an increased mobility in functions, implies that a company can influence the place of effective management and thus the company's residence to a greater extent. By shifting crucial functions to the location in which the company is preferably resident, it is, to a certain extent, possible to arrange that the relevant decisions are taken there and to establish the main organisational and economic centre in this location. Consequently, the mobility of the place of effective management is a suitable means for choosing a company's location for tax purposes. Due to ICT-induced economic changes, it has, to a certain extent, become easier to choose a residence country with a lower tax rate and thereby reduce the overall effective tax rate.

In addition to new opportunities in the international tax planning of a company, a further effect of the decentralised management structure is an increase in the *fiscal risk* for the taxpayer. As situations in which the residence of a company cannot be clearly defined by the criterion of the place of effective management are occurring more frequently due to ICT,²⁴⁹ the fiscal risk for taxable entities increases. Due to this uncertainty, the risks related to the definition of the place of effective management may be higher than the potential for tax planning.

In addition, it must be noted that the benefits of minimising the effective tax rate by choosing a

²⁴⁵ See also *Raupach*, 1997, pp. 699-701, who shows various fiscal considerations.

²⁴⁶ For more details, see page 27.

²⁴⁷ See also *OECD*, 2001c, sections 37-38.

²⁴⁸ For more details and examples, see *Brunsbach*, 2003, pp. 77-80.

²⁴⁹ See *Angelkorte*, 2003, p. 544, the examples of the C Company and the M Group in chapter 2.4.5., and the discussion on the place of management of a virtual organisation in *Peter*, 2002, pp. 301-305.

company's residence can be most clearly seen when setting up a company. In contrast, for the *relocation of a company's residence* to achieve a lower current tax rate, there may be a realisation of hidden reserves at the time of relocation which may reduce, or even offset, the advantage of the lower current tax rate. Possible changes to the location of residence could involve a full relocation of residence or the implementation of a dual-resident company. The transfer of both the statutory seat and the place of effective management of a company in general entails a realisation and taxation of a company's hidden reserves and thus a significant increase in the effective tax rate.²⁵⁰ Consequently, even if, after the complete transfer of a company's residence, the company's income could be taxed at a lower tax rate, the effectiveness of this international tax planning instrument in the context of minimising the effective tax rate is very restricted and, in the end, depends on the tax rules regarding the realisation of hidden reserves.

An alternative approach consists in transferring only one of the two tax attributes for determining a company's residence.²⁵¹ Under certain circumstances, a realisation of hidden reserves may then be avoided.²⁵² However, a dual resident company may then result, which means that the company is liable to tax on a world-wide basis in two jurisdictions. To assess whether this strategy really does help to lower the effective tax rate, the current taxation of this structure has to be taken into account. The current tax burden of a dual resident company varies depending on whether a double tax convention exists and which method to avoid double taxation is applied by the two residence countries. The OECD Model stipulates that the place of effective management is the prevailing criterion for a company's residence. Consequently, the country in which the place of effective management is located constitutes the residence country, whereas the other country in which the statutory seat is located represents the source country.²⁵³ If there is no double tax convention, double taxation due to the double liability for tax on a world-wide basis is mitigated or avoided by the applicable method to avoid double taxation in line with the respective national laws.²⁵⁴ Further tax planning advantages of a dual resident company include making use of tax benefits related to an unlimited tax liability and to the fact that a dual resident company is subject to all double tax treaties and directives implemented by the respective country.²⁵⁵ However, tax risks related to dual

²⁵⁰ See also *Herzig*, 2003, p. S 89. For a detailed discussion of the German tax rules, see *Jacobs* (Ed.), 2002, pp. 1143-1144; *Angelkorte*, 2003, pp. 544-545.

²⁵¹ A relocation of the place of management is much more frequent in practice. See *Staringer*, 1999, p. 34.

²⁵² For a detailed discussion of the German taxation of a relocation of a company's statutory seat or place of effective management, see *Schäfer / Spengel*, 2004, pp. 16-17, and also *Debatin*, 1991, pp. 164-170; *Knobbe-Keuk*, 1991, pp. 298-306; *Schlaßmacher*, 2002, p. 97; *Jacobs* (Ed.), 2002, pp. 1142-1144.

²⁵³ The respective residence and source rules are then applied. For income from third countries, Article 21 of the OECD Model is applicable.

²⁵⁴ If both countries apply the tax credit method, in an extreme case, double non-taxation reducing the effective tax rate may result. It also depends on the national law whether profits realised in third countries are creditable.

²⁵⁵ Moreover, group relief, the avoidance of anti-tax-haven rules or a double loss deduction may be possible.

resident companies often occur. Especially if there is no double tax convention, a double taxation of profits increasing the effective tax rate may result.²⁵⁶

In the end, it depends on each individual case whether a dual resident company constitutes an appropriate means to reduce the effective tax rate and, consequently, a suitable alternative to a relocation of both the statutory seat and the place of effective management, combined with a lower current tax rate. In general, for an existing company, the potential for international tax planning is limited in both cases. Moreover, the tax risk is increased due to uncertainty in the transfer of the place of effective management and the implementation of a dual resident company, particularly if the transfer of the place of effective management was unintentional. With the increase in the use of ICT, the risk of such an unintentional relocation of a company's place of effective management has emerged.²⁵⁷ In contrast, if a company is established, the mobility of the place of effective management increases the opportunities for reducing the effective tax rate by exploiting the international tax differential.

4.2.2. Allocating the Tax Base

4.2.2.1. Optimising the Allocation of Functions and Risks

The general tax planning strategy to make use of the international tax differential is to allocate only a few functions to countries with a high tax rate and to attribute more functions to countries with a relatively low tax rate.²⁵⁸ The possibility of lowering the effective tax rate increases significantly if this strategy is used, since profits can be realised to a great extent in countries with a lower tax rate.²⁵⁹ In general, this holds true for both the profit allocation between related companies belonging to a group and between a permanent establishment and other units of the company.

Whilst this tax planning strategy is not new, the degree to which the strategy is implemented has changed due to the increase in the use of ICT. In the past, only a few functions, if any, could be allocated to countries with a lower tax rate. Often, business activities had to remain centralised and could not be moved, as there was no effective means for bridging the geographic distances. Moreover, as most of the activities were dependent on the physical factors of production, on the fixed installations at the company site or on location-specific factors, they were not mobile and relocation generated high costs and required a great deal of effort. These days, however, the use of

See *Lehner*, 1988, p. 201; *Angelkorte*, 2003, pp. 546-547.

²⁵⁶ See also *Lehner*, 1988, p. 201; *Angelkorte*, 2003, p. 544.

²⁵⁷ See also *Schaumburg / Schloßmacher*, 2001, p. 398.

²⁵⁸ For the results of a business survey conducted for Germany, see *DIHK*, 2003, p. 6, who shows that 38% of relocations are based on tax considerations. According to another survey, tax aspects were crucial in 21% of the transfer of activities. See *ISI*, 2002, p. 6.

²⁵⁹ As regards the final tax rate applied to profits attributed to lower-taxing countries, see chapter 4.2.3.1.

ICT facilitates much greater mobility in companies' business activities and the bridging of geographic distances. Many functions are tending to be more mobile, as they are often based on firm-specific factors which are not dependent on physical location factors.²⁶⁰ Thus, the decision on where to invest may be less dependent on business management considerations and more emphasis may be placed on tax aspects.²⁶¹

Some typical examples for optimising the division of functions and risks are the allocation of purchase, production, marketing, and sales operations to countries with favourable conditions.²⁶² The options range from allocating only some activities abroad to shifting entire functions to lower-taxing countries. For purchasing or sales activities, the foreign entity can either function as a contract dealer, a commercial agent or a commission agent.²⁶³ With regard to production activities, the entity abroad can either carry out in-house production, contract manufacturing or manufacturing based on a license agreement.²⁶⁴ Further examples are the centralisation of functions in special service centres,²⁶⁵ e.g. special financing centres,²⁶⁶ captive insurance companies and management, control or co-ordination centres. Moreover, the R&D activities can also be centralised in an R&D centre, provided that the necessary personnel is available. In addition, the administration and licensing of intangible assets is a function which is highly mobile. As all these forms of providing services are not that dependent on physical location factors, they can easily be allocated abroad.

An advanced approach to international tax planning for multinational groups is a tax-effective management of the value added chain. The aim is to co-ordinate the whole organisational supply chain management with international tax planning to increase the after-tax profit by minimising the effective tax rate.²⁶⁷ One example of a tax planning strategy for a multinational group is the

²⁶⁰ See also *Burkert*, 2003, p. 360. A legal relocation instead of a physical relocation may be sufficient in certain cases. See *Brunsbach*, 2003, pp. 39-42.

²⁶¹ See *Werra*, 2001, p. 58; *Jacobs* (Ed.), 2002, p. 1030. For example, the large amount of call-centres located in Ireland a few years ago is thought to a great extent to be due to the favourable tax system.

²⁶² For a detailed analysis of possibilities to relocate functions from the viewpoint of the fiscal authorities, see *Kuckhoff / Schreiber*, 1999, pp. 321-330, 353-362.

²⁶³ See *Ritter*, 1998, p. 178; *Scheffler*, 2000, pp. 294-295; *Jacobs* (Ed.), 2002, pp. 1059-1060; *Baumhoff / Bodenmüller*, 2003, p. 367; *Burkert*, 2003, pp. 323-324; *Endres / Oestreicher*, 2003, p. 12*. See also the discussion on the advantages and disadvantages of restructuring marketing and sales operations in *De Hosson*, 1996, pp. 89-92.

²⁶⁴ See *Müller*, 1996, p. 454; *Herzig*, 1998, pp. 293-294; *Jacobs* (Ed.), 2002, pp. 1037-1039; *ibid.*, 2003, p. 117; *Baumhoff / Bodenmüller*, 2003, pp. 355-358; *Burkert*, 2003, pp. 356-358.

²⁶⁵ For the following examples of service centres, see also the example of the M Group in chapter 2.4.5., and *Müller*, 1996, p. 455; *Herzig*, 1998, pp. 291-292; *Jacobs* (Ed.), 2002, pp. 1031, 1039-1067; *Endres*, 2003a, p. 732; *Endres / Oestreicher*, 2003, p. 11*; *Fairpo*, 2004, p. 14.

²⁶⁶ Finance planning constitutes a further important means to optimise the allocation of the tax base, since capital is a highly mobile input factor. See also *Herzig*, 2003, p. S 88. This tax planning strategy is not considered separately here, as it is not particularly new in the age of ICT and as the relevant ICT-induced changes are shown in the context of other instruments. See also the analysis in chapter 4.2.3.1.3. on subsidiaries.

²⁶⁷ Thus, the planning for the value creation processes and the centralisation of certain functions in profit centres takes place simultaneously for business and tax aspects. The tax model is in general based on the business model. See also *OECD*, 2003, p. 28.

“principal trading company concept” or “central entrepreneur concept”.²⁶⁸ According to this concept, the principal trading company representing the “main margin taker” holds the main intangible assets as well as the main strategic functions and business risks. This company is located in a lower-taxing country. The other companies in the group function as service companies carrying out more standard or auxiliary activities and providing services to the principal trading company on the basis of services contracts. By use of this tax planning approach, most parts of the creation of value are realised by the central entrepreneur. Since this company is located in a lower-taxing country, the profits attributable to this entity are taxed at a low tax rate.

Due to the increased mobility of some functions, a relocation of profits as shown in the various aforementioned concepts can be effected in an easier way in the age of ICT. It is nowadays possible to separate mobile functions, including the value added, from the actual production location.²⁶⁹ For example, the highly profitable intangibles can be centralised in a lower-taxing country. Since the other group members make use of the intangibles on the basis of suitable transfer prices under market conditions, the utilising companies realise a profit amounting to the customary return on the capital invested. Thus, excess profits based on the use of company-specific intangibles can accrue in the company located in the low-tax country. Thereby, a relatively high amount of profits may be generated in low-tax countries even if few business activities are actually conducted in those countries.

In general, a company can decide whether to establish its own legal entity to carry out specific functions or not.²⁷⁰ With an increase in the use of ICT, the allocation of profits to a server constituting a permanent establishment is an issue that has been raised frequently.²⁷¹ If it is the taxpayer’s objective to install a permanent establishment in the source country, some functions must be allocated to the permanent establishment to demonstrate that the activities carried out are more than just preparatory and auxiliary activities.²⁷² Thus, the more functions that are allocated to a permanent establishment, the more likely it is that the company’s business activities qualify as a permanent establishment. Otherwise, installing a single server abroad is not an effective means of shifting profits, as only a relatively low amount of profits would be attributable to it.²⁷³

²⁶⁸ For more details, see *Burkert*, 2003, pp. 358-359; *Endres*, 2003a, p. 732; *Endres / Oestreicher*, 2003, p. 11*; *Möller / Bartl*, 2003, pp. 271-283.

²⁶⁹ For the following example, see *Schreiber*, 2004, pp. 218-219.

²⁷⁰ For the tax planning implications of this decision, see chapter 4.2.3.1.

²⁷¹ See *OECD*, 2001b, pp. 11-34 for a detailed analysis of four different variations, and the comments in *Strunk*, 2001, pp. 1527-1536; *Ditz*, 2002, pp. 210-216. For a discussion of whether a server constitutes a permanent establishment, see chapter 4.2.3.1.2.

²⁷² This tax planning strategy is particularly relevant if the profits of the permanent establishment are realised in a lower-taxing country and if the tax exemption method is applied.

²⁷³ See also *Kilby / Wildi*, 2000, p. 27; *OECD*, 2000, section 7.

Depending on the amount of functions and risks allocated to low-tax countries, the optimal allocation of functions and risks in general serves as a very effective means to increase the possibility of lowering the effective tax rate. This particularly holds true for an additional investment or the establishment of a new tax attribute. However, if the setting-up of an entity abroad is accompanied by a reduction in the number of functions in the home country, the issue of the realisation and taxation of hidden reserves at the time of the transfer of assets will arise.²⁷⁴ In general, the more activities that are reallocated, the more opportunities for tax planning there are, but also, the more assets that are transferred as a matter of course. Thus, the company is faced with a trade-off with regard to the minimisation of the effective tax rate: if functions and risks are largely transferred to lower-taxing countries, the effective tax rate can be reduced significantly. As, however, it is also necessary in this case to relocate quite a high number of tangible and intangible assets, the tax due as a result of a realisation of hidden reserves tends to be rather high as well.²⁷⁵ Consequently, an optimal solution has to be found taking into account both current and occasional aspects.²⁷⁶

Due to an increase in the use of ICT, firm-specific intangible assets and services are particularly necessary for the creation of value and thus are transferred more often.²⁷⁷ This involves special risks, since difficulties may arise with regard to the allocation of intangibles and services, i.e. the source of the profits. It is debatable whether, and to what extent, an intangible asset is really transferred or where the services are performed. Moreover, especially for intangible assets that are not legally protected, such as technical know-how or a customer data base, an assignment to either of the parties taking part in the transaction tends to be difficult.²⁷⁸ In addition, problems regarding the valuation of assets arise more often.

To conclude, the possibility of lowering the effective tax rate by using the very effective means of an optimal allocation of functions and risks has greatly increased in the age of ICT. Thus, this instrument is becoming more important.²⁷⁹ However, in cases where a transfer of assets is necessary

²⁷⁴ See also *Endres*, 2003a, p. 733; *Herzig*, 2003, p. S 88.

²⁷⁵ If a technology developed at home is required to carry out business abroad, it is for example possible to reduce the tax burden by transferring the technology by degrees. To begin with, the technology may be licensed to the R&D company abroad. The licence fees would then be phased out while the technology became obsolete. New research projects could then be carried out abroad in the form of contract R&D. For more details and further examples, see *Burkert*, 2003, p. 359.

²⁷⁶ See also the detailed analysis in *Scheffler / Eickhorst*, 2004, pp. 818-823.

²⁷⁷ Possible examples of attributable assets to sales activities are the customer data base or design patents. For more details on the valuation of a customer base, see *Hollenbach*, 2003, pp. 605-612. Typical attributable assets for production activities are patents, licences, know-how, special software or, possibly, business opportunities and a goodwill of a company. See *De Hosson*, 1996, pp. 87-88; *Kilby / Wildi*, 2000, p. 27; *Baumhoff / Bodenmüller*, 2003, pp. 367, 378-382.

²⁷⁸ See also *Baumhoff / Bodenmüller*, 2003, p. 366.

²⁷⁹ See also *Herzig*, 1998, p. 289; *Endres*, 2003a, p. 731.

to do business abroad, the issue of the realisation and taxation of hidden reserves must be taken into account.

4.2.2.2. Implementation of an Optimal Transfer Pricing System

Along with the assignment of functions and risks to different parts of a company, an optimal transfer pricing system has to be developed between different legal parts of a group of companies.²⁸⁰ For the purposes of international tax planning, the effective tax rate can be reduced through transfer pricing strategies which are legally permissible to shift profits to lower-taxing countries.²⁸¹ These tax planning strategies do not require major changes to the business organisation and their implementation is therefore much easier than a complete reallocation of functions.²⁸² Due to the economic changes resulting from the use of ICT, the scope for tax planning through transfer pricing could be extended in certain cases, since the underlying business models tend to be more flexible. However, the pre-existing drawbacks related to transfer pricing are more obvious and of increasing importance in the age of ICT. Nowadays, it is more difficult to find and identify comparable transactions in order to determine a suitable transfer price.²⁸³ With the advent of ICT, these problems arise more frequently, since a decentralised organisational structure results in a strong increase in controlled cross-border transactions, especially with regard to finding comparable transactions and determining a suitable transfer price for firm-specific intangible assets and services. Consequently, the calculation of suitable transfer prices is very cost-intensive in practice. In addition, a double taxation of profits, and thus an increase in the effective tax rate, may occur, as the transfer prices arrived at by the jurisdictions involved in a cross-border transaction often differ.²⁸⁴

To conclude, the planning of an optimal transfer pricing system is based on the allocation of functions and risks within a company or a group of companies. In comparison to the reallocation of functions and risks, optimising the transfer pricing system is a less effective means of reducing the effective tax rate, but it is less cumbersome. In the age of ICT, the drawbacks related to the transfer pricing are presumed to arise more frequently.

²⁸⁰ Thus, the functional analysis gives a range of possible transfer pricing methods for each individual case. See also *Baumhoff / Bodenmüller*, 2003, pp. 353, 361.

²⁸¹ For example, the choice between the resale price method and the cost plus method or between licensing and cost pooling, can be optimised. See *Jacobs* (Ed.), 2002, p. 967, and the different examples for sales and production activities mentioned in chapter 4.2.2.1.

²⁸² See *Herzig*, 2003, p. S 88.

²⁸³ Inter alia, see *Eicker*, 2000, p. 129; *Kessler*, 2001/2002, pp. 445-446; *Steinmel*, 2001/2002, pp. 485, 494, 503, and for more details, see the analysis in chapter 6.3.1.1.2. and chapter 6.3.1.1.3.

²⁸⁴ Here, the EU Tax Arbitration Convention can give relief. For further details, see chapter 6.3.1.1.6.

4.2.3. Planning the Legal Structure of the Organisation

4.2.3.1. Optimising the Internal Legal Structure of a Company

As outlined above, these days, the activities of a company can be allocated with less effort to lower-taxing countries. However, it depends on the legal structure of a company, and its tax effects, whether these lower tax rates can be taken advantage of or if they are cancelled out by specific tax rules. In this context, the legal form of the investment, the method which may be applied to avoid double taxation, and the possible application of anti-tax-haven rules all determine the final tax rate. Thus, optimising the legal structure of the company or group is crucial to the level of the effective tax rate. It does not entail a change to the operational business of a corporation and can therefore be applied without much effort.²⁸⁵ In general, a company can choose between doing direct business and making a direct investment, i.e. setting up a permanent establishment or a subsidiary abroad. The consequences of the economic changes brought about by ICT are examined below for every type of investment, along with an analysis of whether new opportunities to reduce the effective tax rate or new fiscal risks arise.

4.2.3.1.1. Doing Direct Business

Doing direct business means that the company is present on the market in the source country without having set up a fixed establishment there. The main business models typical for changed business structures are the provision of services, such as data warehousing, ASP or web site hosting, and the licensing or sale of digital products and other intangible assets.²⁸⁶ Due to the ICT-induced economic changes, these forms of doing business are easier to implement from a distance without the need for physical contact with the customer.²⁸⁷

Regarding tax aspects, the various forms of doing direct business have to be classified under different categories of income. The income categories relevant in this context are business profits and royalties in accordance with Articles 7 and 12 of the OECD Model. In order to qualify these new forms of doing business as either royalties or business profits, they have to be assigned to either the provision of know-how or the provision of services. For this purpose, the following criteria have been proposed by the OECD.²⁸⁸ Contracts for the supply of know-how concern currently existing information, or the supply of information after it has come into existence, and include provisions regarding the confidentiality of the information. In contracts for the provision of

²⁸⁵ See also *Herzig*, 2003, p. S 88.

²⁸⁶ For more details on new business models, see chapter 2.4.2., and also *Forst*, 1997, pp. 1455-1458.

²⁸⁷ As the provision of know-how is supposed to increase, the frequency of royalties could increase as well. See *Steimel*, 2001/2002, pp. 483-484, and *Brunsbach*, 2003, p. 111.

²⁸⁸ See paragraph 11.3 of the Commentary on Article 12 of the OECD Model, and *Brunsbach*, 2003, pp. 95-112.

services, the supplier agrees to perform services which may require the use of special knowledge, skills and expertise owned by that supplier but not the transfer of ownership to the other party. The OECD has classified income resulting from typical business models in different income categories.²⁸⁹ For example, the provision of proprietary technical information on a specific product, or the electronic ordering and downloading of digital products for the purpose of commercially exploiting the copyright, are categorised as a provision of know-how and the respective income is qualified as a royalty. Business models such as ASP, web site hosting, software maintenance, data warehousing or the electronic access to professional advice are qualified as the provision of services. Thus, the respective profits constitute business income.

This categorisation made by the OECD is deemed to be a suitable clarification. However, there may still be some uncertainties and income qualification conflicts²⁹⁰ which often constitute a tax risk in terms of double taxation. A possible risk inherent to income qualification conflicts is the fact that the respective countries may qualify the same transaction differently.²⁹¹ Uncertainties may also arise due to the fact that even if there is a uniform qualification, the source of the income may often be unclear in the age of ICT.²⁹² In addition, with the economic changes through the use of ICT, the taxpayer can arrange the transactions more easily to avoid such tax risks, for example to avoid an excess tax credit in order not to increase the effective tax rate.

4.2.3.1.2. Investing in the Form of a Permanent Establishment

Under current tax rules, a permanent establishment is defined as a fixed place of business through which the business of an enterprise is wholly or partly carried on.²⁹³ As physical distance is less important with the advent of ICT, under business management considerations, there are fewer reasons for establishing a permanent establishment in a specific country in order to be close to the customer. However, as other location factors may take on more importance in the decision of where to locate a company, they can be taken advantage of by creating a permanent establishment in a specific country.

In terms of taxation, to make use of the international tax differential, the permanent establishment

²⁸⁹ See *OECD*, 2001d, Annex 2, and also *Eicker*, 2001b, pp. 53-69; *Brunsbach*, 2003, pp. 113-114.

²⁹⁰ See *eCom Taxpert Group*, 2002, pp. 31-80, who disagree in 15 out of 28 income categories.

²⁹¹ For example, the source country may qualify the payment as a royalty and impose a withholding tax on it, whereas the residence country may qualify the income as business profits and, therefore, may not accept the withholding tax. Moreover, even if the withholding tax is accepted, an excess tax credit may result. This could lead to an increase in the effective tax rate. See also *Eicker*, 2001b, pp. 25-26, 35-39; *Doernberg / Hinnekens / Hellerstein / Li*, 2001, pp. 376-379; *Jacobs* (Ed.), 2002, p. 1240.

²⁹² See also chapter 4.2.2.1., and *Forst*, 1997, pp. 1458-1459, who points out the difficulties of linking an item of income with a specific geographical location. With regard to the general issue of determining the source of profits, see chapter 5.1.2.

²⁹³ For further details on the definition of a permanent establishment, see chapter 3.2.2.

will be set up in a low-tax country for tax planning purposes. If the tax exemption method is applied in the home country of the parent company, the effective tax rate can be lowered. Otherwise, the application of the tax credit method leads to a taxation which is at least at the tax level of the residence country.²⁹⁴

Due to the ICT-induced economic changes, i.e. increased mobility and a greater division of functions and parts of a company, it is much easier for a company to make use of the international tax differential. The location of a permanent establishment can be influenced and a company can decide whether or not a permanent establishment is created. For example, due to the fragmentation of business, the activities of a company can be split up into smaller entities only carrying out activities which are tax exempt in accordance with paragraph 4 of Article 5 of the OECD Model. Thus, it is possible to avoid setting up a permanent establishment by making use of this exemption rule.²⁹⁵ Typical examples of permanent establishments in the age of ICT are servers and employees telecommuting and working distantly from the company's premises.²⁹⁶

The OECD has stipulated the circumstances under which a server can constitute a permanent establishment.²⁹⁷ A server has to meet the standard basic-rule requirements for a permanent establishment and can constitute a fixed place of business if it is located in a fixed place for a certain amount of time. If the server is owned or leased and operated by the company, the company has the server at its disposal. It has to be examined on a case-by-case basis whether the operations carried out by a server are deemed to be auxiliary or preparatory activities.²⁹⁸ The presence of personnel is not a prerequisite for an enterprise to carry out its business activities through the server. Consequently, as the server might constitute a permanent establishment and as the location of the server is rather independent of other location-specific factors, companies can install a server in a low-tax country without much effort. Thus, one can make use of the international differences in tax rates, provided that the income is exempt from taxation in the residence country of the parent company. Therefore, the opportunities to reduce the effective tax rate by creating or avoiding a permanent establishment in a specific country have increased due to the use of ICT.²⁹⁹ However, it

²⁹⁴ For further details, see chapter 3.4.

²⁹⁵ See *OECD*, 2003, section 179, and also footnote 540.

²⁹⁶ See also the examples of the C Company and the M Group in chapter 2.4.5.

²⁹⁷ See paragraphs 42.2-42.9 of the Commentary on Article 5 of the OECD Model, and *OECD*, 2000.

²⁹⁸ The commentary includes two examples. For an ISP, the operation of the servers to provide services to customers constitutes an essential part of its business activities. For an e-tailer selling products over the Internet, the activities performed through the server may be more than preparatory or auxiliary if they include – in addition to the sale – functions such as the conclusion of contracts with customers, the processing of payments or the delivery of products.

²⁹⁹ See also *Satzger*, 1999, p. 43, and for the use of a server for tax planning strategies for outbound transactions from a German perspective, see *Prinz*, 1997, pp. 521-523; *Müller*, 2001/2002, pp. 532-534; *Müller / Reiser*, 2003, pp. 236-239.

must be noted that the potential for using a server as a tax planning instrument greatly depends on the amount of profits attributable to it which is presumed to be rather low.³⁰⁰ Moreover, due to potential uncertainties regarding the degree of nexus required for the existence of a permanent establishment in practice, the tax risk is increased.³⁰¹

In addition, employees telecommuting from a telecommuting centre, e.g. shared service centres, can represent a permanent establishment.³⁰² Since telecommuting centres are not as mobile as a server, they do not constitute a means for international tax planning that is as flexible as the use of a server. However, it is a more effective means, as probably more income is attributable to such a kind of permanent establishment. Moreover, particularly with regard to other forms of telecommuting, such as home-based telecommuting or an employee working at the customer's premises, there is a potential tax risk due to the uncertainty of whether a permanent establishment is set up.³⁰³

To conclude, the use of ICT provides more opportunities to reduce the effective tax rate for a permanent establishment. One essential condition for using the permanent establishment as a tax planning instrument is that the tax exemption method is applied in the residence country of the head office. Otherwise, under the tax credit method, at least the tax rate of the residence country is applied. In addition, the permanent establishment only constitutes a suitable means to reduce the effective tax rate if a certain amount of profits is attributable to it. However, the tax risk also increases, since uncertainties regarding the question whether a permanent establishment exists or not occur more often.

4.2.3.1.3. Direct Investments in the Form of a Subsidiary

Since a subsidiary constitutes a distinct legal entity, the profits can be retained and reinvested in the source country without being taxed in the residence country.³⁰⁴ Thus, the differences in

³⁰⁰ Particularly if only limited functions are performed by the server, a rather small amount of profits is attributable to it. For more details on this question, see also the quotations in footnote 271, and *Strunk*, 2001, p. 1533; *Strunk / Kaminski*, 2001, pp. 162-164; *Ditz*, 2002, p. 215; *Buciek*, 2003, pp. 143-144. This example has also been discussed by the OECD. See *OECD*, 2001a, sections 41-110. Therefore, the question whether a server can constitute a permanent establishment or not is deemed to be not that important. In addition, also the incentive to shift profits by use of a server is presumed to be not that high. See also *Wichmann*, 2003, p. 147, and the comments in chapter 6.2.3.2.2.

³⁰¹ See *Eicker*, 2001a, p. 60. For a discussion of the fact whether the relocation of a server entails the application of an add back taxation according to paragraph 42 of the German General Tax Act, see *Arndt / Fetzter*, 2001, pp. 1177-1180; *Graf*, 2003, pp. 197-198. They conclude that the application of add back taxation in the case of relocating a server within the EU would infringe European Law.

³⁰² For an analysis of different forms of telecommuting, see chapter 6.2.2.2.

³⁰³ Further issues in international tax planning arise if the permanent establishment located abroad does not generate active income. For more details, see chapter 4.2.3.1.4.

³⁰⁴ This fact is an important difference in relation to the permanent establishment. Thus, the investment in form of a subsidiary is particularly advantageous if the tax credit method is applied to the profits of the permanent establishment. As regards non-fiscal reasons, compared to a permanent establishment, a subsidiary will in general be preferred if an investment is planned for longer periods or due to legal or image reasons. Also, a permanent

international tax rates can be used to a great extent and the possibility of retaining profits in the source country constitutes a decisive advantage compared to the permanent establishment. If the profits of the subsidiary are distributed to the parent company, the tax planning opportunities by use of a subsidiary depend on the applicable method to avoid double taxation. In general, the tax exemption method provides for an optimal use of the lower tax rate in the source country, since under this method, the tax level of the source country is finally applied. Otherwise, under the tax credit method, at least the tax level in the residence country is applicable.³⁰⁵

Moreover, in addition to using a subsidiary as a form of direct investment in the source country, the effective tax rate can be reduced by repatriating profits from abroad to the parent company via an intermediary subsidiary in a third country. In some cases, regardless of whether the tax level is lower in the source country or in the residence country, it is possible to reduce the tax level even below. These strategies for minimising the effective tax rate can be implemented for any functions which are less dependent on a physical location and highly mobile, such as holding functions or financing.³⁰⁶ Since in the age of ICT, the value added process is more decentralised and fragmented and, as the use of ICT can ensure the effective implementation of such a constellation by bridging geographical distances, this kind of planning strategies are of increasing importance. The main issues arising from the use of ICT on tax planning with subsidiaries are the changes in the applicability of anti-tax-haven rules discussed below.

4.2.3.1.4. Limitations on Investing Abroad

Direct investment abroad in the form of a permanent establishment or a subsidiary fall under anti-tax-haven legislation if the following three prerequisites are fulfilled. First, the domestic shareholder must control the foreign entity or must have a significant ownership stake in it. Second, the geographical location where the entity is established or does business is qualified as a tax haven with the income being taxed at a relatively low level.³⁰⁷ Third, with regard to the nature of the foreign entity's activities, the income resulting thereof must be passive.³⁰⁸ Whilst the first criterion

establishment may be transformed into a subsidiary after a certain time period.

³⁰⁵ For more details, see chapter 3.4.

³⁰⁶ If profits are exempted from taxation in the jurisdiction of the parent company, the optimal tax planning strategy is to realise profits in lower-taxing countries. Otherwise, if the jurisdiction of the parent company has stipulated the tax credit method, the optimal tax planning strategy is to optimise the crediting by reducing the amount of excess tax credits. Finance centres are especially relevant in practice. For more details, see *Jacobs* (Ed.), 2002, pp. 813-815; *Herzig*, 2003, p. S 88; *Jacobs*, 2003, pp. 118-121; *Spengel*, 2003, pp. 45-52, 164-171; *ibid.*, 2005, pp. 17-21 for empirical analyses of the evidence of fiscally-motivated financing strategies. For empirical results of a survey among UK companies on intermediaries in third countries, see *Devereux / Pearson*, 1989, pp. 66-67.

³⁰⁷ For the tax haven criteria highlighted by the OECD, see *OECD*, 2000a, p. 10, and *Arnold / Dibout*, 2001, pp. 27-30, who provide an overview of the various criteria used in different jurisdictions.

³⁰⁸ See *Doernberg / Hinnekens / Hellerstein / Li*, 2001, p. 323. For an overview of CFC-definitions in different countries, see *Arnold / Dibout*, 2001, pp. 40-48.

is a legal one and, therefore, not influenced by an increase in the use of ICT, the second and the third criterion may be influenced by it.

If an add back taxation rule is applicable to a subsidiary abroad considered as a controlled foreign company (CFC), the undistributed income of the CFC is subject to current inclusion, i.e. it is not deferred but attributed to its domestic shareholders and taxed on a current basis. The application of the add back taxation particularly comes into question if the subsidiary is an intermediary in a triangular constellation.³⁰⁹ Anti-tax-haven rules are also applied to permanent establishments. For example, if a permanent establishment realises passive income, the tax credit method may be applied instead of the tax exemption method.³¹⁰ The application of anti-tax-haven rules constitutes a potential tax risk and can increase the effective tax rate if a double taxation of profits results. The following comments are mainly based on examples of CFC rules which are relevant to subsidiaries. However, they are also valid for permanent establishments.

With regard to the second criterion, in order to determine whether the source of a CFC's income is located in a tax haven and thus taxed at a low level, the residence of the controlled foreign entity and the source of the respective income have to be identified. Due to an increase in the use of ICT, these locations tend to be rather blurry. For example, especially for virtual organisations, it may be difficult to determine the company's residence on the basis of the place of management.³¹¹ Identifying the source of income is particularly complicated with regard to the place of provision of services or the place of use or consumption of intangibles.³¹² Consequently, the ICT-induced taxation issues also influence the application of anti-tax-haven rules and increase the tax risk for the taxpayer.

With regard to the third criterion, a distinction must be drawn between active income and passive or foreign base company income. Typical activities in the age of ICT are trading with digital goods, providing services or licensing. Taking the CFC provisions in the United States as an example, income from the sale of property, such as intangibles, is deemed to constitute foreign base company sales income if it is derived from transactions between the CFC and related parties and if it arises from sales made outside the CFC's tax jurisdiction.³¹³ With regard to the provision of services, the income is deemed to be foreign base company services income if it is derived from services

³⁰⁹ For more details of this tax planning strategy, see chapter 4.2.3.1.3.

³¹⁰ For the German practice, see *Jacobs* (Ed.), 2002, p. 492; *Schwarz*, 2003, p. 283. See also the judgement of the German Supreme Tax Court on 5 June 2002 with regard to a server installed in Switzerland, and the discussion in *Kaminski / Strunk*, 2002, pp. 1037-1042; *Schwarz*, 2003, pp. 282-283. For examples of activity clauses in double tax treaties, see *Scheffler*, 2002, p. 193; *Schwarz*, 2003, p. 282.

³¹¹ For further details, see the analysis in chapter 4.2.1.

³¹² See the comments in chapter 4.2.2., and also *United States Department of the Treasury*, 2000, p. 76.

³¹³ See section 954 (d) of the United States Internal Revenue Code; *United States Department of the Treasury*, 2000, p. 77; *Maguire / Anolik*, 2000, pp. 1937-1939 for further examples; *Rogers / Lemanowicz*, 2001, pp. 911-912.

provided outside the CFC's country of residence for or on behalf of a related party.³¹⁴ For royalties, e.g. from the lease of software, the resulting income is considered to be active income if the CFC has developed, created or produced the software or has added substantial value to the software in the regular course of the CFC's business.³¹⁵

To examine in practice whether the income is active or not, the income first has to be classified under the respective income categories.³¹⁶ The fact that the outcome of the anti-tax-haven rules differs depending on the income classification is of special interest in cases in which some activities of a company are very similar but classified differently.³¹⁷ These circumstances can be used for tax planning since the company in question can arrange its business affairs in order to prevent the application of CFC rules. In addition, the classification of income as active or passive depends on the actual nature of the CFC's activities and on the location of the activities.³¹⁸ These days, functions, tasks or intangible assets, such as know-how, are more mobile and can be shifted more easily.³¹⁹ Consequently, the business affairs of a company can be arranged in such a way that the CFC generates active income. For example, the operations of a company can be restructured by transferring software development personnel and the respective functions, tasks, and assets to the CFC.³²⁰

Moreover, there may be anti-tax-haven rules which include tests for distinguishing between active and passive income which are no longer suitable in the era of ICT, since generating active income requires a human element.³²¹ For example, in Canada, a CFC's royalty income is deemed to be

³¹⁴ See section 954 (e) of the United States Internal Revenue Code; *United States Department of the Treasury*, 2000, p. 79; *Maguire / Anolik*, 2000, pp. 1939-1941; *Rogers / Lemanowicz*, 2001, p. 912.

³¹⁵ See section 954 (c) of the United States Internal Revenue Code; *United States Department of the Treasury*, 2000, p. 78; *Rogers / Lemanowicz*, 2001, p. 910.

³¹⁶ Due to an increase in the use of ICT, such a classification can turn out to be complicated in some cases. See *United States Department of the Treasury*, 2000, p. 76; *Doernberg / Hinnekens / Hellerstein / Li*, 2001, pp. 328-331, who provide further examples. For the qualification as active or passive income according to the German Foreign Transaction Tax Act, see *Strunk / Zöllkau*, 2000, pp. 95-109; *Müller*, 2001/2002, pp. 520-528; *Brunsbach*, 2003, pp. 45-59; *Kroppen / Hagemeyer*, 2004, pp. 1137-1144, who focus on new organisational forms of distribution. For the provisions in Canada, see *Li*, 2003, pp. 480-484.

³¹⁷ For example, a CFC may purchase software from its parent company and either sell it to third parties or provide services to unrelated parties by making use of this software. Whilst the selling-on of the software is foreign base company sales income, the income realised by the provision of services is qualified as active income, provided that the parent company did not render substantial assistance to the CFC. Also if a product can be sold either physically or digitally, the income qualification may differ. See *United States Department of the Treasury*, 2000, pp. 79-80 for further examples.

³¹⁸ As regards the issues related to the location of a company's activities, see the comments above.

³¹⁹ For further details on the shifting of functions and risks, see chapter 4.2.2.1.

³²⁰ See *Doernberg / Hinnekens / Hellerstein / Li*, 2001, p. 334.

³²¹ See *Canadian Advisory Committee on Electronic Commerce*, 1998, section 4.2.5.1. For CFC rules based on a human element in the UK, see *Inland Revenue*, 1999, sections 5.33-5.34; *Kilby / Wildi*, 2000, p. 27. In the UK, the CFC's activities are exempted from the CFC rules if it has locally employed staff. To conclude, a re-examination of these rules is necessary in an ICT environment, especially for activities that can be performed solely by use of ICT. For a reform approach, see *Glicklich / Leitner*, 2001, p. 511, who propose to focus on the effective tax rate to which the income is subject to decide whether CFC rules are applicable or not.

active income only if the CFC employs more than five full-time employees in the licensing business throughout the year.³²² As, due to ICT, the number of employees may be lower, add back taxation may be applied although the foreign entity carries out active activities. Consequently, these rules can increase the tax risk for the taxpayer and can also increase the effective tax rate if a double taxation of profits results from the application of CFC rules.

To conclude, with the advent of ICT, there might well be more cases in which the existence of a controlled foreign subsidiary or permanent establishment is called into question,³²³ since the organisational structure of companies is becoming increasingly decentralised and minor functions or parts of a company may be separated and dispersed all over the world. However, this does not necessarily imply that the number of cases in which anti-tax-haven rules are actually applied has increased. As shown above, it may nowadays be easier to prevent add back taxation by restructuring operations. Thus, companies can legally avoid the application of anti-tax-haven rules with greater ease. However, the current anti-tax-haven rules also constitute a potential risk, as more situations occur in which their application is uncertain and has to be clarified.³²⁴

4.2.3.1.5. Comparison of the Investment Alternatives and Location Decisions

Following an analysis of each of the three investment alternatives, it is debatable whether there has been a shift between their relative frequencies due to ICT. When exclusively considering *business management aspects*, it is, in certain cases, no longer necessary to establish a physical presence in the source country to do business there, as the link between the company and the customer can be provided by ICT. Thus, it has often been stated that more direct business will be carried out in the source country and that there will be fewer subsidiaries and permanent establishments present in physical form.³²⁵ However, often, having a physical presence in the source country is still required to provide products or services in a cost-effective manner or to make use of favourable investment conditions.³²⁶ Moreover, links within a company can be provided more easily with ICT which can facilitate the connection between the physical presence established abroad and the parent company. It is therefore doubtful whether the amount of direct business carried out can really be expected to

³²² See *Canadian Advisory Committee on Electronic Commerce*, 1998, section 4.2.5.3.; *Pantaleo / Zylberberg*, 2001, p. 441; *Li*, 2003, p. 483.

³²³ See also *Doernberg / Hinnekens / Hellerstein / Li*, 2001, p. 331; *Li*, 2003, p. 478.

³²⁴ Particularly if an entity abroad carries out ICT-related tasks, a company may not be aware of the fact that anti-tax-haven provisions have to be applied. Furthermore, it has been discussed in principle whether the current anti-tax-haven rules are compatible with the basic principle of non-discrimination as stipulated in the EC Treaty. For more details, see *Schön*, 2001, pp. 940-947; *Kellersmann / Treisch*, 2002, pp. 197-199; *Jacobs* (Ed.), 2002, pp. 254-259; *Spengel*, 2003, pp. 284-288.

³²⁵ Inter alia, see *Satzger*, 1997, p. 232; *Doernberg*, 1998, pp. 1013-1014; *Satzger*, 1999, p. 43; *McLure Jr.*, 2000, pp. 10-11; *Brunsbach*, 2003, p. 120.

³²⁶ See also *Portner*, 1999, pp. 645-646; *OECD*, 2003, section 6.

increase.³²⁷ If there is a physical presence in the source country, permanent establishments may become more frequent than subsidiaries for economic purposes. Particularly in this age of ICT with its ever-changing business models and lack of capital, a permanent establishment is in general less costly, less time-consuming and more flexible.³²⁸

When examining just *tax planning aspects*, the investment decision is based on the distinction between lower-taxing and higher-taxing countries. Thus, how often each investment option is chosen depends on its ability to make use of the international tax differential to reduce the overall effective tax rate. In general, investing in a source country with a lower tax burden is preferable. If a comparison is made between permanent establishments and subsidiaries for tax purposes, subsidiaries are advantageous to permanent establishments since they constitute a suitable means for lowering the effective tax rate by use of profit retention. If profits are distributed, as shown above, for both a permanent establishment and a subsidiary, the lower tax rate can be used in an optimal way if the tax exemption method is applied in the residence country of the parent company.³²⁹ Further differences between subsidiaries and permanent establishments consist in the possible imposition of a withholding tax on dividends distributed by the subsidiary or differences regarding the allocation of income and the treatment of losses.³³⁰ In addition, subsidiaries can be used in triangular constellations. However, permanent establishments also constitute a suitable alternative for doing business abroad, especially when taking into account the advantages under business management aspects.³³¹ To summarise, it is impossible to predict an overall effect with regard to whether the number of permanent establishments or subsidiaries will increase.

In general, ICT-induced economic changes, such as greater flexibility and less dependence on location factors, enable taxpayers to achieve their business and tax optimising strategies more often and more conclusively.³³² For example, creating a permanent establishment or a subsidiary in a low-tax source country, or avoiding an investment in a high-tax source country, is easier to do through ICT.³³³ Thus, since tax aspects may also become more important due to the decreasing relevance of other location factors, investments in lower-taxing countries could be expected to increase in the

³²⁷ Up to now, definite empirical results with regard to this issue do not exist.

³²⁸ See *Eicker*, 2001a, p. 60.

³²⁹ For further details, see the comments in chapter 3.4.

³³⁰ For further details, see chapter 3.3. and chapter 3.4.; *Scheffler*, 2002, pp. 296-297. For differences in loss treatment, see *Jacobs* (Ed.), 2002, pp. 756-757. Also the capital gains tax for a sale of a foreign direct investment differs. See paragraphs 2 and 4 of Article 13 of the OECD Model.

³³¹ See also *Eicker*, 2001a, p. 60; *Owens*, 1997, p. 1848, who argues that income allocation issues are at least as likely to arise these days with subsidiaries as they are with permanent establishments.

³³² For optimal tax strategies in e-commerce activities, see *Satzger*, 1997; *Strunk / Zöllkau*, 1998, pp. 592-596; *Endriss / Käbisch / Labermeier*, 1999, pp. 2280-2281; *Pinkernell*, 1999, pp. 282-290; *Schwarz*, 2003, pp. 286-287 with regard to inbound and outbound transactions from a German perspective; *Scheffler*, 2000, pp. 279-297.

³³³ See also *Satzger*, 1999, p. 43, who notes a dramatic increase in the possibilities for tax planning.

age of ICT, especially in the form of permanent establishments and subsidiaries.³³⁴ In the end, since the choice of the optimal form of investment is based on many factors, the outcome will differ depending on the relevant factors and on the characteristics of the target jurisdiction.

4.2.3.2. New Forms of Enterprise Co-Operation

As well as investing abroad, it is also possible to enter into a form of co-operation with another business partner. As mentioned above, an increase in the use of ICT has led to new hybrid forms of co-operation which may be organised virtually.³³⁵ In legal terms, these virtual co-operations in general constitute a contractual joint venture. From a tax point of view, it is debatable whether a contractual joint venture with profit pooling entails the creation of a partnership subject to taxation.³³⁶ This question depends on the degree of economic linkage between the two partners. If a country classifies a contractual joint venture as a partnership, the income of the entity is subject to taxation in this country. The final tax rate depends on whether the tax exemption method or the tax credit method is applied in the residence countries of the business partners.³³⁷ In contrast, if a contractual joint venture is classified as doing direct business, the business partners are not liable to tax in the source country, but the apportioned business profits are taxed in the residence countries of the business partners according to the tax levels prevailing there.³³⁸

Due to the emergence of new hybrid forms of co-operation in the form of contractual joint ventures, it is often not clear whether a partnership exists or not, and at which tax rate the profits are taxed. If the qualification of a contractual joint venture by the countries involved differs, double taxation or double non-taxation may result.³³⁹

In terms of international tax planning, the possible qualification conflict and the difference in the final tax rates which apply to a partnership or to doing direct business, can be used to minimise the

³³⁴ For empirical results on the scope of income invested abroad, see *Spengel*, 2005, pp. 104-107, who indicates that this amount is dependent on the method to avoid double taxation in the residence country. Moreover, it has been shown in several analyses that the international tax differential does indeed have an impact on the location decisions of companies. For studies supporting this fact, see *Devereux / Pearson*, 1989, pp. 64-65; *Commission of the European Communities*, 1992, pp. 93-119; *Devereux / Griffith*, 1998, pp. 335-363; *Hines Jr.*, 1999, pp. 305-322, who show evidence indicating that taxation significantly influences the location of FDI, transfer pricing and R&D performance. For further empirical studies which show that investors favour jurisdictions with a favourable tax system, see the overview in *Koop*, 1993, pp. 25-29. For an overview of international studies and studies on German inbound and outbound investments, see *Spengel*, 2003, pp. 210-220.

³³⁵ For further details, see chapter 2.4.4.

³³⁶ This should be decided in accordance with the laws of all jurisdictions involved. For more details, see *Fischer-Zernin*, 1997, pp. 1273-1277; *Brunsbach*, 2003, pp. 61-63; *Bogenschütz / Schanne*, 2003, pp. 949-955. In particular for non-virtual contractual joint ventures, it is argued that a partnership does not exist if the aim of the partners consists in pooling profits and losses and not in establishing a joint business. See *Bogenschütz / Schanne*, 2003, p. 953; *Endres*, 2003, p. 199, who refer to examples in German jurisprudence.

³³⁷ See also the general comments in chapter 3.4.

³³⁸ Thus, the tax consequences of doing direct business as shown in chapters 3.4. and 4.2.3.1.1. apply.

³³⁹ See *De Hosson*, 1996, pp. 85-86; *Holz / Hippe*, 1996, p. 253; *Jacobs* (Ed.), 2002, pp. 1202-1203.

effective tax rate. A company can take advantage of the international tax differential by stipulating the contractual terms of the joint venture and, thereby, choosing either a qualification as a partnership or as doing direct business to achieve the lowest possible rate of taxation. For example, if extensive contractual relationships are entered into, the existence of a partnership is likely.³⁴⁰ Moreover, a potential qualification conflict can be used to achieve a double non-taxation of some of the profits in order to lower the effective tax rate.

However, the taxation of international contractual joint ventures also contains a potential tax risk. Due to the uncertainty regarding the fiscal qualification of a virtual contractual joint venture, the taxpayer cannot be sure of whether he is liable to tax in a country or not. If there is a differing qualification of the co-operation, a double taxation of profits and an increase in the effective tax rate may occur.³⁴¹ To conclude, the creation of hybrid forms of co-operation, such as virtual contractual joint ventures, constitutes a further opportunity for reducing the effective tax rate. However, potential risks must be borne in mind.

4.2.4. Summary of the Relevant Changes in International Tax Planning and Derivation of the Main Taxation Issues

The outcome of the previous analysis on the different tax planning instruments is summarised below. For each instrument, current and non-current tax aspects relevant in the age of ICT are considered. They are compared to the "old economy", i.e. more centralised organisational forms making no use of ICT. In addition, the respective tax risks are mentioned.

Table 4.2: Overview of the most Relevant Changes Regarding Different Tax Planning Instruments

Issue	"Old Economy"	Doing Business in the Age of ICT		
		Economic Changes due to ICT	Opportunities for International Tax Planning	Risks in International Tax Planning
location of a company's residence	<ul style="list-style-type: none"> - place of effective management fixed in one place - restricted scope for tax planning by choosing location of residence 	<ul style="list-style-type: none"> - place of effective management may be mobile or there may be several places of effective management in different countries 	<ul style="list-style-type: none"> - residence of a company can be chosen more freely - very effective instrument to lower effective tax rate, particularly when setting up a company => scope for tax planning is enlarged 	<ul style="list-style-type: none"> - possible uncertainties regarding place of residence - effectiveness of instrument is restricted in the case of relocation of residence

³⁴⁰ See for more details *Brunsbach*, 2003, pp. 71-72.

³⁴¹ This double taxation may be prevented by the agreement of an advanced ruling with the tax authorities involved. See *Jacobs* (Ed.), 2002, p. 1203; *Endres*, 2003, p. 199.

Issue	“Old Economy”	Doing Business in the Age of ICT		
		Economic Changes due to ICT	Opportunities for International Tax Planning	Risks in International Tax Planning
allocation of functions and risks	<ul style="list-style-type: none"> - quite centralised and immobile business activities - relocation generates high costs, since activities are based on physical factors of production - restricted scope for tax planning 	<ul style="list-style-type: none"> - more mobile and decentralised business activities - business activities are based on firm-specific intangible assets and services - cost-effective relocation may be possible 	<ul style="list-style-type: none"> - wide range of functions can be allocated to lower-taxing countries - very effective means of lowering the effective tax rate, especially for additional investments or new foundations => scope for tax planning is enlarged 	<ul style="list-style-type: none"> - transfer of assets: potential realisation and taxation of hidden reserves impairs effectiveness of this instrument - valuation issues, difficulties in allocating profits when dealing with intangibles => increased tax risk
implementation of a transfer pricing system	<ul style="list-style-type: none"> - transfer prices for physical goods can normally be found, comparable transactions exist 	<ul style="list-style-type: none"> - business activities are based more on firm-specific intangible assets and services - high number of intra-company transactions 	<ul style="list-style-type: none"> - on the basis of more flexible allocation of functions and risks: scope for tax planning by use of transfer pricing is enlarged in certain cases 	<ul style="list-style-type: none"> - difficulties in finding and identifying comparable transactions for firm-specific intangibles and services - increase in costs due to high number of intra-company transactions
legal structure of a company - doing direct business	<ul style="list-style-type: none"> - more clear-cut income qualification for different forms of doing direct business 	<ul style="list-style-type: none"> - new business models emerge 	<ul style="list-style-type: none"> - new tax planning potential due to qualification conflicts - potential risks can be avoided more easily 	<ul style="list-style-type: none"> - increased uncertainty and double taxation due to blurry income qualification and qualification conflicts
- permanent establishment	<ul style="list-style-type: none"> - activities of a company in general constitute a fixed place of business 	<ul style="list-style-type: none"> - extensive activities without fixed place of business emerge 	<ul style="list-style-type: none"> - more flexibility to create or avoid permanent establishment - increased potential for reducing effective tax rate particularly under the tax exemption method 	<ul style="list-style-type: none"> - possible uncertainty whether permanent establishment exists or not, e.g. for a server - limitations on investing abroad: see below
- subsidiary	<ul style="list-style-type: none"> - more centralised organisational structure 	<ul style="list-style-type: none"> - mobile and decentralised business activities 	<ul style="list-style-type: none"> - increased potential for reducing effective tax rate, particularly under tax exemption method - triangular constellation with intermediary subsidiary can be used more easily => scope for tax planning is enlarged 	<ul style="list-style-type: none"> - limitations on investing abroad: see below
limitations on investing abroad: subsidiary and permanent establishment	<ul style="list-style-type: none"> - more centralised organisational structure 	<ul style="list-style-type: none"> - more decentralised organisational structure - minor functions can be separated 	<ul style="list-style-type: none"> - application of anti-tax-haven rules may be prevented more easily due to increased flexibility regarding location of income and income classification 	<ul style="list-style-type: none"> - application of anti-tax-haven rules comes into question more often - increased risk due to uncertainties regarding source of income and income classification
hybrid forms of enterprise co-operation	<ul style="list-style-type: none"> - international contractual joint ventures often not efficiently feasible - contractual joint ventures often classified as doing direct business 	<ul style="list-style-type: none"> - efficient international co-operations are possible => virtual contractual joint ventures 	<ul style="list-style-type: none"> - classification of virtual contractual joint venture as partnership may be possible => international tax differential can be used by stipulating the requisite terms of contract - qualification conflicts could be used => new tax planning potential 	<ul style="list-style-type: none"> - increased tax risk due to blurry classification of contractual joint venture - qualification conflicts may entail double taxation

The aim of the previous analysis on international tax planning in the age of ICT was to identify the

most important tax fields which have to be considered in more detail in the following analysis. Firstly, it has turned out that the location of a company's residence on the basis of economic criteria is a taxation issue influenced by the increase in the use of ICT. Secondly, the definition of the permanent establishment in the source country is one of the most important taxation issues in the age of ICT. Thirdly, the income allocation between a permanent establishment and its head office and among affiliated groups ranks among the main taxation issues to be analysed further. Fourthly, the applicability of the methods to avoid double taxation should be discussed in more detail.

In addition to these main taxation issues which are analysed in more detail in chapter 6, the issue whether an entity constitutes a tax subject or not is not discussed further. This question which is of special importance in the case of hybrid forms of co-operation has already been discussed in chapter 4.2.3.2. and, in the end, has to be decided on a case-by-case basis.³⁴² Moreover, the following analysis will focus on business income, since the income classification issues have already been discussed in chapter 4.2.3.1.1. and since no particularly new taxation issues are created in the context of royalties. Also the impact of ICT on CFC rules has been analysed in detail in chapter 4.2.3.1.4. and is therefore not considered further in the subsequent analysis.

4.3. Implications for the Allocation of the International Tax Base Between Different Jurisdictions

As stated above, an increase in the use of ICT entails several changes with regard to the form, location, and degree of a company's international investments. It is analysed in the following whether and to what extent these changed patterns of doing business abroad have an impact on the allocation of the international tax base among different jurisdictions. The allocation of the tax base can either be affected by ICT-induced economic changes, by the companies' tax planning activities or by feasibility issues with regard to the administration of taxation. These influences are examined below and evaluated with regard to their relevance and the degree to which they are supposed to change the allocation of the tax base.

4.3.1. Shift in the Taxable Base from Source Countries to Residence Countries

As regards the allocation of tax revenues, it has often been stated that an increase in the use of ICT would lead to a shift in the taxable base from source countries to residence countries.³⁴³ This assumption is based on various grounds. Firstly, it has been stated in the beginning of the discussion on ICT and taxation that a process of disintermediation could lead to a reduction in the number of

³⁴² For a detailed discussion, see *Brunsbach*, 2003, pp. 63-72.

³⁴³ In general, source countries are largely ICT-importing countries (e.g. India), whereas residence countries are mostly ICT-exporting countries (e.g. the United States).

intermediaries in the country where the consumer is located and, consequently, less income would be attributable to the source country.³⁴⁴ However, the process of disintermediation and the resulting effects on the allocation of the tax base are nowadays not very likely.³⁴⁵ Thus, a shift in the allocation of the taxable base from source countries to residence countries cannot, at present, be based on the argument that disintermediation has occurred.

Secondly, it has often been stated that an increase in the use of ICT leads to a reduction in physical investments in the source country, which is *inter alia* due to the replacement of traditional retailers by e-tailers who can distribute their products via ICT.³⁴⁶ Since it is assumed that the latter do not need to have a physical presence in the country of destination or only require a limited physical presence for only a few functions, tax attributes in the source country would arise less frequently and less income would be attributable to them. In such cases, there is a possible loss of tax revenues for the source country and an increase in the tax revenues for residence countries.³⁴⁷ Even if these events could occur, their impact has not yet been determined³⁴⁸ and it is therefore doubtful whether they really lead to a shift in the allocation of the taxable base between different jurisdictions.

Thirdly, it has been argued that an increase in business models based on the provision of know-how in the form of licensing might – on the tax level – lead to an increase in the relative frequency of royalties.³⁴⁹ Since the OECD Model provides for exclusive residence taxation of royalties, this development would also lead to a shift in the taxable base from the source country to the residence country.³⁵⁰ However, it is debatable whether this shift would actually occur, as there would only be changes if the licensing replaced a direct investment in the source country. Moreover, the tax revenues of source jurisdictions might increase due to the increasing importance of the provision of services which are in general qualified as business income and taxed in the source country if a

³⁴⁴ *Inter alia*, see *McLure Jr.*, 1997a, p. 296; *Owens*, 1997, p. 1835; *Cockfield*, 1999, p. 159; *Cockfield*, 2001, sections 17-22. For an overview of arguments in favour of a shift in the tax revenues, see *OECD*, 2003, section 115.

³⁴⁵ For further arguments, quotations, and empirical results, see chapter 2.4.2.

³⁴⁶ For further quotations, see footnote 325.

³⁴⁷ *Inter alia*, see *Tillinghast*, 1996, p. 525, who argues that the division of tax revenues is threatening to be altered fundamentally; *Doernberg*, 1998, pp. 1013-1014, who assumes a dramatic shift in the tax base from countries importing e-commerce to those exporting e-commerce; *Cockfield*, 1999, pp. 157-159; *Pinkernell*, 1999, pp. 287-288, who gives the example of Germany as an ICT-importing country losing tax revenues and the United States as an ICT-exporting nation gaining more tax revenues; *McLure Jr.*, 2000, p. 11; *Doernberg / Hinnekens / Hellerstein / Li*, 2001, p. 342; *Li*, 2003, p. 523; *Hinneken*, 2003, p. 319. This argument has also been brought forward by certain jurisdictions. For example, see *Indian Ministry of Finance* (Ed.), 2001, pp. 71-72. In contrast, see *eCom Taxpert Group*, 2002, pp. 8-9, who suppose that ICT will not shift tax base away from India.

³⁴⁸ See also *Bird*, 2003, p. 5. As mentioned in chapter 4.2.3.1.5., companies often still have a physical presence in the source country for various reasons. See also *Portner*, 1999, p. 646; *Avi-Yonah*, 2001, pp. 1395-1400, who presumes that a shift in tax revenues has not taken place since it is harder for multinational firms to avoid having a permanent establishment in market countries than previously supposed. See also *Sprague / Hersey*, 2003, p. 315, who argue that remote vendors of consumer goods are not the predominant e-business model in the economy.

³⁴⁹ For further quotations, see footnote 287.

³⁵⁰ See *Li*, 2003, p. 523. In this point, double tax conventions can deviate from the OECD Model.

permanent establishment exists.³⁵¹

To conclude, the degree of the often predicted demise of source-based taxation cannot at present be measured by trade data and does not seem to have occurred to a great extent.³⁵² It is also impossible to determine at present whether countries will see a significant reduction in their tax revenues due to the business changes related to ICT.³⁵³ For example, as illustrated by the OECD, the effect of a significant loss in direct revenues in a given source jurisdiction would only be relevant if the growth of e-commerce was very important, was mostly at the expense of traditional commerce and represented a shift from purely domestic to international commerce.³⁵⁴

Issues arising from the practical implementation of the tax law have been mentioned as a further reason for a change in the allocation of the tax base, as it may be difficult to obtain and verify the necessary information. With regard to source countries, the collection of source taxes may become more difficult due to the lack of meaningful audit trails in electronic transactions.³⁵⁵ For residence countries, it has been argued that issues with unavailable and unreliable information on foreign-source income may cause problems.³⁵⁶ In addition to the shift in the tax base, the possibility of an erosion of the world-wide tax base has been assumed due to the aforementioned issues.³⁵⁷ Although these administrative issues may arise to a certain degree, it is debatable whether, and to what extent, they have an impact on the allocation of the tax base. Certainly, an improvement in control technologies and procedures for international information exchange is needed to prevent tax fraud and to protect tax revenues.³⁵⁸

4.3.2. Shift in Tax Revenues Based on Location Factors

Unlike with a shift in tax revenues from source to residence countries, it is conceivable that the new

³⁵¹ For details on the classification of business models, see chapter 4.2.3.1.1.

³⁵² In contrast, it has been shown by use of macroeconomic data that there is no significant decline in corporate tax revenues collected by OECD member countries. See *Avi-Yonah*, 2001, pp. 1395-1400. See also *Sprague / Hersey*, 2003, p. 300, who assume that the opposite is true, i.e. that developing nations are expected to derive significant economic growth from the e-commerce economy.

³⁵³ See the quotations in footnote 347, and *Hinneken*, 1999, p. 442; *Sprague / Hersey*, 2003, pp. 316-317.

³⁵⁴ Additional prerequisites are that these effects must not be compensated for by residents of the country in question engaging in reciprocal e-commerce business, by an enhanced tax on consumption or by other benefits and business opportunities, such as a transfer of functions. See *OECD*, 2003, section 116.

³⁵⁵ For further details and examples, see *Doernberg*, 1998, p. 1014; *Li*, 2003, p. 523. See also *Guttman*, 1999, p. 1392, who states that these issues are due to disintermediation.

³⁵⁶ See *Li*, 2003, p. 530.

³⁵⁷ Inter alia, see *Avi-Yonah*, 1997, p. 516; *Portner*, 1999, pp. 645-646, who argues that a reduction in the overall tax base might result from cost savings due to efficiency gains through the use of ICT; *Neubig / Poddar*, 2000, pp. 1153-1161, who argue that pressure for such a reduction is put on almost all types of taxes; *Doernberg / Hinneken / Hellerstein / Li*, 2001, pp. 341-342; *Li*, 2003, p. 534.

³⁵⁸ See *The Dutch State Secretary of Finance*, 1998, p. 24; *Australian Taxation Office*, 1999, pp. 170-171; *Westberg*, 2002, pp. 80-81, 235, who states that the OECD Model Agreement on Exchange of Information on Tax Matters is of importance to the promotion of international tax co-operation. In July 2004, the OECD's Committee on Fiscal Affairs refined Article 26 of the OECD Model and the Commentary thereon to enhance the exchange of

business structures enable a shift in tax revenues from countries with less favourable investment conditions to countries with more favourable investment conditions. With the increased international mobility of business activities, a company can exploit non-tax business location factors, such as low labour costs, well-trained employees or a fully developed infrastructure, with greater ease and to a larger extent by optimising the group structure and the allocation of the group's functions and risks.³⁵⁹ Therefore, jurisdictions with favourable location factors are supposed to attract investments and, consequently, tax revenues, to a greater extent.³⁶⁰ Since nowadays, the companies' activities tend to be less dependent on specific business location factors, the tax system of a particular jurisdiction is a more and more important location factor.³⁶¹ The ICT-induced economic changes, such as greater flexibility and mobility of firm-specific intangible assets and services, less dependence of a company's activities on specific location factors, and the decreased importance of geographical distances in some cases, enable companies to use the international tax differential to a greater extent. Consequently, taxpayers can nowadays achieve their tax optimisation strategies more often by making use of the international differences in tax rates. For example, avoiding a tax attribute in a high-tax source country and investing in a lower-taxing country in the form of a permanent establishment or a subsidiary is made easier by ICT. As regards residence countries, a company can nowadays locate its residence more easily in a low-tax country. Moreover, the application of CFC rules can be avoided in certain cases.³⁶² In addition, concerning residence and source countries, an optimal allocation of the company's tax base between different jurisdictions by centralising or decentralising business functions to minimise the effective tax rate can be achieved with less effort.³⁶³ Thus, investments in low-tax countries will increase further, whereas investments in countries with a higher tax burden tend to decrease. This effect may have an influence on the allocation of the tax base, leading to a possible shift in the tax revenues from high-tax to low-tax countries.³⁶⁴

4.3.3. Summary

When summarising the different developments mentioned above, it becomes clear that a shift in the tax base from source to residence countries is not likely, whereas a shift to jurisdictions with more favourable investment conditions, in particular low-tax jurisdictions, is more likely due to the

information between jurisdictions.

³⁵⁹ For more details, see chapters 4.2.1. to 4.2.3.

³⁶⁰ For a survey analysing the reasons for investing abroad, see footnote 31.

³⁶¹ For analyses which show that the tax system is an important location factor, see footnotes 258, 334.

³⁶² See also *Li*, 2003, pp. 528-530.

³⁶³ In addition to the possibilities for legal international tax planning, the risk of illegal tax evasion and tax fraud has also increased in the age of ICT and this may have an impact on the tax revenues of high-tax countries. For more details, see *Dreßler*, 1999, p. 291; *Guttman*, 1999, p. 1395; *Eicker*, 2000, p. 124.

³⁶⁴ See also *Rädler*, 2004, p. 370, who presumes a tax base erosion of countries with high tax rates.

increased mobility of business activities. The actual impact has not been measured to date, but studies on the dependence of investment decisions on specific location factors, such as a jurisdiction's tax system, corroborate this assumption.³⁶⁵ However, it is almost impossible to predict the net effect of ICT-induced economic changes on the tax base of a specific jurisdiction, since the diverse effects have an impact on the domestic tax base to varying and opposing degrees.³⁶⁶

Certainly, it is in the interest of a jurisdiction to preserve its right to tax.³⁶⁷ However, countries do not have a right to a particular level of tax revenues and it is not the function of tax law to guarantee a particular level of tax revenues for a given country. The normative criteria for optimal taxation do not include preserving a country's tax revenues; however, the evaluation criterion of inter-nation equity is based more on an allocation of revenues in line with the source of the income.³⁶⁸ To conclude, an increase in the use of ICT does not really provide a persuasive argument in favour of a shift in tax revenues from source to residence countries.³⁶⁹ As a consequence, possible reforms cannot be based only on such a shift in tax revenues.³⁷⁰

4.4. Implications for a Systematic Analysis

On the basis of the precedent analysis, the most important tax fields in the era of ICT have been defined by identifying inconsistencies in current international tax law which provide opportunities for tax planning. On the basis of this outcome, for these tax fields, a systematic analysis is conducted in more detail. This means that it is on the basis of normative criteria for an optimal taxation analysed whether the current tax rules are still suitable and to what extent reforms are required. Thus, in addition to the analysis of the implications resulting from the increased use of ICT for companies, the consequences for tax administrations are considered.

³⁶⁵ For quotations of empirical studies, see footnote 334.

³⁶⁶ See also footnote 352. For rough estimates showing that there was no impact on Australian tax revenues, see *Australian Taxation Office*, 1997, pp. 32-33, 81. See *Canadian Advisory Committee on Electronic Commerce*, 1998, p. 47, who state that the effects on Canadian tax revenues are not clear. For the Netherlands, see *The Dutch State Secretary of Finance*, 1998, pp. 23-24, who state that, at that time, there were no significant developments of the Dutch national budget. A long-term budgetary impact from the growth of e-commerce is expected, but it is unclear whether, on balance, it will lead to any real loss of or surplus in the Netherlands' tax revenues. For possible scenarios for the Irish tax revenues, see *Irish Revenue*, 1999, p. 46.

³⁶⁷ See also *Spence*, 1997, p. 143, and *Inland Revenue*, 1999, p. 74, who aim to preserve traditional taxing rights in the UK.

³⁶⁸ For more details, see chapter 5.1.2.

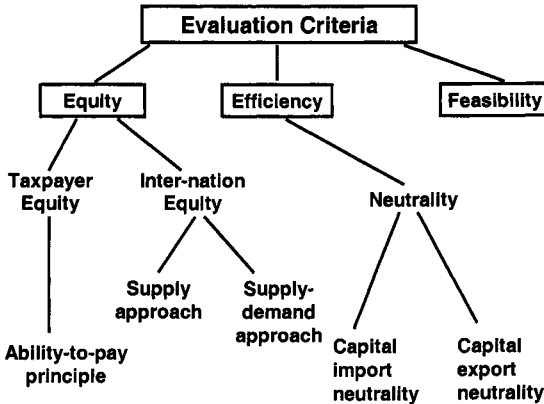
³⁶⁹ See also *The Dutch State Secretary of Finance*, 1998, p. 12.

³⁷⁰ For further details, see the discussion on models for reforming permanent establishments in chapter 7.2.

5. Normative Criteria for Optimal Taxation

The theoretical framework underlying the following analysis consists of basic normative criteria for an optimal taxation which are shown in figure 5.1 below.³⁷¹ The normative criteria are used to evaluate the current tax regulations and to recommend possible reforms.

Figure 5.1: Evaluation Criteria



5.1. Equity

5.1.1. Taxpayer Equity

The criterion of equity between different taxable entities calls for equal treatment of taxpayers who are in a comparable situation regarding fiscal aspects. This criterion can be seen in concrete terms in the “ability-to-pay” principle, requiring a fair treatment among different taxpayers according to their contributive capacity.³⁷² The taxpayer’s economic ability to pay, i.e. his net income, serves as the benchmark to measure the discretionary economic power of each taxpayer.³⁷³ Two aspects of the equity principle can be distinguished. To ensure horizontal equity, all taxable entities with the same ability to pay, i.e. the same level of earnings, should be subject to an equal amount of tax. Vertical equity occurs when taxable entities with an unequal economic ability to pay, i.e. different levels of earnings, face a different tax burden. Since the criterion of taxpayer equity requires that

³⁷¹ For the basic normative criteria of a fiscal system, see also *Jacobs* (Ed.), 2002, pp. 294-295.

³⁷² For more details, see *Neumark*, 1970, pp. 121-137; *Haller*, 1981, pp. 14-16; *Musgrave / Musgrave*, 1989, pp. 223-232; *Vogel*, 1994, pp. 367-369; *Schaumburg*, 1998, pp. 601-602; *Tipke*, 2000, pp. 321-325; *Commission of the European Communities*, 2001, p. 26; *Tipke / Lang*, 2002, pp. 78-83.

³⁷³ See *Li*, 2003, pp. 53-54. The ability-to-pay principle can also be applied at the corporate level, since a corporation is a “halfway house” for the income flowing to the shareholders. See *Musgrave*, 2001, p. 1339; *Li*, 2003, p. 58. A corporation’s ability to pay is an objective ability to pay. For more details, see *Birk*, 2000, p. 328; *Jachmann*,

each taxpayer is taxed at exactly his ability to pay, it can further be derived from this criterion that no double taxation should take place, since otherwise, the taxpayer would be taxed as if he disposes of a higher ability to pay.³⁷⁴

In an international context, as long as at least two jurisdictions with different tax systems are involved, the equity criterion can be interpreted in line with the valuations of the source country or the residence country, and can thus be met in only one jurisdiction. For taxation under the residence principle, the absolute, world-wide ability to pay is considered in the country of residence.³⁷⁵ This approach is based on the idea that a taxable entity in general only has a single ability to pay. In contrast, for taxation under the source principle, the ability to pay is split into a domestic and a foreign share, i.e. the ability to pay in the country of residence and in the source country.³⁷⁶ This concept rests upon the assumption that the taxable entity's ability to pay varies depending on the various economic conditions existing in different jurisdictions.³⁷⁷

5.1.2. Inter-Nation Equity

The criterion of inter-nation equity calls for an equitable allocation of the international tax base between different source countries.³⁷⁸ Thus, the fair conditions under which different countries shall have a right to tax have to be determined.³⁷⁹ According to the principle of source country entitlement, the source country has the prior right to tax profits generated within its jurisdiction.³⁸⁰ In general, varying interpretations of what constitutes an equitable allocation exist which are based on different apportionment criteria. The profit allocation can be effected depending on the benefits received from public services, the location of factors of production or the origin of profits.³⁸¹ These criteria are considered in the following.

In principle, a country should have the right to tax all profits whose source is within its borders. The

2000, pp. 16-22; *ibid.*, 2000a, p. 12; *Tipke / Lang*, 2002, pp. 82-83.

³⁷⁴ See also *Flick*, 1961, p. 172; *Schaumburg*, 1998, p. 600 for further quotations. See also *Jacobs* (Ed.), 2002, pp. 4-5, who shows the implications of double taxation on the decisions of companies, on free competition and on the flows of capital.

³⁷⁵ See also *Jacobs* (Ed.), 2002, p. 305.

³⁷⁶ See *Schaumburg*, 1995, p. 130.

³⁷⁷ For a further discussion, see chapter 6.4.2.

³⁷⁸ In addition to the scenario that income is earned in more than one source jurisdiction, the issue of sharing the international tax base also arises in the case of allocating taxing rights between the source country and the residence country. See *Li*, 2002, p. 827, and footnote 132. In this scenario, the source country's effective tax rate is relevant to the sharing of the inter-nation tax base, whereas the way the residence country taxes the investments abroad determines the division of the gains between the treasury and the taxpayer. See *Musgrave*, 1972, pp. 394-395.

³⁷⁹ Dividing the "tax cake" is the main function of international tax rules. See *Bird*, 1988, p. 297.

³⁸⁰ See *Musgrave*, 2000, p. 47; *Commission of the European Communities*, 2001, p. 26, and chapter 3.2.2.

³⁸¹ For more details, see *Musgrave*, 1972, pp. 399-401; *Oestreicher*, 2000, p. 172. A further approach is to allocate the tax base in accordance with net national gains. See *Musgrave / Musgrave*, 1972, pp. 68, 72-74; *Musgrave*, 2000, pp. 52-53, and the comments in *Vogel*, 1988, p. 398; *Zuber*, 1991, pp. 109-110.

source of profits is defined as the location where the profits are generated, i.e. where the activities contributing to the generation of profits take place. A company generates profits by participating in the economic life of the source country, i.e. by using public and private services. Thus, under the benefit principle, the country within whose borders the profits are generated contributes to this generation of profits and therefore should be entitled to tax the profits.³⁸² For example, due to the provision of transport infrastructures, digital infrastructures, security, economic stability, education or a stable legal and economic system, business entities are able to operate commercially.³⁸³

To allocate taxing rights according to the generation of profits, the profits' source has to be identified. However, under economic terms, it is not possible to clearly identify the location where the income is generated. Consequently, there is no universally valid definition of the source of income for tax purposes, but the source of income is always defined by conventions the jurisdictions agreed on. In general, two approaches for identifying profit-generating factors exist.³⁸⁴ Under the *supply approach*, the source of income is considered to be located where the company's income generating factors of production operate. In line with this approach, a consumer market does not represent a factor contributing to the added value of the company. In contrast, the *supply-demand approach* states that profits are generated through the interaction of supply and demand. It is argued that the value of a good inter alia depends on the utility it has for the consumer and that, as a consequence, the amount of the company's profits is also influenced by the consumer market.³⁸⁵ Relevant attributes having an impact on the demand of a product are, for example, the purchasing power of the consumers, social standards or fashion developments. Thus, since the demand jurisdiction contributes to the generation of the company's profits by providing a consumer market, the demand jurisdiction should also have the entitlement to tax.

When discussing which of the two approaches should be favoured, there seems to be no straightforward basis for arguments from an economic point of view.³⁸⁶ As mentioned above, it is impossible to define the real source of profits. As a consequence, under economic terms, one cannot decide on whether the supply approach or the supply-demand approach is to be preferred. An evaluation of the two approaches is rather based on how the jurisdictions' entitlements to tax are

³⁸² Thus, profit allocation takes place according to each country's share in the profit-generating activities of business entities. For more details, see *Musgrave*, 1972, pp. 399-400; *Musgrave / Musgrave*, 1972, pp. 70-71, 82-83; *ibid.*, 1989, pp. 219-222; *Zuber*, 1991, pp. 108-109; *Musgrave*, 2000, p. 52; *Oestreicher*, 2000, pp. 154-155, 173-174; *Commission of the European Communities*, 2001, p. 26; *Li*, 2003, pp. 52-53. This approach touches the very nature of taxes: they are defined as payments levied by the country in order to obtain revenues. Here, only the right to tax is derived from the benefit principle, not the level of taxation. See also footnote 135.

³⁸³ See *Schanz*, 1892, pp. 372-373; *Vogel*, 1988, p. 313; *McLure Jr.*, 2000, p. 11; *Fohr*, 2001, p. 77.

³⁸⁴ See *Musgrave*, 1984, p. 234; *Oestreicher*, 2000, p. 179.

³⁸⁵ See also footnote 744.

³⁸⁶ See also *Musgrave*, 1984, pp. 234, 241; *Oestreicher*, 2000, p. 180; *Hellerstein / McLure Jr.*, 2004, pp. 209-210; *Schreiber*, 2004, p. 221.

viewed.³⁸⁷ Thus, it is debatable whether a part of the taxable income should be assigned to the demand jurisdiction for providing a consumer market. According to current tax law, the supply approach is the prevailing doctrine, since the provision of a consumer market does not entitle the source jurisdiction to tax.³⁸⁸ Furthermore, the supply-demand approach can entail feasibility issues in practice, as it will be discussed later on in chapter 7. In addition, it can be argued that the contribution of the demand jurisdiction can better be captured by a consumption tax. Based on these arguments, the supply approach is favoured here over the supply-demand approach.

5.2. Efficiency and Neutrality

One of the fundamental criteria for optimal taxation is efficiency. To provide efficiency, taxation should be neutral and not interfere with or affect the taxpayer's decisions.³⁸⁹ Consequently, equivalent transactions should be taxed in the same way.³⁹⁰ The theoretical origin of this principle can be based both on an examination from the point of view of national economies and from a microeconomics' point of view.

The postulate of neutral and efficient taxation at the *national economies' level* is based on the general welfare theory. In an economy with perfect competition, the market mechanism, without any interference from the state, would result in an efficient allocation of economic resources.³⁹¹ Given this so-called Pareto-optimum, it is not possible to enhance the welfare position of one individual by changing the methods of production or the type of goods produced without lowering the welfare position of another individual. A tax system provides efficiency and maximises the overall utility if this Pareto-optimum remains unchanged when implementing taxes.³⁹² Thus, production efficiency exists if the total output cannot be reallocated in such a way as to reduce total costs.³⁹³ The mere income effect resulting from levying taxes does not entail a loss of efficiency. However, when the level of tax depends on specific economic circumstances which can be influenced by the taxpayer, the latter will try to minimise the tax due by adjusting his decisions. This substitutional effect provides an allocation that is not Pareto-optimal and thus leads to inefficiencies and welfare losses. To avoid this excess burden of taxation and to provide efficient taxation, the tax system must be neutral.

³⁸⁷ See *Musgrave*, 1984, p. 234. For a further discussion on the consequences resulting of these two approaches, see chapter 7.3.2.4.3.

³⁸⁸ See also *Schreiber*, 2004, p. 221. For more details on profit allocation under current tax law, see chapter 3.3.

³⁸⁹ See also *Commission of the European Communities*, 2001, p. 26; *ibid.*, 2004, p. 37.

³⁹⁰ See *Doernberg / Hinnekens / Hellerstein / Li*, 2001, p. 67.

³⁹¹ For more details, see *Pareto*, 1909, pp. 354-379.

³⁹² For further details on the following comments, see *Musgrave / Musgrave*, 1989, pp. 279-294; *Schwinger*, 1992, pp. 12-18; *König*, 1997, pp. 7-8; *Homburg*, 2003, pp. 159-163.

³⁹³ See *Devereux / Pearson*, 1995, p. 1658; *Spengel*, 2003, p. 224.

The *microeconomics' approach* looks at taxation effects with regard to a sole company. In this context, taxes should be neutral and should not interfere with an entrepreneur's decisions in order to guarantee efficiency at the corporate level. Basically, two reasons for a neutral and efficient tax system exist at the corporate level. Firstly, neutral taxation allows the minimisation of costs for tax planning or of information costs with regard to the taxation of alternative business models, since such information is redundant if all possible options entail the same tax consequences.³⁹⁴ This minimisation of costs is in the interests of the company, as it serves to maximise the company's profits. Secondly, a non-neutral tax system involves the risk that the outcome of managerial decisions is not optimal and most efficient for the company from a business economics perspective. Rather, to minimise the tax burden, an economically suboptimal and inefficient decision may be taken.³⁹⁵ Therefore, a neutral tax system is preferable, as managerial decisions are then solely based on relevant economic aspects and the tax law does not include incentives for non-optimal and inefficient business decisions.³⁹⁶

Since the neutrality concept on the level of national economies and the microeconomic approach are based on different backgrounds and perspectives, they cannot be equated with one another. However, at the very least, if taxation at the firm level is not neutral but influences the taxpayer's decisions, there is presumably no optimal factor allocation at the level of the whole economy. Thus, neutral taxation at the firm-level serves to achieve efficiency at the level of national economies.³⁹⁷

The general requirement of a neutral and efficient taxation is *inter alia* applied to the *allocation of factors* within and between companies.³⁹⁸ If the allocation of factors is organised via markets in a market economy, it follows from the aforementioned requirement of an efficient and neutral taxation that taxation should not distort the competitive equilibrium within a market economy.³⁹⁹ The competitive equilibrium is distorted if there is no optimal factor allocation.⁴⁰⁰

The general postulate of competitive neutrality is applied in various respects.⁴⁰¹ Depending on the

³⁹⁴ See *Wagner*, 1989, pp. 264-265; *Zuber*, 1991, pp. 50-51; *Wagner*, 1992, p. 4; *ibid.*, 1995, p. 735; *Niemann*, 2001, p. 6. The argument is limited insofar as an entrepreneur would favour a non-neutral tax system if the tax due combined with the costs of information and tax planning are lower than the tax due under a neutral tax system. See *Wagner*, 1995, p. 737.

³⁹⁵ Since the fiscal consequences are easily quantifiable, fiscal arguments might outweigh other important but not easily quantifiable arguments. See *Zuber*, 1991, p. 52; *Jäger*, 2001, p. 99.

³⁹⁶ The requirement of neutrality is also included in the OECD taxation framework conditions for electronic commerce. See *OECD*, 1998, p. 4; *Hinneken*, 1999, p. 440; *OECD*, 2003c, p. 12.

³⁹⁷ See *Spengel*, 2003, pp. 224, 226 with further quotations, and also the discussion in *Elschen*, 1991, pp. 106-110; *Homburg*, 2003, pp. 331-333.

³⁹⁸ For an overview of other fields of application, see *Brodhag*, 1997, p. 12.

³⁹⁹ See *Elschen / Hüchtebrock*, 1983, p. 257; *Herzig / Watrin*, 2000, p. 379; *Schön*, 2004, p. 64.

⁴⁰⁰ See *Brodhag*, 1997, p. 9 with further quotations.

⁴⁰¹ See the overview in *Brodhag*, 1997, p. 10, who differentiates between regional, intertemporal and intersectoral neutrality, and also *Herzig / Watrin*, 2000, pp. 379-380. For more details on regional neutrality, i.e. neutrality in the international context, see the discussion below in this chapter.

decisions to be taken, one can distinguish between different forms of intersectoral neutrality. The most important ones are neutrality with regard to the choice of the legal form, the size of the company or the type of investment and financing.⁴⁰² The basic assumption of neutrality is that all those situations which are comparable in economic terms should be treated the same. Thus, when examining whether a neutral taxation is provided, economically comparable pairs of taxable elements have to be compared with regard to their fiscal treatment. For example, when considering neutrality with regard to the legal form, it is assumed that, in economic terms, the legal form of the investment is irrelevant. Thus, permanent establishments and subsidiaries are considered to be comparable investment alternatives. The postulate of a neutral treatment of different legal forms then requires that the tax burden is not dependent on the legal form of the investment. Consequently, both permanent establishments and subsidiaries should be taxed in the same way in order to avoid a preferential tax treatment of one legal form.⁴⁰³ Then, a non-neutral taxation and inefficiencies can be prevented.

To conclude, taxation neutrality states that taxes should not interfere with the economic decisions of rational decision-makers and should not create incentives for factor relocation or profit shifting. Otherwise, inefficiencies caused by the decision-makers adapting their decision may result. Thus, it is postulated as an evaluation criterion that tax law should be neutral with regard to economically comparable situations, such as permanent establishments and subsidiaries.

In an *international context*, the neutrality principle calls for the neutral treatment of cross-border transactions within the framework of national tax systems.⁴⁰⁴ Since, in practice, the tax systems of at least two jurisdictions have to be applied, and since the tax regulations in general differ, neutrality and efficiency can always be fulfilled in line with the valuation of only one jurisdiction. Basically, there are two different concepts that consider the economic benefits of neutrality and efficiency: capital export neutrality and capital import neutrality, which guarantee neutrality either in the residence or in the source country and, therefore, non-neutrality in the other country.⁴⁰⁵

Under the basic principle of *capital export neutrality*, a tax system should not affect the decisions of any taxpayer regarding in which country to invest. This can be achieved by treating all domestic taxpayers in line with the valuation of their country of residence.⁴⁰⁶ Capital export neutrality guarantees international production efficiency.⁴⁰⁷ Since all domestic investors are taxed at an equal

⁴⁰² See also Neumark, 1970, p. 264; Jäger, 2001, pp. 102-109; Spengel, 2003, pp. 224-225.

⁴⁰³ See also Jäger, 2001, p. 102.

⁴⁰⁴ See Spengel, 2003, p. 230.

⁴⁰⁵ See also Ganderberger, 1983, p. 9; *ibid.*, 1985, pp. 42-43. For a general description of the two concepts, see Jacobs (Ed.), 2002, pp. 19-35.

⁴⁰⁶ See Zuber, 1991, p. 116; Spengel, 2003, pp. 231-232.

⁴⁰⁷ This is due to the fact that the gross interest rates and the marginal productivity of capital in the residence and the

rate, they are indifferent to investment alternatives in the country of residence or in the source country.⁴⁰⁸ The most common way to achieve capital export neutrality is to tax the world-wide income of a taxable entity (world-wide principle) in accordance with the tax rules applied by the country of residence.⁴⁰⁹ Therefore, profits generated abroad have to be determined in accordance with the rules of the residence country as accrued, taxed at the same tax rate as domestic income, with taxes paid abroad being fully credited against the tax due in the residence country.⁴¹⁰ In theory, in the context of international taxation, this would lead to immediate and sole taxation at the shareholder's level, since a corporation would not constitute a taxable entity. However, in international taxation, this approach is not feasible and therefore does not represent a workable solution.⁴¹¹ Alternatively, it is possible to finally tax the profits of a foreign corporation – now representing a taxable entity – in the country of residence as accrued. Under the “residence principle”, at the level of the domestic shareholder, taxes paid by the corporation in the source country would have to be fully credited against the tax due by the shareholder in the country of residence in the accrual period (tax credit method and full tax imputation).⁴¹² Thus, to avoid the shelter effect of foreign corporations in the case of profit retention resulting in a taxation according to the level in the source country, a general implementation of the tax credit method and an add back taxation is necessary.⁴¹³

In contrast, the basic idea behind *capital import neutrality* is to treat all investors equally in line with the valuation of the source country.⁴¹⁴ Thus, all income arising from business activities within a given jurisdiction is subject to the same overall tax level, regardless of the beneficiary of the

source country are equal. For more details, see *Richman*, 1963, p. 8; *Brunsbach*, 2003, pp. 155-156; *Homburg*, 2003, pp. 282-284. However, consumption efficiency cannot be achieved, since the net interest rates differ between locations. See *Homburg*, 2003, p. 285; *Spengel*, 2003, p. 229.

⁴⁰⁸ See *Musgrave / Musgrave*, 1972, p. 69; *Gandenberger*, 1983, p. 8; *Weichenrieder*, 1995, p. 15; *Commission of the European Communities*, 2001, p. 27; *Doernberg / Hinnekens / Hellerstein / Li*, 2001, p. 68; *Homburg*, 2003, p. 283.

⁴⁰⁹ One cannot fully equate capital export neutrality and capital import neutrality with the methods used to avoid double taxation, i.e. the tax credit method and the tax exemption method, since further measures are necessary to guarantee one of the two forms of neutrality. See *Spengel*, 2003, p. 231. Even if the source principle in combination with the tax exemption method could also guarantee capital export neutrality if the effective tax burdens on business profits were harmonised, such a harmonisation is impossible in practice. For details, see *Spengel*, 2003, pp. 235, 317.

⁴¹⁰ See *Spengel*, 2003, pp. 231-232, and also *Musgrave*, 1969, pp. 109-111; *OECD*, 1991, p. 39.

⁴¹¹ See *Advisory Council of the German Federal Ministry of Finance*, 1999, p. 36; *Jacobs* (Ed.), 2002, pp. 295-296, and also *Jacobs* (Ed.), 2002a, pp. 99-101.

⁴¹² See *Jacobs* (Ed.), 2002, pp. 291, 296; *Spengel*, 2003, pp. 232-233. In addition to the implementation of capital export neutrality at the level of the corporation, to achieve capital export neutrality at the shareholder level (shareholder capital export neutrality or portfolio capital export neutrality), all foreign and domestic dividends would have to be treated equally for the distribution of profits to the shareholders. See *Devereux / Pearson*, 1989, p. 24; *Spengel*, 2003, pp. 233-234.

⁴¹³ For a further discussion of the shelter effect and a general add back taxation, see *Schreiber*, 1998, pp. 75-76; *Homburg*, 2000, pp. 33-37, 46-47.

⁴¹⁴ See *Zuber*, 1991, p. 116; *Spengel*, 2003, p. 231.

income.⁴¹⁵ Since the tax rate does not depend on the country of residence of the investor, competitive disadvantages between foreign and domestic producers operating on the same consumer market in the source country are avoided.⁴¹⁶ The tax burden is then only one location factor among others in the source country.⁴¹⁷ The principle of capital import neutrality is based on the assumption that the taxable entity has close links with the economy of the source country and that investors operate and sell on the market of the source country. Moreover, it is assumed that domestic and foreign markets can clearly be distinguished and that the competitive conditions on these markets differ substantially.⁴¹⁸ Given different tax rates between countries, the capital import neutrality principle does not allow for international production efficiency but ensures international consumption efficiency.⁴¹⁹ In order to implement capital import neutrality in practice, the most common method is to tax income according to the “source principle”, meaning that the income generated within a jurisdiction (territoriality principle) is finally taxed in the source country and is exempted in the country of residence (tax exemption method).⁴²⁰ It will be discussed in chapter 6.4. which of the two principles is more suitable in the age of ICT.

5.3. Feasibility

The requirement of feasibility states that the international tax system must be enforceable in practice in order to achieve its basic objectives, i.e. the other normative criteria for optimal taxation.⁴²¹ The criterion of feasibility includes several aspects. First, a feasible tax system has to provide reasonable results. In addition, the administration and control of the tax system has to be fair and not arbitrary. Moreover, the tax system should be simple and easily applicable.⁴²² The feasibility of a tax system also includes cost effectiveness, meaning that the costs of operating a tax system should be minimised. These costs include compliance costs for the taxpayer and

⁴¹⁵ See *Richman*, 1963, p. 8; *Gandenberger*, 1983, p. 9; *OECD*, 1991, p. 39; *Tanzi*, 1995, p. 76; *Weichenrieder*, 1995, p. 15; *Homburg*, 2003, p. 284.

⁴¹⁶ See also *Brunsbach*, 2003, p. 157.

⁴¹⁷ See *Scheffler*, 1996, p. 165.

⁴¹⁸ See *Schreiber*, 1994, p. 241; *Fohr*, 2001, pp. 69-70.

⁴¹⁹ See *Weichenrieder*, 1995, p. 16; *Brunsbach*, 2003, pp. 156-157; *Homburg*, 2003, pp. 285-286; *Spengel*, 2003, p. 229. The allocation of the consumption possibilities maximises overall welfare, since, with equal marginal rates of substitution, foreign and domestic consumers cannot realise further benefits from bartering. However, since the gross interest rates, i.e. the costs of capital, and thus also the marginal productivity of capital differ depending on the respective location, production efficiency cannot be guaranteed.

⁴²⁰ To provide capital import neutrality, a mere business tax for all business entities could be established with a proportional tax rate and no deduction of interest. For more details, see *Jacobs* (Ed.), 2002a, pp. 101-103; *ibid.*, 2002, p. 303; *Spengel*, 2003, pp. 228-229.

⁴²¹ See also *Neumark*, 1970, pp. 358-364. For example, only a tax system that guarantees equal law enforcement in practice can be called equal. See also *Tipke*, 1980, pp. 281, 286; *Theisen*, 1990, p. 22; *Schaumburg*, 1998, p. 79; *Utescher*, 1999, p. 335; *Tipke*, 2000, pp. 348-349.

⁴²² This requirement is also included in the taxation framework for taxing electronic commerce. See *OECD*, 1998, p. 4; *Owens*, 2000, p. 10; *OECD*, 2003c, p. 12.

administrative costs for the public authorities, such as the cost of controlling abuses of law.⁴²³ In addition, feasibility includes that the tax system is politically acceptable. In particular, with regard to reform proposals at the international level, it is obvious that the tax system is a political and controversial matter. Consequently, international tax rules are often purpose-driven and based on pragmatic considerations.⁴²⁴ To conclude, the requirement of a feasible system of company taxation is of great importance, particularly in an international context, as it constitutes the basis for achieving the other objectives of international tax law.

⁴²³ This requirement is also one of the conditions in the taxation framework for taxing electronic commerce. See *OECD*, 1998, p. 4; *Owens*, 2000, p. 10; *Commission of the European Communities*, 2001, p. 28; *Doernberg / Hinnekens / Hellerstein / Li*, 2001, p. 70; *OECD*, 2003c, p. 12. See also the study on the importance of compliance costs in the European Union in *Commission of the European Communities*, 2004e, pp. 21-53.

⁴²⁴ See *Bird / Wilkie*, 2000, p. 91.

6. Application of International Tax Law to the Changed Organisational Structures

The objective of this chapter is to compile the issues in international company taxation resulting from the ICT-induced economic changes. Thus, each of the tax fields of international company taxation identified in chapter 4 as important in the age of ICT is assessed in light of the aforementioned evaluation criteria. Subsequent to the analysis of defining a company's residence, the permanent establishment as the main tax attribute for business profits in the source country is examined. Afterwards, the allocation of the tax base between different taxable entities in different jurisdictions is evaluated. The analysis ends with the examination of the suitability of the residence and the source principle in the age of ICT.

6.1. Taxation in the Residence Country: Localisation of a Company's Residence According to the Place of Management

The current tax system is based on legal entities as tax attributes. Thus, the residence and the taxable profit of each separate company have to be determined. This is also valid for a multinational group with a parent company and several subsidiaries.⁴²⁵ In order to locate the residence jurisdiction of a company, different criteria are applied according to domestic laws, inter alia the place of effective management and the place of central management and control. For dual resident companies, paragraph 3 of Article 4 of the OECD Model stipulates the place of effective management as a tie-breaker rule.⁴²⁶

As mentioned in chapter 4.2.1., the changes in the economic organisation of companies mainly have an impact on economic criteria determining a company's residence. Therefore, the analysis focuses on economic criteria, whereas other criteria are taken into account when discussing possible reforms.⁴²⁷ Even though there are some differences between the place of central management and control and the place of effective management according to domestic laws and to the OECD Model, they can be subsumed under the notion of place of management for purposes of this analysis, since the main relevant characteristics are the same.⁴²⁸

The place of management is in general located where the key management works and where decisions necessary for conducting a business are made. To identify the place of management, it first has to be determined which persons are responsible for the management in the sense that they

⁴²⁵ As shown in chapter 3.2.1., it has to be ascertained, in a first step, whether an economic entity constitutes a taxable entity. Since it has turned out in chapter 4 that this issue is not as relevant as the identification of a company's residence, the issue of the existence of a tax subject is not considered in more detail here. See also footnote 342.

⁴²⁶ For more details on national criteria and the OECD tie-breaker rule, see chapter 3.2.1.

⁴²⁷ For a discussion of possible reforms, see chapter 7.1.

⁴²⁸ For more details on the definition of the place of management, see chapter 3.2.1.

take the decisions of relevance for the company. Second, once the persons responsible for the management are identified, the location where the management tasks are performed has to be ascertained.

In the age of ICT, it is debatable whether the place of management is still an appropriate criterion to determine a company's residence. This rule works well if the underlying assumptions of a hierarchical organisation with a clear allocation of management competencies and a management that is centralised at a certain place for a certain period of time are met.⁴²⁹ In the past, the top level management tended to operate from one single location. This place often coincided with the place where the company was incorporated, where the main business activities were conducted and where the directors or senior managers resided.⁴³⁰ Whilst this company organisation model is still valid for a number of companies, particularly for multinational groups and virtual companies in the age of ICT, the organisational structure of the company and the management structure have changed.⁴³¹ Therefore, it is analysed in the following to what extent the criterion of the place of management as currently defined can still be upheld in the era of ICT.

6.1.1. Identifying the Persons Responsible for Management

To determine a company's place of management, in a first step, the persons responsible for the management of a company by taking the relevant decisions must be identified.⁴³² With the changed internal organisation of companies, there are two issues which have an impact on this determination. The first issue is the degree of decentralisation, meaning that hierarchical structures are often replaced by horizontal, object-orientated and matrix structures. It is a characteristic of those organisational forms that there is no traditional centre of management located at one specific place.⁴³³ The second issue concerns the fact that the legal structure of a group differs more and more from the operational structure. Due to these developments, the identification of the most senior person or group of persons responsible for the relevant decisions regarding the main business operations of a company may not be clear-cut, since the board of managers – as in the case of traditional business organisations – does not necessarily represent the main decision authority. In the following, several examples are considered including these issues to different extents.

⁴²⁹ See *Herzig*, 1998, p. 283; *Raupach*, 1998, p. 63; *Schloßmacher*, 2002, p. 98; *Brunsbach*, 2003, p. 80.

⁴³⁰ See *OECD*, 2001c, section 33.

⁴³¹ For details on changes in the internal organisation and the management structure, see chapter 2.4.3.

⁴³² According to the OECD, also a group of persons may be responsible for the management, for example a managing board. Thus, the identification of one single lead manager is not necessary. See also paragraph 24 of the Commentary on Article 4 of the OECD Model.

⁴³³ See *Breuninger / Krüger*, 1999, p. 101. The mere fact of decentralisation does not necessarily constitute a problem for the determination of the place of management if the decision competence is still assigned to the single companies, i.e. to their managing board.

A typical example for a changed business organisation is an affiliated group with an operational structure which is based on lines of business and fragmented into different profit centres and which coincides with the statutory structure. However, the management of several subsidiaries belonging to a company may be effected by one *management centre* for the whole group.⁴³⁴ In this case, the person accountable for the management of a subsidiary is not the management board of the company, but the responsible directors working at the management centre.

Taking the example of a *multinational group with a decentralised organisational structure*, the management function and the respective competencies are often allocated to several persons.⁴³⁵ Thus, it may in certain cases be difficult to appoint one single person who is mainly responsible for the company's management, since several managers may have equal management rights. The scenario of several management centres can also be due to a merger between companies.⁴³⁶ Moreover, coming along with the fact that the company's operational structure differs more and more from the statutory structure, the allocation of decision-making competencies is often rather based on the operational structure.⁴³⁷ Thus, several management levels can be relevant and may need to be considered for the allocation of the management authority.

As a consequence of the two aforementioned items, the decision-making competencies are not necessarily assigned solely to the managing board of a subsidiary, but are also assigned to the head of the division, i.e. the line of business, the function or the region the subsidiary belongs to, for example in the case of a matrix structure.⁴³⁸ Since, as a rule, the head of a division has the management authority over the companies which are part of the division – otherwise, the formation of an operational structure based on divisions would not be effective –, he would probably be the person disposing of the main decision-making competencies relevant to the determination of the place of management.⁴³⁹ However, the more dimensions a company's organisational structure has, the more persons may be regarded as a manager disposing of the relevant decision-making

⁴³⁴ See also *Breuninger / Krüger*, 1999, p. 82; *Michel*, 2001, pp. 231-232. Similarly, in the case of a centralised group structure with a head office, in certain cases the relevant decisions of a subsidiary may permanently be taken at the controlling shareholder, i.e. by persons working in the head office and not by the management of the subsidiary. Under these circumstances, the main decision-makers might again not be the management of a subsidiary, but the respective managers at the head office. See *Michel*, 2001, pp. 228-229. This general issue is not especially related to organisational changes induced by ICT.

⁴³⁵ See also the example of the M Group in chapter 2.4.5. and *Brunsbach*, 2003, p. 81.

⁴³⁶ See in more detail *Breuninger / Krüger*, 1999, pp. 80-82, showing the example of the Daimler / Chrysler merger in 1998. Two operational headquarters were maintained, one in Germany and one in the United States. An integration committee was established disposing of consultative functions which shall meet one time per week via video-conferencing. See sections 4.2 and 4.3 of the Business Combination Agreement among Daimler Benz AG, Chrysler Corporation and Oppenheim AG dating from 7 May 1998. Thus, the management of the Daimler / Chrysler Corporation was split between several locations.

⁴³⁷ See also *Brunsbach*, 2003, pp. 81-82.

⁴³⁸ See also *Raupach*, 1988, pp. 503-504 for examples.

⁴³⁹ See *Michel*, 2001, p. 230.

authority, for example in the case of a matrix structure based on business functions and lines of businesses.⁴⁴⁰ Thus, under certain circumstances, it may be hard to identify the real decision-making process in practice, since the decisions relevant to the company may be taken jointly by different persons, for example the head of the line of business, the head of the region and the chairman of the board of management of a company.

However, it has to be noted that also for those new forms of organisational structures, in many cases it is probably possible to identify the most senior manager or group of managers by weighting the activities and functions performed or the responsibilities assumed even if several different managers are responsible for the management.⁴⁴¹ To sum up, in the case of a multinational group with a decentralised management structure, it is not necessarily a director at the head office who manages the subsidiary's business operations, but it may be a manager or a group of managers of the respective divisions the subsidiary belongs to according to the operational structure of the group.

Taking the example of a *virtual company* such as the C Company pictured in chapter 2.4.5., it is presumed that the relevant decisions are taken jointly by the partners of the company. Thus, under these assumptions, the persons responsible for the management are easy to identify.⁴⁴² However, due to the decentralised operational structure in such a networked company, the management of the company is not necessarily institutionalised but, often, several persons are responsible for the management of the company.

To sum up, due to the changes in the internal organisational structure of companies and affiliated groups, the persons responsible for the management of a company are often not exclusively the board of directors of a company but also managers working at other company premises. Thus, cases occur more often in which several persons dispose of equal rights and the relevant decision-making authority for a company. However, in a number of cases, the most senior manager or group of managers can be determined by weighting the activities and functions exerted or the responsibilities assumed. In addition, with the tendency towards a decentralised structure, the location of managers may be mobile or they may work distantly from each other.

⁴⁴⁰ See also *Raupach*, 1988, pp. 505-506, who argues that, in this case, the management of the functional entities probably has the most senior decision-making authority. See also *Michel*, 2001, pp. 232-233.

⁴⁴¹ With regard to the weighting of activities, see also *Brunsbach*, 2003, pp. 82-83 and 86-87. For example, according to German jurisprudence, the location of the commercial management is considered to be more relevant than the one of the technical management. See German Supreme Tax Court, 1991, p. 555.

⁴⁴² Other cases are conceivable in which the allocation of the management competence is not that clear and in which difficulties to identify the persons responsible for management might arise. Then again, a weighting with regard to the activities and functions performed or responsibilities assumed would in many cases lead to a clear determination of the most senior managers. Since a single company is presumed here, the issue of a person outside the company deemed to have the main decision-making authority as outlined above in the case of affiliated groups does not arise.

6.1.2. Determination of the Place of Decision-Making of the Managers

Once the person or group of persons responsible for the management of a company is identified, the location of the exertion of the management functions has to be determined. According to the definition of the place of management, it is assumed that this is the location where the commercial decisions necessary for the conduct of a company's business are made. Due to the possibility of using different means of ICT while performing the management function, the responsible persons are mobile and geographically independent of the company's premises, the beneficiaries of the decisions or of other managers. As a consequence, the location of the decision-making differs more and more from the aforementioned locations. Several scenarios are conceivable which are outlined in the following.

First of all, the manager or a group of managers can exert management activities on a *mobile basis*. Given one most senior manager, he may take the relevant decisions at alternating places, for example during business trips, at altering meeting rooms or at different business premises.⁴⁴³ Given a group of responsible managers in a bi- or poly-centric management structure, the managers may meet at different locations on a rotational basis.⁴⁴⁴ As regards the determination of the company's residence, a place of management can always be determined in those cases in which a predominant location exists either because the most relevant decisions are taken at a specific place or because decisions are taken most frequently and permanently at a specific location.⁴⁴⁵ Certainly, a number of cases can be decided on this basis. However, it is especially in the age of ICT conceivable that in special instances, no unambiguous place of management can be determined since there is no location where the most relevant decision-making takes place most frequently. This scenario may lead to a mobile place of effective management.⁴⁴⁶ Whilst such situations were also possible in the past, the cases in which these issues occur increase in the age of ICT due to the use of different means of communication and the changed organisational structures of companies.

Second, *geographical distances between different managers* can be bridged by the use of ICT. A group of managers disposing of equal decision-making authorities can – while doing their work at several locations – communicate by various means of ICT, such as e-mail, electronic discussion group applications or video conferencing. Thus, a group of managers does no longer need to be physically located or to meet in one place in order to take decisions necessary for the conduct of the

⁴⁴³ See also *Brunsbach*, 2003, p. 87.

⁴⁴⁴ See also the examples of the M Group and the C Company in chapter 2.4.5., and *OECD*, 2001c, section 44, and the example in *Brunsbach*, 2003, p. 89.

⁴⁴⁵ Thus, a geographical weighting is necessary. See *Brunsbach*, 2003, p. 88.

⁴⁴⁶ See *OECD*, 2001c, section 44. If a certain minimum duration is required for the existence of a place of management, no place of management may exist at all since this requirement is not fulfilled at any place. See *Brunsbach*, 2003, p. 89.

entity's business.⁴⁴⁷ Such a scenario is conceivable for a bi- and polycentric management structure or a virtual organisation. As regards the ascertainment of the company's residence, it has to be kept in mind that it is only necessary to consider several managers for the determination of the place of management if their functions performed and responsibilities assumed are exactly the same.⁴⁴⁸ Under the assumption that the managers dispose of equal rights, which might, for example, be the case if the management of a company is not institutionalised, it is difficult and sometimes impossible to pinpoint one most significant place of management.⁴⁴⁹ Then, a place of management might be regarded as existing in each jurisdiction where a manager is located at the time of decision-making.⁴⁵⁰

Third, the exercise of management functions is *geographically independent* of the location of the company's premises and, therefore, of the beneficiaries of the managerial decisions. This is due to the fact that geographical distances can be bridged by using ICT which provide the necessary link. Thus, irrespective of whether the place of management is mobile or fix, the relevant place of decision-making of the one most senior manager or the most senior group of managers may be located in a country where the company does not exert its main activities or any activities at all.⁴⁵¹ For example, it is conceivable that one manager or a group of managers takes the relevant decisions in meeting rooms being located distantly from the company's premises or on business trips. It is also possible that, as shown in the scenarios above, the most senior person or group of persons works distantly from the company, for example at a management centre or – as a head of a line of business – at other business premises of the group. In those cases, the place of management could be situated in another jurisdiction than where the main activities of the company take place or where the company is incorporated.⁴⁵² In the past, these places were rather located in one jurisdiction. Whilst the scenarios of a dislocated management also occurred before the advent of ICT, they take place much more often these days, because the location of managers is more and more independent of the location of the company or the location of the main activities of the company.

To sum up, different scenarios for the identification of the place of management result. Certainly, there are still a lot of cases in which a determination of a company's place of management is still possible and provides reasonable results. However, due to the decentralised organisational structure,

⁴⁴⁷ See also *Herzig*, 1998, pp. 283-284, talking about a "virtual management of organisations"; *Hinneken*s, 2001, pp. 323-324; *OECD*, 2001c, section 37.

⁴⁴⁸ Otherwise, a determination of one place of business would be possible by weighting the relative importance of the manager's functions and tasks. See chapter 6.1.1. above.

⁴⁴⁹ See also *Raupach*, 1998, p. 95; *The Dutch State Secretary of Finance*, 1998, p. 10; *Hinneken*s, 2001, p. 323.

⁴⁵⁰ See *OECD*, 2001c, section 38.

⁴⁵¹ See also *McLure Jr.*, 2000, p. 14.

⁴⁵² This is valid on the assumption that the determination of the place of management is based primarily on the fact of decision-making.

the operational structure differing more and more from the statutory structure and the possibilities of bridging geographic distances, the place of management may not be readily determinable. The place of management may be mobile, there might be different equally relevant places or the place may be located distantly from the company's premises. These issues are due to the fact that merely the place of decision-making is considered which constitutes neither a permanent nor a clear-cut element today. Beyond, the fact that it is necessary to determine a place of management for each legal entity is not appropriate for today's organisational structure of affiliated groups.

6.1.3. Assessment of the Current Tax Rules in Light of the Evaluation Criteria

Subsequently, the outcome of the application of the current place of management rule to the changed organisational structure is assessed in light of the feasibility criterion. First of all, feasibility of a tax system means that the general objectives of the tax system are met.⁴⁵³ As mentioned above, the residence country's jurisdiction to tax is founded on the benefit theory,⁴⁵⁴ meaning that a company shall in general be resident in the country to which it has its closest connection. It is assumed that the jurisdiction in which the company makes greater use of economic resources or of the legal, financial, physical and social infrastructure should be defined as the company's residence jurisdiction and should have the right to tax the resulting profits on a world-wide basis. Thus, the determination of the company's residence should ensure that the residence country is the one with which the company has its closest connections and where the focal point of the company's activities is located.⁴⁵⁵ However, it is debatable whether this objective of international taxation can still be achieved in the era of ICT. The notion underlying the economic criterion of the place of management is to attribute the company's residence to the place where the main economic activities of the company are located. As shown above, the application of the current definition of the place of management to the changed organisational structures may provide inadequate results. In certain cases, the place of management is not located in the jurisdiction where the main economic activities take place, but it may be located in a different place where the company exerts less or no activities at all. This result is not consistent with the underlying idea of the concept of the place of management. As a consequence, the basic objective of ascertaining the jurisdiction to tax according to the benefit principle is not met. Thus, the current rule for determining a company's residence according to the place of management does not provide reasonable tax results in certain cases and is therefore not feasible.

⁴⁵³ For more details on the feasibility criterion, see chapter 5.3.

⁴⁵⁴ For more details and further quotations, see chapter 3.2.1.

⁴⁵⁵ Under neutrality considerations, it is irrelevant which country taxes the world-wide income, i.e. which country is the residence country. See *Homburg*, 2003, p. 284.

Second, with regard to the feasibility criterion, the definition of residence has to be workable in practice, should ensure legal certainty and prevent manipulation. Since there are more and more cases in which the place of management cannot be identified precisely, the current rule to determine a company's residence does not provide legal certainty. As a consequence, this rule is in certain cases not practicable and therefore no longer appropriate in the above-mentioned scenarios.⁴⁵⁶ It has further been argued that the increased mobility of the company's managers may provide too much flexibility for companies to move their place of management only for tax purposes. Thus, the place of effective management can nowadays be influenced more easily than before in order to establish a residence in a low tax country.⁴⁵⁷

6.1.4. Conclusion

To summarise, due to the changed organisational management structures in combination with the possibility of communicating via ICT without meeting physically, it is in certain cases difficult – if not impossible – to determine one permanent physical location which indicates the place of management. Possibly, a company's place of management may be mobile, there can be several places of management and the place of management may be situated in a location differing from the one of the company's main activities. Consequently, the residence jurisdiction of a particular corporation may be ambiguous.⁴⁵⁸ Thus, with regard to both the criterion of the place of effective management and the place of management and control, a company's residence cannot clearly be determined in the cases mentioned above. Also with regard to the place of effective management as a tie-breaker rule according to the OECD Model, a criterion that does not provide clear-cut results in certain cases is not suitable as a tie-breaker for double resident companies.

These developments are not completely new, but they are more likely to occur as a result of recent technological changes.⁴⁵⁹ Even if the residence of a number of companies can still be identified in a reasonable way, these days, there is an increasing number of cases in which the current criterion of the place of management does not constitute a suitable means for determining a company's residence.⁴⁶⁰ The issues can be put down to the fact that the criterion of the place of management is focussed on the place of decision-making. Moreover, the fact that it is necessary to determine a place of management for each legal entity is not suitable for today's organisational structure of affiliated groups. Certainly, difficulties with regard to the determination of a company's residence

⁴⁵⁶ See also *Michel*, 2001, p. 246.

⁴⁵⁷ See *Doernberg / Hinnekens / Hellerstein / Li*, 2001, p. 304; *Brunsbach*, 2003, pp. 174-175. However, the potential for tax planning is restricted, particularly in the case of a relocation of residence. For details, see chapter 4.2.1.

⁴⁵⁸ See *McLure Jr.*, 2001, pp. 334, 336.

⁴⁵⁹ See *Doernberg / Hinnekens / Hellerstein / Li*, 2001, p. 165.

⁴⁶⁰ See also *Brunsbach*, 2003, p. 175, who argues that these issues are no longer restricted to holding companies but

always existed, since, in the end, a company is nothing more than a nexus of contractual relationships among shareholders, employees, suppliers, creditors and customers. Thus, the determination of residence of such a construct is always artificial.⁴⁶¹ However, since the operational structure differs more and more from the statutory structure, the determination of residence becomes even more artificial.⁴⁶² It therefore has to be analysed how to revise the definition of a company's residence to ensure reasonable results also for the changed organisational structures. Beyond, the requirement of ascertaining a place of residence for each legal entity within a group can in principle be questioned.⁴⁶³

6.2. Tax Attributes in the Source Country: Defining a Permanent Establishment

In this chapter, it is examined whether the current permanent establishment concept can still be applied in an appropriate way in the age of ICT. In an introductory part, it is examined to what extent the conditions inherent in the permanent establishment definition are challenged by the ICT-induced economic changes. Based thereon, it is analysed in more detail for each relevant economic change whether the application of the current permanent establishment rule is still suitable insofar as it is in line with the evaluation criteria as stipulated in chapter 5.

6.2.1. The Impact of ICT on the General Attributes of the Permanent Establishment Definition

6.2.1.1. The General Attributes of the Permanent Establishment Definition

Under current tax rules, the term permanent establishment serves as the tax attribute for business profits and indicates the threshold that has to be met by business activities in the source country in order to entitle that country to tax the pertinent business income. In Article 5 of the OECD Model, a basic-rule permanent establishment is defined as a fixed place of business through which a business of an enterprise is wholly or partly carried on.⁴⁶⁴ This definition can be traced back to several conditions the activities of a company in the source country have to meet in order to constitute a permanent establishment. First, according to the *place of business test*, the taxpayer has to have a physical presence in the source country.⁴⁶⁵ In addition, this presence has to be fixed at a certain

now also include operative companies.

⁴⁶¹ See *Doernberg / Hinnekens / Hellerstein / Li*, 2001, p. 301.

⁴⁶² See *Brunsbach*, 2003, p. 210.

⁴⁶³ See also *Herzig*, 1998, p. 284, and chapter 7.3.2.2.1. for a discussion of the reform approach of a consolidated group as the relevant taxable entity.

⁴⁶⁴ For more details on the basics of taxation in the source country, see chapter 3.2.2.

⁴⁶⁵ For a more detailed discussion, see *Skaar*, 1991, pp. 111-123. According to the changes of the Commentary on Article 5 of the OECD Model in 2003, a permanent establishment has to represent a geographic entity. Otherwise, two permanent establishments might exist. See paragraphs 5.1 to 5.4 of the Commentary on Article 5 of the OECD Model.

location according to the *location test*.⁴⁶⁶

The *right of use test* stipulates that a permanent establishment only exists if the company has the right to use the business units abroad.⁴⁶⁷ In terms of the *permanence test*, the right to use the fixed place of business has to be permanent, meaning that it has to last for a certain duration.⁴⁶⁸

In addition to the ownership of a fixed place of business, functional criteria have to be fulfilled in order to establish a permanent establishment. Thus, according to the *business activity test*, a permanent establishment only exists if the physical establishment carries on a business activity. Under the OECD Model, certain activities are expressly excluded and the business activities have to exceed the minimum threshold of mere auxiliary or preparatory activities, i.e. they have to constitute core activities of the company.⁴⁶⁹ In practice, this question has to be decided on a case-by-case basis. One test to be applied in this regard is whether the activities constitute a significant part of the activities of the company in respect of qualitative aspects, meaning whether they carry weight as regards the overall activities of the company.⁴⁷⁰ A second test is whether the activities are relevant on a quantitative level, meaning that if they contribute at more than a marginal level to the profits of the company, the activities would not be considered as preparatory.⁴⁷¹ Consequently, if a company's activities are significant with regard to either quantitative or qualitative aspects, the activities are no longer deemed to be auxiliary or preparatory.

The *business connection test* stipulates that the company's activities have to be performed through the place of business, meaning that for the existence of a permanent establishment, the business

⁴⁶⁶ For more details and examples, see *Skaar*, 1991, pp. 125-152. The place of business test and the location test stand for the objective presence of the taxpayer in the source country. To delimit a permanent establishment, different locations are considered one single place of business if there is both geographical and commercial coherence amongst those different locations. See paragraphs 5.1 to 5.4 and also 27.1 of the Commentary on Article 5 of the OECD Model; *Caridi*, 2003, p. 13.

⁴⁶⁷ For an overview over the history of the test and the distinction between a factual and a legal approach, see *Skaar*, 1991, pp. 155-158. It may be required that the taxpayer has a legal position to the extent that he cannot be removed from the place of business without his own consent. As applied in most countries, the actual use of the place of business is deemed to be sufficient. See *Skaar*, 2000, p. 190; *Jacobs* (Ed.), 2002, p. 380 and also the discussion of the new paragraph 4.1 to 4.6 of the Commentary on Article 5 of the OECD Model in *Caridi*, 2003, pp. 8-12.

⁴⁶⁸ "Permanent" means continuing indefinitely rather than everlasting. In the international context, at least six months are considered to be sufficient to constitute a permanent activity. Dependent on the respective definition used for the right to use test, the permanence test either requires the legal position or the actual use to be of a certain duration. See *Skaar*, 2000, pp. 190-191. The right of use test and the permanence test are also referred to as the subjective presence of the taxpayer in the source country. See *Skaar*, 1991, pp. 209-226.

⁴⁶⁹ For the definitions of core versus auxiliary or preparatory activities, see *Skaar*, 1991, pp. 279-325; *ibid.*, 2000, p. 191. The evidence of exercising business activities is considered to be determinative with regard to whether or not a business is actively participating in the economy of the source jurisdiction. See *OECD*, 2003, section 163. According to the change in the Commentary on Article 5 of the OECD Model, a permanent establishment has to constitute an economic entity, meaning that if this entity does not exist, two permanent establishments might exist. See paragraph 5.1 to 5.4 of the Commentary on Article 5 of the OECD Model.

⁴⁷⁰ By stipulating this minimum threshold, some foundation for facilitating assessment and collection of the tax shall be provided. See paragraph 24 of the Commentary on Article 5 of the OECD Model.

⁴⁷¹ See *Storck*, 1980, pp. 149-150; *Kumpf*, 1982, p. 35; *Jacobs* (Ed.), 2002, pp. 381-382; paragraph 24 of the Commentary on Article 5 of the OECD Model; *Görl*, in: *Vogel / Lehner*, 2003, Article 5 section 85.

activities of the enterprise have to be connected to the place of business.⁴⁷² Pursuant to the OECD Model, only the activities directly performed by the permanent establishment are considered to be connected to it. Under paragraph 1 of Article 7 of the UN Model and some bilateral tax treaties concluded with developing countries, the attraction theory is applied. According to this rule, also activities performed at places differing from the permanent establishment within the same jurisdiction are attributed to the permanent establishment. This rule can either be applied to all activities performed in a jurisdiction or only to those activities which are economically related to those performed by the permanent establishment.⁴⁷³

In addition to the basic-rule permanent establishment, also a dependent agent can constitute a permanent establishment of the company if no permanent establishment exists according to the basic rule outlined above.⁴⁷⁴ The dependent agent rule is intended to cover those cases in which business activities are performed through a person without a fixed place of business.⁴⁷⁵ An agent is a person who performs legal acts on behalf of another person.⁴⁷⁶ The requirement of the place of business and other objective criteria is replaced by the requirement of an *agent* being a person in terms of Article 3 of the OECD Model. This person has to have the *authority to conclude contracts*.⁴⁷⁷ Since a real representative activity is necessary, a mere contact to customers is not sufficient. The location test is replaced by the *personal connection test* according to which it is required that the agent has to have a qualified connection to the source country, meaning that he has his habitual abode there.⁴⁷⁸ In addition, the subjective criterion for an agency permanent establishment is that the agent has to be *legally and commercially dependent* upon the principal.⁴⁷⁹ As regards the functional criteria for an agency permanent establishment, there is no special activity of the agent required. The only requirement is that the activity must be *essential and significant* to

⁴⁷² See *Skaar*, 1991, pp. 327-328; *ibid.*, 2000, p. 192. For the delimitation of one permanent establishment, a geographical entity is necessary. See footnote 465.

⁴⁷³ For further details on different forms of a force-of-attraction rule, see *Skaar*, 1991, pp. 328-340; *Jacobs* (Ed.), 2002, pp. 484-486. For details on the implementation of force-of-attraction rules in practice in the United States, see footnote 697.

⁴⁷⁴ See *Skaar*, 1991, p. 463. The reasons for this agency clause are that taxation would not be neutral if the taxation of a company's foreign business operations depended upon whether the company conducts the business itself or through a dependent agent. In addition, without the agency clause, a permanent establishment could easily be circumvented.

⁴⁷⁵ See paragraph 31 of the Commentary on Article 5 of the OECD Model.

⁴⁷⁶ The characteristic of agency is the authorisation to act on behalf of someone else. See *Skaar*, 1991, p. 490.

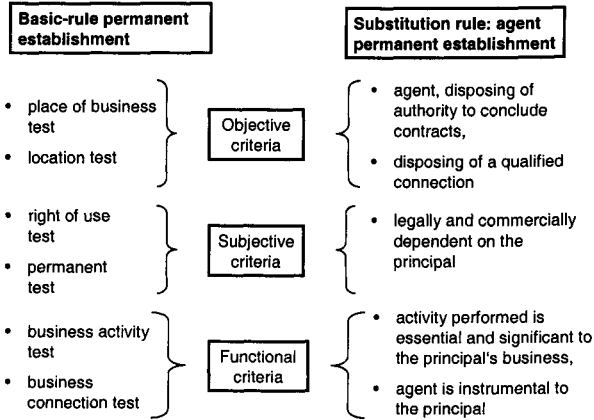
⁴⁷⁷ This authorisation may be specifically limited, provided that the agent acts in a way binding upon its principal. See *Skaar*, 2000, p. 193. It is not necessary that the agent himself signs the contract, but it is sufficient that he has the authority to negotiate all parts of the contract. See paragraph 33 of the Commentary on Article 5 of the OECD Model and *Skaar*, 1991, pp. 489-490; *Jacobs* (Ed.), 2002, pp. 400-401; *Lee*, 2002, pp. 1327-1329. For a detailed discussion of the recent changes in the Commentary on Article 5 of the OECD Model regarding the authority of the agent, see *Caridi*, 2003, pp. 42-44; *Piltz*, 2004, pp. 183-185.

⁴⁷⁸ See *Skaar*, 1991, pp. 464, 485; *ibid.*, 2000, p. 193.

⁴⁷⁹ For more details, see *Skaar*, 1991, pp. 465-466 and 503-514; *ibid.*, 2000, p. 193.

the principal's business.⁴⁸⁰ In addition, like the business connection test, the agent has to be *instrumental* to the principal and has to exercise his attorney to conclude contracts habitually.⁴⁸¹

Figure 6.1: Tests Underlying the Permanent Establishment Definition



6.2.1.2. The Impact of ICT on the Tests Underlying the Permanent Establishment Definition

The current definition of the permanent establishment is in several respects based on the economic circumstances of a company's activities. For example, the degree of economic activities performed in the source country is decisive for the existence of a permanent establishment. Consequently, due to the ICT-induced changes in the nature of business and in the way business is carried on, it is reasonable and might be necessary for this threshold to be adjusted. It thus has to be examined whether the definition of a permanent establishment representing the minimum threshold for the source country's right to tax is still appropriate with regard to the changed organisational structures of the economy. Several of the above-mentioned tests underlying the permanent establishment concept might be challenged in the age of ICT.

First of all, the *place of business test* is challenged in the era of ICT. Source-based principles have been developed in an era when commerce was typically conducted through a "bricks and mortar" presence in a country. The definition of a permanent establishment was based on the assumption

⁴⁸⁰ The business activity test in paragraph 4 of Article 5 of the OECD Model also applies to an agency permanent establishment. See also *Skaar*, 1991, pp. 523-525.

⁴⁸¹ See *Skaar*, 1991, pp. 525-527; *ibid.*, 2000, p. 194.

that the factors of production, capital and labour, are immobile.⁴⁸² It was assumed that a physical location was necessary for the production of income. Foreign enterprises that did not reach a sufficient level of physical or representative presence would in general have had a low level of participation in the economic life of the source country, such as small operations of limited duration where only little income is produced.⁴⁸³ However, in the era of ICT, it has been argued that companies can participate easier and to a substantial degree in the economic life of the source country without installing a physical place of business there. Thus, since income can be derived and value can be added by a company without establishing a physical presence, it has to be analysed in the following whether the use of a physical location by the company still constitutes a significant factor for deriving income.⁴⁸⁴ Since the connection between a company's physical and economic presence is becoming weaker, the current definition of a permanent establishment including the place of business test which relies on physical manifestations of an economic presence has been called into question.

In addition to the place of business test, also the *location test* and the *permanence test* are challenged. Nowadays, the activities of a company are becoming more mobile and independent of any physical location.⁴⁸⁵ It has been argued that the more mobile international business becomes, the less adequate are rules which require a physical presence at a certain place for a certain amount of time.⁴⁸⁶ Moreover, the *right of use test* is called into question in the age of ICT. These days, employees can work distantly from the company in fixed locations for which the company has no right to use, for example if employees work at home or at the customer's premises. Thus, it is debatable whether the criterion of the right to use is reasonable in an era where substantial value adding activities can be conducted by employees without the place of business being at the disposal of the company.

Furthermore, as regards the *business activity test*, the requirement of the permanent establishment performing the core activities of the company is in principle still suitable in the age of ICT. However, since nowadays, a stronger fragmentation of business is possible, this rule may in certain cases not be reasonable.⁴⁸⁷ Thus, it is debatable whether the differentiation between auxiliary or

⁴⁸² When the concept of permanent establishment was introduced, it was based on the following three groups of enterprises: extractive industries with direct dependence upon natural resources, factories and plants as well as other commercial establishments with a fixed location. Mobile industries were not explicitly mentioned, since they were not significant. Given also a low mobility of the labour force, the only mobile international activity of significance was transportation. See Skaar, 1991, pp. 66-67.

⁴⁸³ See Skaar, 1991, p. 559; *Australian Taxation Office*, 1999, pp. 92, 109; *Sprague / Hersey*, 2003, pp. 302-303.

⁴⁸⁴ See also Skaar, 1991, p. 15.

⁴⁸⁵ For more details, see chapter 2.3.1.

⁴⁸⁶ See Skaar, 2000, p. 194.

⁴⁸⁷ With regard to tax planning activities related to this rule, see chapter 4.2.3.1.2.

preparatory activities and core activities in paragraph 4 of Article 5 of the OECD Model is still suitable. In addition, with the possibility of a fragmentation of business and of allocating only a small amount of profits to a permanent establishment, it is debatable whether the *business connection test* stipulating that only those profits which are created through the activities of the permanent establishment are attributable to the permanent establishment is still appropriate.

With regard to the dependent agent rule, it is debatable whether the requirement of the *authority to conclude contracts* is still suitable.⁴⁸⁸ This rule is based on the assumption that the agent acts in relation to third parties and is designed to be applied to sales activities mostly. However, nowadays, it is possible that a substantial amount of business activities is performed through an employee working in the source country who does not act as an agent disposing of the authority to conclude contracts, but may for example provide services to customers or may perform internal tasks for the company.

Based on these general examinations regarding the suitability of the basic tests inherent in the permanent establishment rule, it is in the following analysed in more detail for several ICT-induced changes whether and to what extent the current tax law applied to these changed economic structures is in line with the evaluation criteria stipulated in chapter 5. The analysis is divided into economic changes within the internal organisation of a company, namely the fragmentation of business and the emergence of telecommuting, and economic changes with regard to the relation between a company and markets, including services and the sale of goods. The evaluation criteria serving as a basis for the analysis are inter-nation equity, neutrality and feasibility of the tax system.

6.2.2. Internal Organisation

6.2.2.1. Organisational and Regional Decentralisation Within a Company

6.2.2.1.1. Application of the Current Tax Law

In the following, the consequences resulting from the decentralised business structures for the current definition of a permanent establishment are analysed. Here, mainly two tax provisions are relevant. First, according to the Commentary on Article 5 of the OECD Model, a business location has to constitute a commercially and geographically coherent entity in order to be considered one single permanent establishment.⁴⁸⁹ Second, the minimum threshold inherent in the business activity test stipulated in paragraph 4 of Article 5 of the OECD Model is relevant in this context. According

⁴⁸⁸ See paragraph 33 of the Commentary on Article 5 of the OECD Model, which states explicitly that an authority to conclude contracts regarding activities similar to the core activities and related to solely the internal business operations does not qualify as an authority to conclude contracts.

⁴⁸⁹ Thus, only those activities which can be attributed to this entity are considered as belonging to this place of business. See footnote 465.

to this rule, a permanent establishment only exists if more than preparatory or auxiliary activities are performed through it.⁴⁹⁰ Subsequently, it is examined whether these two rules are still suitable in the age of ICT.

With the increased use of ICT, it can be observed that an organisational and regional decentralisation takes place within companies and affiliated groups.⁴⁹¹ Thus, different functions and activities of a company can be spread among several places within one jurisdiction. Such a decentralised and international business structure is nowadays effectively feasible due to the use of ICT. When applying the current tax law to these changed economic structures, the possibility of a fragmented business structure and, thus, of splitting off some auxiliary activities of the company and locating them distantly can either lead to the fact that no permanent establishment exists in the source country at all or that a permanent establishment exists but with less functions and, thus, profits attributable to it.⁴⁹² This is due to the fact that the activities performed at several places of business may fall under the exemption rules in subparagraphs 4 a) to 4 f) of Article 5 of the OECD Model. However, a centralisation of the same activities in one place could entail the creation of a permanent establishment, provided that the activities then exceed the preparatory or auxiliary threshold.⁴⁹³ An extreme and striking example for such a decentralised business structure is the one of several places of business maintained in a country, each of them used to exert one of the activities mentioned in subparagraphs 4 a) to 4 e) of Article 5 of the OECD Model, for example collecting information or storing goods for delivery. Then, the places of business do not constitute a permanent establishment, since they fall under the exemption rules. Thus, even though the company disposes of physical locations in the source country, no permanent establishment would exist. In contrast, if these activities were centralised in one place, they could represent a permanent establishment. Even if this example is extreme, it can illustrate the basic implications of the fragmented business structure. In addition, it is possible that although a permanent establishment still exists at a certain place in the source country, some activities are split off and might not be included in the taxable base in the source country if they fall under the minimum threshold. In contrast, if these auxiliary activities were performed at the same location as the permanent establishment and, thus, would constitute a part of the geographical and economic entity, these functions and the respective profits would be attributed to the permanent establishment. Consequently, less income is attributable to the existing permanent establishment.⁴⁹⁴ These tax

⁴⁹⁰ For more details on the definition of a permanent establishment, see chapters 3.2.2. and 6.2.1.1.

⁴⁹¹ For more details with regard to these developments, see chapter 2.4.3.

⁴⁹² It has to be noted that, normally, not much income is attributed to auxiliary activities and, therefore, the differences in the amounts of income attributable to the permanent establishment are not that big.

⁴⁹³ Thus, subparagraph 4 f) of Article 5 of the OECD Model is not applicable in this case.

⁴⁹⁴ See also *Jacobs* (Ed.), 2002, p. 416.

consequences of the fragmentation of functions are reinforced insofar as the exemption rules in subparagraphs 4 a) to 4 d) of Article 5 of the OECD Model stipulate that the activities mentioned there are in general exempted, since they are in principle deemed to constitute activities which contribute only to a minor degree to the generation of profits. However, some of these activities may represent a substantial part of the company's business activities, for example the collection of information or the delivery of goods.⁴⁹⁵ Thus, although these activities might constitute more than preparatory or auxiliary activities and although significant profits might be attributable to them on the basis of a functional analysis, no permanent establishment exists.⁴⁹⁶ However, it has to be noted that even if such scenarios are possible in practice, the situations in which really no permanent establishment is created and would be created if the activities were located in one place are deemed to be rather seldom.

6.2.2.1.2. Assessment on the Basis of the Evaluation Criteria

Subsequently, the outcome of the application of the current tax law to the changed economic structures is evaluated in light of the evaluation criteria. As a result of the above-mentioned scenarios, it is first debatable whether the general exemptions of certain activities in subparagraphs 4 a) to 4 d) of Article 5 of the OECD Model are still suitable.⁴⁹⁷ In general, according to the criterion of *inter-nation equity*, the source country should be entitled to tax all profits arising within its jurisdiction as defined by the currently prevailing supply approach. However, the exception for mere preparatory or auxiliary activities in paragraph 4 of Article 5 of the OECD Model is assumed to be justifiable under *feasibility* considerations. Otherwise, the system of international taxation would hamper international trade and create feasibility issues of profit allocation to such minor business activities.⁴⁹⁸ The resulting deviation from the general concept of sharing the tax base according to *inter-nation equity* is deemed to be acceptable, since there is not much profit attributable to these activities. However, it has to be guaranteed that really only preparatory and auxiliary activities are exempted to guarantee a taxation that is in accordance with *inter-nation equity*. Otherwise, the source country has to be entitled to tax the profits resulting from the activities within its jurisdiction. Since, as mentioned above, the current exemption rules cannot guarantee that

⁴⁹⁵ See also *OECD*, 2003, section 198.

⁴⁹⁶ See also *OECD*, 2003, section 178.

⁴⁹⁷ In addition, it is debatable whether the definitions of the activities are suitable for business activities based on ICT, i.e. whether the notion "goods or merchandise" in subparagraphs 4 a), 4 b) and 4 c) is applicable to digital products or data and to what extent "storage" and "delivery" can apply to digital products downloaded from servers through computer networks. See *OECD*, 2003, section 186.

⁴⁹⁸ See also *Skaar*, 1991, p. 279; *OECD*, 2003, sections 163, 182, who further show that this exception is justified by the aim of the OECD Model not to establish a jurisdiction to tax but to limit it, and paragraph 23 of the Commentary on Article 5 of the OECD Model. It is assumed that these activities are so different from the main activities of the company that it would be difficult to allocate profits to this entity and the effort to determine

really only preparatory and auxiliary activities are exempted, they do not provide a taxation in accordance with inter-nation equity. Therefore, an adjustment of these rules is necessary.

Secondly, it is debatable whether the fact that one place of business has to constitute a coherent commercially and in particular geographically entity in order to represent one permanent establishment is still suitable in the age of ICT with a decentralised business structure as the predominant business model. Under the current rule, an unjustifiable distinction is created between different companies performing the same business functions either in disaggregated facilities or centralised in one place.⁴⁹⁹ This outcome does not provide a *neutral taxation*, since two situations which are economically comparable are treated differently for tax purposes. As a consequence, the necessity of the geographical entity might be called into question in the age of ICT where geographical distances can in certain cases be bridged.

To conclude, with the more and more fragmented business structure of companies, firstly, the exemptions of the business activity test in subparagraphs 4 a) to 4 d) of Article 5 of the OECD Model are challenged in the age of ICT and should be adjusted in order to guarantee that the scope of exempted activities exactly encompasses preparatory and auxiliary activities. Secondly, it can be discussed whether the necessity of a geographical entity is still appropriate. These two issues are addressed in chapter 7.2.1.1.

6.2.2.2. Telecommuting: Employees Working Distantly from the Company

6.2.2.2.1. Application of the Current Tax Law

These days, employees can work distantly from the company's premises, for example work at home, at the customer's premises, at the premises of another group company or in a mobile way.⁵⁰⁰ In addition, a manager of a company might perform his tasks distantly from the company. Particularly in the case of an affiliated group such as the example of the M Group in chapter 2.4.5., the management of a subsidiary can be effected by a person working in another country than the subsidiary's residence country, for example if the management is performed by executives working at the parent company. It is discussed in the following whether the current tax provisions can still be applied in a reasonable way.

Based on these economic changes, in terms of taxation, it is debatable whether the employees performing different types of telecommuting from abroad constitute a permanent establishment of the company. According to the basic rule of the permanent establishment definition, the place of

⁴⁹⁹ profits of a negligible amount is deemed to be too high in relation to the resulting amount of taxable profits. See also *OECD*, 2003, sections 179.

⁵⁰⁰ For more details, see chapter 2.4.3. and the examples of the M Group and the C Company in chapter 2.4.5.

business test and the right of use test imply that a permanent establishment only exists if the company has the right to use over a certain place of business. Additionally, the exemption rule in paragraph 4 of Article 5 of the OECD Model shall not be applied and the permanence test has to be fulfilled. The agent rule stipulates that a person other than the company itself can only constitute a permanent establishment if the company is represented by an agent.⁵⁰¹ The following analysis of the basic-rule permanent establishment and the agent rule considers employees telecommuting from home, at the customer's premises, at the premises of other group members and working in a mobile way.⁵⁰²

6.2.2.2.1.1 Basic-Rule Permanent Establishment

In the case of *home-based telecommuting*, the place of business test is met by the fact that the employee works at home and also the permanence test will often be met. However, the company does not have the right to use the employees' home. Thus, since the right of use test is not met, the employee's home is not considered as a permanent establishment of the company.⁵⁰³ It has to be decided on a case-by-case basis whether the activities of the employee telecommuting from home fall under the exemption rule of the business activity test in paragraph 4 of Article 5 of the OECD Model. This exception might be applicable particularly for large companies or groups.⁵⁰⁴

Given the example of a *manager* working at another fixed place than the company, again the right to use test is the decisive criterion which is not met. Consequently, no permanent establishment exists.⁵⁰⁵ In general, managerial activities do not constitute auxiliary or preparatory activities.⁵⁰⁶ Moreover, it depends on the respective case whether the permanence test is met or not.⁵⁰⁷

Furthermore, it is conceivable that employees work at the *customer's premises*, for example in order to provide services there. Again, the right to use test is not met, since the employing company does not have the customer's premises at its disposal. Consequently, the employees working there do not

⁵⁰¹ For more details, see chapter 6.2.1.1.

⁵⁰² The example of employees working in telecommuting centres does not raise new taxation issues with regard to the question whether a permanent establishment exists in general, since a telecommuting centre is comparable to other fixed places of business of a company. Thus, if the company has a right to use the centre, a permanent establishment exists, provided that more than preparatory or auxiliary activities are performed. For more details, see *Utescher*, 1999, pp. 173-174, 195-196.

⁵⁰³ See *Utescher*, 1999, pp. 159-169 for the German jurisprudence, and pp. 187-191 for the OECD Model; *Pasch / Utescher*, 2001, p. 1663; *Jacobs* (Ed.), 2002, pp. 374, 412; *Brunsbach*, 2003, p. 129.

⁵⁰⁴ Then, subparagraphs 4 d), 4 e) and 4 f) might be applicable. See *Utescher*, 1999, p. 190; *Pasch / Utescher*, 2001, p. 1664.

⁵⁰⁵ Also a place of management explicitly mentioned in subparagraph 2 a) of Article 5 of the OECD Model has to meet the general criteria of a permanent establishment. See paragraph 12 of the Commentary on Article 5 of the OECD Model and *Kumpf*, 1982, pp. 35-36; *Utescher*, 1999, pp. 112-113; *Jacobs* (Ed.), 2002, p. 413; *Brunsbach*, 2003, pp. 130-131; *Görl*, in: *Vogel / Lehner*, 2003, Article 5 section 36; paragraph 47 of the Commentary on Article 5 of the OECD Model.

⁵⁰⁶ See also *Utescher*, 1999, pp. 191-194; *Sieker*, 2001, p. 91; *Brunsbach*, 2003, p. 131.

⁵⁰⁷ As regards the place of business test, the same implications as for home-based telecommuting are valid.

establish a permanent establishment. It again has to be decided on a case-by-case basis whether the permanence test is met or not.⁵⁰⁸

In addition, it is possible that employees perform their activities in a *mobile way*, for example while providing professional services which can be performed independently of a certain geographical location.⁵⁰⁹ In those cases of mobile telecommuting, the employees would not create a permanent establishment according to the basic rule, since the place of business test and the right of use test are not met. In addition, the permanence test is probably not fulfilled in many cases.⁵¹⁰

To sum up, in all the examples of employees working distantly from the premises of the company, the decisive criterion which is not met is the company's right to use the fixed place at which the employees perform their activities. Additionally, in the case of mobile telecommuting, the place of business test and the permanence test might also not be fulfilled. As a consequence, under the current basic-rule permanent establishment, the company does not have a permanent establishment in the source country and the source country has no right to tax profits resulting from the employees' activities, even if significant income-producing functions may take place within its jurisdiction. This is due to the fact that the current definition of the permanent establishment focuses on the location of a fixed place of business that is at the disposal of the company and not on the location of the employees' activities. Moreover, the basic-rule permanent establishment is primarily focussed on manufacturing and sales activities which are deemed to require a fixed place of business,⁵¹¹ whereas service activities are not explicitly mentioned in the definition of a permanent establishment according to the OECD Model.⁵¹² Thus, service activities which now represent a significant business activity only fall under this rule if they are performed within a fixed place of business which is at the disposal of the company.

6.2.2.2.1.2 Agent Rule

The dependent agent rule in paragraph 5 of Article 5 of the OECD Model is intended to cover those cases in which business activities are performed through a person without a fixed place of business.⁵¹³ Thus, it is debatable whether employees working distantly from the company's

⁵⁰⁸ With regard to the exception for preparatory and auxiliary activities, the commentaries on home-based telecommuting are again valid.

⁵⁰⁹ As regards the implications of this mobility for taxation issues related to the organisation of markets, see chapter 6.2.3.

⁵¹⁰ For the exception for preparatory and auxiliary activities, see the commentaries for home-based telecommuting above.

⁵¹¹ See also *OECD*, 2003, sections 238-239.

⁵¹² In contrast, under paragraph 3 of Article 5 of the UN Model, a permanent establishment also exists if services are provided by an enterprise through employees or other personnel engaged by the enterprise for such purposes if the activities continue for a period or periods aggregating more than six months within any twelve-month period.

⁵¹³ For more details, see chapter 6.2.1.1.

premises and not constituting a permanent establishment fall under this subordinate rule. Since the agent rule stipulates that the company has to be represented by the agent, it is a precondition that the agent acts in relation to third parties and habitually makes use of his authority to conclude contracts.

If an employee performs *internal activities* for the company and does not act in relation to customers, as it may often be the case for telecommuting from home, the employee does not fulfil the preconditions for acting as an agent of the company.⁵¹⁴ In addition, employees may work in relation to *third parties*, for example if an employee is working at the customer's premises or in a mobile way while providing services to customers. Even then, in most cases, the employee would not represent an agent of the company, since he does not exert real representative activities and does not habitually exercise his authority to conclude contracts. In contrast, given the example of a *manager* of a company working at the premises of another group company in a mobile way or in rather seldom cases at home, it is conceivable that the conditions for the manager acting as an agent of the company are met.⁵¹⁵

To sum up, employees working distantly from the company's premises and providing either internal activities or working in relation to customers in most cases do not constitute an agency permanent establishment, except in the case of a manager. This is due to the fact that the agency rule is designed to be applied to sales activities mostly.⁵¹⁶ Thus, it is not considered in the concept of the permanent establishment that the company's activities can be performed by an employee working distantly from the company's premises. Additionally, service activities provided by an employee who does not act as an agent in order to perform his activities are not considered. This is due to the fact that this concept was created in an era when services were not a core income generating activity. Subsequently, this outcome of the application of the current permanent establishment definition to the changed organisational structures is assessed on the basis of the evaluation criteria.

6.2.2.2.2. Assessment on the Basis of the Evaluation Criteria

In most of the cases of telecommuting considered, the employee does not establish a permanent establishment of the company. Thus, the source country has no right to tax the company's income resulting from these activities. According to *inter-nation equity* based on the supply approach that is favoured here, the source country should be entitled to tax the income resulting from a significant economic activity within its jurisdiction, since it contributes to the generation of these profits. In the

⁵¹⁴ See also *Jacobs* (Ed.), 2002, pp. 412-413; *Brunsbach*, 2003, pp. 129-130, and the example of the M Group in chapter 2.4.5.

⁵¹⁵ In practice, this question has to be decided on a case-by-case basis. See also *Sieker*, 2001, p. 96 for an example of an agency permanent establishment for a manager.

⁵¹⁶ See also *OECD*, 2003, section 238.

examples of telecommuting outlined above, irrespective of the kind of activities performed, a certain amount of a company's value added can be created in the source country. Particularly in the case of an employee permanently telecommuting from home, working at the premises of other group companies, the customer's premises or in a mobile way but permanently in the source country, the economic allegiance to the source country and, thus, the contribution of the source country to the generation of profits is of similar intensity as if the employee would work at the company's premises.⁵¹⁷ Furthermore, contrary to mere sales activities from abroad, in the case of the telecommuting, the provision of services takes place directly in the source country, since the employee is physically present there. As a consequence, contrary to a supplier distributing goods from abroad, the enterprise carries on its activities directly in the source country. The source country contributes to the generation of profits for example by providing for a technical infrastructure and, thus, enabling the communicational link, or by providing for public safety or a legal system.⁵¹⁸ However, the source country has no right to tax the profits generated by telecommuting, since the value is not created within a fixed place of business which is at the disposal of the company. This outcome is not consistent with inter-nation equity.⁵¹⁹

According to the requirement of *neutrality*, situations which are comparable economically shall be taxed equally. In the case of an employee telecommuting from home in the source country, the same activities may be performed to the same extent and the same amount of profits can be generated in the source country as if the employee works at the company's premises. Also the situations of an employee working at the customer's premises, a manager working at the premises of another group company or in a mobile way but permanently in the source country are economically comparable to employees or managers working at the company's premises.⁵²⁰ This is due to the fact that the intensity of activities performed in the source country is the same, irrespective of whether the employee works at one fixed place. The only difference between the cases considered here is that the activities are either performed at a fixed place of business that is at the disposal of the company or not. However, a differing treatment on this basis is not justified. Consequently, the current regulations provide a different treatment of situations which are economically the same and are in this regard not consistent with the neutrality criterion. In contrast, if an employee works only *temporarily* in the source country, the situation is not deemed to be economically comparable to an

⁵¹⁷ See also *Utescher*, 1999, pp. 362-363 for home-based telecommuting. It is further argued that mobile telecommuting is clearly not comparable and that it is not clear whether an employee working at the customer's premises is a comparable situation, since in the case of home-based telecommuting, an employee working under the authority of the company has the place of business at his disposal, whereas this is not the case for an employee working at the customer's premises.

⁵¹⁸ See also the discussion in *OECD*, 2003, sections 42-43 and chapter 5.1.2. for more details.

⁵¹⁹ See also *Brunsbach*, 2003, p. 184.

⁵²⁰ See also the quotation in footnote 517.

employee working permanently in the source country. In this case, the activities performed by the employee are considered to be less intensive and, consequently, a taxation in the source country in those cases is not required under the criterion of neutrality.

According to the *requirement of feasibility*, the permanent establishment definition shall be workable in practice, meaning that it can be implemented and administered in an effective way. Therefore, if an employee works in a *mobile way* in the source country, it might be difficult to trace the taxable profits created by the employee. In addition, given the case that the employee works *only temporarily* in the source country, for example in the case of some mobile forms of telecommuting or also in the case of an employee working at the customer's premises, the creation of a permanent establishment would again not be preferable under feasibility considerations, since the administrative effort of determining the correct amount of income might be too high. If the employee works *permanently* in the source country, a taxation in the source country is assumed to be feasible, since this situation is comparable to the one of the provision of independent personal services which is already implemented now. Justifiable exceptions of the source country's right to tax would then only exist if the employee performs mere preparatory or auxiliary activities.

A further feasibility issue that might arise in the case of an employee constituting a permanent establishment is the *determination of the source as well as the amount of profits* generated by the employee.⁵²¹ It may be difficult to distinguish which portion of the profits arises from which activity since particularly in the case of the provision of services, the product and the "production process" are immaterial. In addition, the contributions of several employees are interrelated and might often hardly be separated.⁵²² As a result, in case the source of income cannot be identified, an allocation of the tax base in accordance with the principle of economic allegiance and the neutrality principle is difficult.

To summarise, the current concept of the permanent establishment is challenged by the decentralised working structures which imply that employees working distantly from the company's premises can contribute to a significant extent to the creation of value and the generation of profits. Particularly the increased importance of services which often constitute core activities in the age of ICT and which can be provided without a fixed place of business are not considered adequately.

⁵²¹ With regard to the attribution of profits to such a permanent establishment, see chapter 6.3.2.

⁵²² Furthermore, also the allocation of expenses to the respective source of income is raised as an issue. See *Spengel*, 2003, p. 328.

6.2.3. Organisation of Markets

6.2.3.1. Doing Business Without a Physical Presence

6.2.3.1.1. Application of the Current Tax Law

The economic changes with regard to the market organisation have been considered the most of all implications of ICT on the taxation in the source country. The main ICT-induced change with regard to the market organisation is that activities which previously required a physical or representative presence within a jurisdiction such as the sale of goods or the provision of some types of services can nowadays be effected from a remote place.⁵²³ Thus, it is possible for companies established abroad to work a market and to reach customers with greater ease and in far greater numbers without establishing a physical presence and without having employees working there.⁵²⁴ In those cases, a permanent establishment is created neither according to the basic rule nor according to the agency rule in the source country, since neither the place of business test nor the agency requirement is met. As a consequence, the source country has no right to tax the company doing direct business from abroad. In the following, this outcome is evaluated in light of the evaluation criteria.

6.2.3.1.2. Evaluation in Light of the Evaluation Criteria

Under the criterion of *inter-nation equity* based on the benefit principle, a source country has the jurisdiction to tax if the taxpayer takes part in the economic life of a jurisdiction and if the source of the profits is located in the source country. In the aforementioned scenarios, the company's only participation in the economic life of the source country consists in selling goods or providing services to customers. Thus, the company is not actively doing business in the source country, but only making use of that country's infrastructure and of the consumer market by selling goods or providing services.⁵²⁵ Pursuant to the supply approach as the currently prevailing basis for attributing taxing rights among different source countries, a mere consumer market does not represent a factor that contributes to the value added of a company.⁵²⁶ In contrast, the supply-demand approach attributes a right to tax to a country for the provision of a consumer market. Thus, the source country has a right to tax if the company's only participation in the source country consists in selling goods or providing services to customers. Under the supply-demand approach,

⁵²³ For more details, see chapter 2.4.2.

⁵²⁴ See also Hickey, 2000a, p. 92; Doernberg / Hinnekens / Hellerstein / Li, 2001, p. 355.

⁵²⁵ The company's participation is rather a participation *with* the economic life of a country than *in* the economic life. See *eCom Taxpert Group*, 2002, p. 20; *Sprague / Hersey*, 2003, p. 312.

⁵²⁶ It has further been discussed whether the use of the infrastructure in the source country gives rise to a taxing right for the source country according to the supply approach. See also the discussion in *OECD*, 2003, sections 41-44. However, a sufficient connection is deemed to exist only if the company really carries out activities there.

the current non-taxation of a company selling goods or providing services to customers in the source country is not consistent with inter-nation equity. However, since the supply approach is preferred here, it is consistent with inter-nation equity based on the supply approach that no taxation takes place in the source country.⁵²⁷

A non-taxation of a foreign company without any physical nexus in the source country is also consistent with the criterion of *taxpayer neutrality*. This is due to the fact that doing e-commerce from abroad and doing remote selling in the traditional way without using ICT are considered as representing the same extent of functions and activities performed in the source country. In contrast, it was sometimes argued that the scenario of an enterprise participating to a significant degree in the economic life of a jurisdiction by means of ICT without the need of a human or physical presence is economically comparable to a company that needs to establish a physical presence in the source country in order to sell products or provide services. As a consequence, also in the case of remote selling via the Internet, a taxation should take place in the source country.⁵²⁸ However, it is assumed here that the economic connection to the source country and the degree of activities or functions performed in the source country of a company working a market remotely by use of ICT is rather comparable to a company doing business from abroad without using ICT and not to a company having established a physical presence in the source country.⁵²⁹

In addition, it is consistent with the criterion of *feasibility* that under the current permanent establishment rule, the source country has no taxing right if only the consumption takes place within its jurisdiction. By this rule, potential feasibility issues can be avoided, since it might be complex for the tax authorities to determine the correct amount of income to collect taxes if the taxpayer has no physical attribute in the source country at all, i.e. neither a permanent establishment nor employees working there.⁵³⁰

In contrast, under the supply-demand approach, a taxation would be justified.

⁵²⁷ See also *The Dutch State Secretary of Finance*, 1998, p. 11; *Brunsbach*, 2003, pp. 181-182. For further details on the discussion of the supply approach and the supply-demand approach, see chapter 5.1.2.

⁵²⁸ Inter alia, see *Strunk*, 1999, pp. 267-268, 273, 276-277; *Strunk / Wichmann*, 2001, p. 420.

⁵²⁹ Holding a different view, see *Utescher*, 1999, pp. 366-367, who states that the participation in the consumer market is more intensive when a company is doing e-commerce than when a company sells its products from abroad on a conventional way, since in the case of e-commerce, due to the high degree of interactive communication, a lot of information on the product or services can be provided.

⁵³⁰ As a matter of administrative expediency, the source country must levy taxes on an entity which can be held accountable under its tax laws. See *Musgrave*, 1972, p. 398. Otherwise, it is difficult to ensure proper compliance and collection of tax for a foreign enterprise that does not have a physical presence in that country. For further details on these feasibility issues, see chapter 7.2.2.2.1.

6.2.3.2. Alternative Attributes

6.2.3.2.1. Application of Current Tax Law

In addition to the aforementioned fact that less tax attributes might exist under current tax law in the source country with the economic changes of market organisations, it is also debatable whether new attributes of doing business in the source country in the era of ICT can constitute a permanent establishment.⁵³¹ In the case of sales and distribution, several functions can be performed by the use of a server.⁵³² The conditions under which a server constitutes a permanent establishment according to the basic rule stipulated in the Commentary on Article 5 of the OECD Model have been outlined in chapter 4.2.3.1.2.⁵³³

In addition, as regards the implications from the organisational changes on markets resulting for the agency rule, particularly a company's web site or an ISP providing services to customers come into question to qualify as an agent of the company. It is stated in the Commentary on Article 5 of the OECD Model that in most cases the ISP will not constitute an agent of the content provider, since the ISP will in general not have the authority to conclude contracts in the name of the content provider.⁵³⁴ With regard to the web site of a company, it is in general stated that it cannot constitute an agent, since it does not qualify as a person under Article 3 of the OECD Model.⁵³⁵

6.2.3.2.2. Evaluation in Light of the Evaluation Criteria

The application of the current tax law to the aforementioned attributes is now evaluated in light of the evaluation criteria. As regards a server, it is deemed to be consistent with *inter-nation equity* based on the supply approach that under the respective conditions according to the Commentary on Article 5 of the OECD Model, a server can represent a permanent establishment in the source country and, consequently, that the source country has the right to tax the respective profits. If core activities of the company can be performed by use of the server, the source of the profits is located

⁵³¹ With regard to the new attribute of employees working under the authority of the company but not at the company's fixed premises, alternative attributes are discussed in chapter 7.2.1.2.

⁵³² See also the example of the M Group in chapter 2.4.5. As regards other parts of the ICT-related infrastructure or equipment constituting a permanent establishment such as the Internet itself, a company's web site, and the computer of a consumer, it has already been elaborated that they cannot constitute a permanent establishment according to the basic rule. Therefore, they are not considered in more detail here. *Inter alia*, see paragraph 42.2 of the Commentary on Article 5 of the OECD Model; *OECD*, 2000, section 6; *Owens*, 1997, pp. 1846-1847; *Peter*, 2002, pp. 141-149 for a detailed discussion.

⁵³³ See also paragraphs 42.2-42.9 of the Commentary on Article 5 of the OECD Model and paragraph 10 of the Commentary on Article 5 of the OECD Model which shows the conditions under which automated equipment constitutes a permanent establishment.

⁵³⁴ See paragraph 42.10 of the Commentary on Article 5 of the OECD Model; *Brunsbach*, 2003, p. 125.

⁵³⁵ See also *Sprague / Hersey*, 2003, pp. 340-341. Holding a different view regarding web sites, see *Gradl*, 2000, pp. 176-179, who argues that a web site can constitute an agency permanent establishment. The treatment of an ISP under the agency rule is in the following not considered in more detail, since the current taxation is deemed to be appropriate in this regard.

in the jurisdiction where the server is installed and contributes to a certain extent to the generation of profits by providing the technical infrastructure.⁵³⁶

In addition, it is assumed to be consistent with the *neutrality criterion* between different taxpayers that a server can under the respective conditions constitute a permanent establishment. Since it is possible that similar functions are performed by use of a server and through a sales office, these two comparable economic situations shall be treated similarly in terms of taxation. In both cases, the question whether a permanent establishment exists is then rather dependent on whether the permanence test is met or whether more than auxiliary or preparatory activities are performed.

If a server is qualified as a permanent establishment, various *feasibility issues* have been mentioned. Since a server can be relocated easily, it has been argued that it does not constitute a stable tax attribute and is therefore not suitable as a tax attribute.⁵³⁷ Therefore, it might be difficult to localise the activities performed and to determine the correct amount of income attributable to the server.⁵³⁸ Furthermore, it has been argued that a server can be used to shift income to low tax countries.⁵³⁹ However, it can be argued against these presumptions that, in practice, a frequent relocation of the server is expected to be rather an exception, since still, a relocation requires some effort.⁵⁴⁰ Moreover, by use of data recording, it seems to be possible to trace the mode of operation and, thus, the functions performed and profits generated by the use of a server. In addition, since in most cases, it is unlikely that much tax revenue is attributed to a server constituting a permanent establishment, the use of a server for tax avoiding strategies shall not be overestimated.⁵⁴¹

6.2.4. Conclusion

Firstly, with regard to the decentralised internal business structure, the current tax law might no

⁵³⁶ See also *Brunsbach*, 2003, p. 183. Holding a different view see *Utescher*, 1999, p. 369, who argues that the contribution of the source jurisdiction to the functioning of a server is very low and rather comparable to the import of goods.

⁵³⁷ Inter alia, see *Portner*, 1998, p. 597; *Eicker / Scheifele*, 1999, pp. 789, 790; *Utescher*, 1999, p. 368; *Portner*, 1999, p. 644; *ibid.*, 1999a, p. 23; *Cockfield*, 1999, pp. 186-191; *ibid.*, 2000, pp. 2411-2415; *Fetzer*, 2000, pp. 114-115, 140-141; *Cockfield*, 2004, p. 648.

⁵³⁸ This issue is reinforced by the fact that often, several mirror servers are used in a transaction and business activities can be shifted from one server to another by use of remote controlling applications. See *Portner*, 1999, p. 645; *ibid.*, 1999a, p. 23; *OECD*, 2003, section 149.

⁵³⁹ For a further discussion of tax planning strategies by the use of a server, see chapter 4.2.3.1.2. Additionally, if a tax attribute should be created in a certain country, this aim can always be achieved by means of a subsidiary. See also *Hickey*, 2000, p. 70. The Commentary of the OECD represents a good basis and is to be welcomed for the clarification and acceptable certainty it provides. See also *Rainerman / Clegg / Anolik*, 1999, p. 12, who criticise that a few of the practical cases encountered in the age of ICT are resolved, and *Hinneken*, 2001a, p. 300, who argues that not many cases of servers will satisfy all the conditions for qualifying as a permanent establishment and that this rule can easily be circumvented. For a further discussion, see *Hinneken*, 2001, pp. 326-328.

⁵⁴⁰ In addition, a frequent relocation of the server would ensure that the profits are liable to tax in the residence country. However, if this is the aim of the taxpayer, this objective can be reached more easily by installing the server in the residence country. See *Jacobs* (Ed.), 2002, pp. 407-408.

⁵⁴¹ See also *Knödler*, 2004, p. 162.

longer be neutral and does in certain cases not provide inter-nation equity, since it is not always guaranteed that this rule provides an exemption of exactly preparatory and auxiliary activities as intended. Therefore, reform measures regarding the exemption for preparatory and auxiliary activities are necessary. In addition, a reform of the delimitation of a permanent establishment can be discussed.⁵⁴² Secondly, also the fact that employees can nowadays work distantly from the company's premises is not considered adequately according to current tax law. Even if in certain cases the employees work permanently in the source country and generate a certain amount of profits there, they might not establish a permanent establishment of the company. Since this result is not consistent with the neutrality criterion and the requirement of inter-nation equity, a reform of the current tax system is necessary.⁵⁴³

As regards the organisation of markets, it is deemed to be consistent with the evaluation criteria that the remote selling of goods or provision of services does not entail the creation of a permanent establishment according to current tax law. In addition, also the fact that a server can in general constitute a permanent establishment under the circumstances mentioned above is considered to be in line with the evaluation criteria. However, particularly with regard to the changes in market organisation, several reform approaches have been suggested which are also discussed later on.⁵⁴⁴

6.3. Profit Allocation

Subsequent to the discussion of the tax attributes in the residence country and in the source country, in this chapter, the impact of ICT on the allocation of profits between different entities belonging to an economic entity is discussed. The focus is on profit allocation between legal entities forming a part of a multinational group. In addition, profit allocation to permanent establishments is analysed.

6.3.1. Profit Allocation Within Multinational Groups According to the Arm's Length Principle

The trade between affiliated companies is assessed to average out at more than 60% of the world trade⁵⁴⁵ and the amount of cross-border intragroup trade is expected to further increase in future years. In addition, it is estimated that at least two third of Internet transactions are conducted within multinational firms.⁵⁴⁶ Thus, the issues of international profit allocation within economic entities

⁵⁴² For the discussion of several reform approaches with regard to the internal fragmentation of the business structures, see chapter 7.2.1.1.

⁵⁴³ For reform approaches, see chapter 7.2.1.2.

⁵⁴⁴ For the discussion of reform approaches with regard to the market organisation, see chapter 7.2.2.

⁵⁴⁵ See *OECD*, 1996, pp. 29-30; *Commission of the European Communities*, 2001, p. 263; *Owens*, 2002, p. 126; *Schneider*, 2003, p. 53. In addition, it has been estimated that 70% of the trade between the United States and Canada is intra-firm in nature. See *Bird*, 1994, p. 752.

⁵⁴⁶ See *Owens*, 1997, p. 1836.

and the equitable allocation of cross-border income between jurisdictions are already today crucial international taxation issues and are supposed to become more important.⁵⁴⁷ In general, issues of profit allocation emerge if different legal entities are under common control and form an economic entity. Then, in the case of a transaction, there is no divergence of interests between the two parties.⁵⁴⁸

The increased use of ICT together with the changing competitive environment is leading to changes in the organisational structure of multinational groups. First, the products transferred and services rendered between affiliated companies as well as the organisational structures of affiliated groups are often specific and not comparable to others. Moreover, the importance of human capital and of mobile factors of production, such as intangible assets, increases. In addition, the conventional value added chains turn into value added networks with the contribution of each partner tending to be small and hard to identify. Furthermore, the companies' boundaries are blurring, as the creation of hybrid forms of enterprise co-operation becomes more frequent.⁵⁴⁹ These organisational structures have implications on the suitability of the currently prevailing methods of profit allocation. It is examined in the following whether and to what extent the traditional transaction methods based on the arm's length principle are still appropriate given the economic changes by the use of ICT. The evaluation of the current tax regulations is based on the evaluation criteria of inter-nation equity and feasibility.

6.3.1.1. Applying the Arm's Length Principle to the Changed Economic Structures

6.3.1.1.1. The Theoretical Rationale of the Arm's Length Principle and the Issue of Non-Comparability of Controlled and Uncontrolled Transactions

One of the essential assumptions of the arm's length principle consists in the comparability of transactions between controlled and uncontrolled parties.⁵⁵⁰ Pursuant to the arm's length principle, market prices constitute the benchmark for profit allocation.⁵⁵¹ It is examined in the following whether this basic assumption underlying the arm's length principle is conform to the economic structure of multinational groups.

⁵⁴⁷ This has also turned out in the analysis on international tax planning in the age of ICT in chapter 4.2.2. and in a recent survey among multinational enterprises. See *Ernst & Young*, 2003, p. 7.

⁵⁴⁸ See also *McLure Jr.*, 1984, p. 105; *OECD*, 2001, section 1.29, and the example of the M Group in chapter 2.4.5. It depends on the economic boundaries of the firm whether issues of profit allocation occur. See also *Jacobs / Spengel / Schäfer*, 2004, pp. 271-272. For a more detailed discussion on the economic boundaries of the firm, see chapter 7.3.2.2.1.

⁵⁴⁹ For more details on the organisational changes, see chapter 2.4.3. and chapter 2.4.4.

⁵⁵⁰ See also chapter 3.3.2.1.

⁵⁵¹ The arm's length principle is based on the assumption of perfect market conditions. They imply perfect competition with easily verifiable free market prices, no interdependencies between the parties of a transaction and homogeneous products. See *McLure Jr.*, 1984, p. 93; *Theisen*, 1990, p. 24; *Helbing*, 1995, pp. 65-66.

If transactions between controlled parties take place under market conditions and thus are comparable to market transactions, profit allocation on the basis of the arm's length principle is in accordance with the profit-generating activities of the members of a multinational group.⁵⁵² However, it is doubtful whether these situations exist between related parties.⁵⁵³

A group of companies consists of legally distinct enterprises which are uniformly managed and economically linked. Thus, a co-ordination via markets is abandoned in favour of a co-ordination via intra-organisational hierarchies by forming an affiliated group. The underlying purpose is to realise excess profits and to achieve competitive advantages.⁵⁵⁴ The economies of integration generated within a multinational group may, for example, consist in ownership-specific advantages such as an improvement of information flow, quality control, managerial efficiency or lower transactional costs.⁵⁵⁵ Thus, the parts belonging to such a group are more profitable than they would be if they were independent.⁵⁵⁶ Since these firm-specific excess profits accrue on the level of the affiliated group, it is impossible to determine the source of these profits and they cannot be attributed to specific transactions. Such firm-specific excess profits resulting from the interconnections between several firms do simply not exist in the case of transactions under market conditions. As a consequence, they cannot be allocated correctly by means of separate accounting on the basis of the arm's length principle.⁵⁵⁷ Consequently, the assumption of market conditions within an affiliated group seems to be illogical and systematically inapplicable.⁵⁵⁸

In addition to this fundamental difference between controlled and uncontrolled transactions, further differences exist. Firstly, the division of risks assumed by the parties often differs between affiliated

⁵⁵² See also *McLure Jr.*, 1984, p. 93; *Oestreicher*, 2000, pp. 24, 124.

⁵⁵³ See also *McLure Jr.*, 1984, p. 93. From a theoretical point of view, since affiliated groups just exist due to imperfections in the arm's length market, there is no reason why comparable transactional pricing should even exist. See *Li*, 2002, p. 834.

⁵⁵⁴ See *Oestreicher*, 2000, p. 24; *Kleineidam*, 2001, pp. 724-725; *Schreiber*, 2004, p. 218. See also *McLure Jr.*, 1984, p. 93, who states that "In case commonly owned firms were connected by a flow of goods and payments strictly at market prices, we might wonder why they were commonly owned."

⁵⁵⁵ The linkages within affiliated groups might consist of economies of scale commonly found within horizontally integrated firms, economies of scope frequently present among vertically integrated firms, as well as shared costs of management, R&D, and a multiplicity of other cost items. See *Musgrave*, 1984, p. 236. For further examples, see *Berry / Bradford / Hines*, 1992, p. 737; *Portner*, 1992, p. 865; *Higinbotham / Levey*, 1998, p. 235, and *Li*, 2002, pp. 832, 834; *ibid.*, 2003, p. 538, who uses the notion of "organisational intangibles" for the integration advantages.

⁵⁵⁶ This means that larger profits accrue to the affiliated group taken as a whole than would to each unit operating independently yet performing the same functions. See also *Musgrave*, 1972, p. 403; *Bird*, 1988, p. 294; *Berry / Bradford / Hines*, 1992, p. 737; *Higinbotham / Levey*, 1998, p. 235; *Oestreicher*, 2000, p. 20; *Jacobs* (Ed.), 2002, p. 875; *Schneider*, 2003, p. 54.

⁵⁵⁷ Therefore, the allocation of the excess profit is rather arbitrary. See also *Musgrave*, 1984, p. 237; *Hellerstein*, 1993, p. 1136; *Kleineidam*, 1997, p. 860; *Newlon*, 2000, p. 216; *Li*, 2002, p. 834; *ibid.*, 2003, p. 538; *Oestreicher*, 2003, pp. 36-37. For more details on the general issue of identifying the source of income, see chapter 5.1.2.

⁵⁵⁸ See also *McLure Jr.*, 1984, pp. 94, 105; *ibid.*, 1989, p. 246; *Portner*, 1992, p. 865; *Herzig*, 1998, p. 285; *Oestreicher*, 2000, p. 20; *Jacobs* (Ed.), 2002, pp. 875-876; *Schröder*, 2002, p. 16. Thus, "exact" transfer prices can only be found if the creation of the company was never advantageous. See *Neus*, 1997, p. 44.

and non-affiliated companies.⁵⁵⁹ For example, the allocation of the exchange rate risk between related parties in general differs from the one between independent third parties. Furthermore, the total amount of the exchange rate risk often differs, since several exchange rate fluctuations may be balanced within an affiliated group.⁵⁶⁰ Thus, by applying the arm's length principle, an exchange rate risk is assumed which does not correspond to the risk actually assumed by the parties.

Secondly, another important general difference between controlled and uncontrolled parties consists in the fact that unrelated parties are co-ordinated via contracts whereas related parties are predominantly governed by control.⁵⁶¹ Even if related parties conclude contracts with each other, due to the missing conflict of interests between them, these contracts normally do not have to be enforced by the legal process but may also be enforced or changed by other means at the will of the parent company. In contrast, given a situation between uncontrolled parties, the divergence of interests ensures that the parties seek to hold each other to the terms of the contract and that the contractual terms are only ignored or modified if it is in the common interest of both parties.⁵⁶² Consequently, two alternatives for the application of the arm's length principle result. The contracts between related companies can either be accepted as they were concluded, even though the parties are not actually bound to them and although they can be changed without any economic consequences. Or the companies can be taxed in a rather arbitrary way according to a theoretical alternative that would have been concluded between uncontrolled parties. Since neither of the two options is convincing, again, the underlying premise of the arm's length principle is challenged.

To summarise, the arm's length principle ignores the fundamental differences between controlled and uncontrolled transactions and attempts to "create an artificial fantasy world in which all transactions are between independent third parties".⁵⁶³ Thus, in all those cases in which the aforementioned differences between controlled and uncontrolled transactions exist, the arm's length principle is not a suitable method for profit allocation. Even if there might be controlled transactions that are comparable to uncontrolled transactions, the existence of comparable transactions is less likely due to the fact that multinational groups are highly integrated these days.⁵⁶⁴

⁵⁵⁹ See also *Hinneken*, 1996, p. 348, who enumerates the examples of transaction, market, insolvency, currency exchange and interest rate fluctuation risks; *Kleineidam*, 1997, p. 859.

⁵⁶⁰ For further details and examples, see *Jacobs* (Ed.), 2002, pp. 876-877; *Oestreicher*, 2003, pp. 37-38.

⁵⁶¹ For the following remarks, see also *Jacobs* (Ed.), 2002, p. 877; *Li*, 2002, p. 833; *ibid.*, 2003, p. 537, who state that this characteristic mirrors the very nature of a group; *Oestreicher*, 2003, pp. 39-40.

⁵⁶² See *OECD*, 2001, section 1.29. The enforcement of the respective terms of the contract is possible only by means of the legal process.

⁵⁶³ *Miller*, 1995, p. 1034.

⁵⁶⁴ For further details, see also the following chapter 6.3.1.1.2.

6.3.1.1.2. The Impact of Organisational Changes on Comparability

In addition to these fundamental issues of non-comparability between controlled and uncontrolled transactions inherent to the arm's length principle in general, the comparability of transactions is further impaired by the organisational changes induced by ICT. In general, the arm's length principle can be applied if the number of transactions is limited and if the conditions of comparable transactions between third parties can be identified.⁵⁶⁵ However, these conditions exist less often due to different changes within the organisational structure of multinational groups in the age of ICT.

Firstly, the products transferred and services rendered within affiliated groups are less often comparable, since they are rather ownership-specific and their values often result from their specific relevance for the respective parties.⁵⁶⁶ Particularly in the case of intangible assets – a more and more important income-producing factor – such as know-how or proprietary technology, the value of the intangible is unique to the relevant parties.⁵⁶⁷ Standard examples are headquarter services which are by definition not relevant to independent companies.⁵⁶⁸ Secondly, with the intra-organisational changes, the organisational structures of multinational groups become more unique and differ from those of independent parties. Consequently, the allocation of functions, responsibilities and risks taken on by the parties in the group organisation are less comparable.⁵⁶⁹ For example, special centres within a group typically carry out activities which are exclusive to the group or are subsidiary to the mainstream of other group members. Since they are often not performed with the same economic significance by independent companies, their productivity is ill-defined when compared to independent enterprises.⁵⁷⁰ Thirdly, differences in business strategies pursued by the group or in economic circumstances imply differing profit levels for related companies compared to independent companies.⁵⁷¹

To conclude, since the determination of adequate transfer prices depends on the comparability of goods and services, functions and risks, business strategies performed and on the economic

⁵⁶⁵ See *Herzig*, 1998, p. 285; *Oestreicher*, 2000, p. 25.

⁵⁶⁶ See also *Hinnekens*, 1996, p. 348; *Oestreicher*, 2000, p. 24; *Wassermeyer*, 2005, p. 66.

⁵⁶⁷ See also *Möbus*, 1992, p. 408; *Herzig*, 1998, p. 285; *Newlon*, 2000, pp. 215-216; *Commission of the European Communities*, 2001, p. 264. The development and exploitation of exclusive intangibles often constitute the most important reasons for integration. See *Li*, 2002, p. 833; *ibid.*, 2003, pp. 536-537.

⁵⁶⁸ See *Commission of the European Communities*, 2001, p. 264.

⁵⁶⁹ For the individualisation of the organisational structure of groups, see *Wichmann*, 1999, p. 196, and for further details on the changed organisational structures, see chapter 2.4.3. As regards the differences of applying the arm's length principle to the changed operational structures of affiliated groups, see *Raupach*, 1997, p. 709; *Higinbotham / Levey*, 1998, p. 238; *Raupach*, 1998, p. 88.

⁵⁷⁰ See *Hinnekens*, 1996, p. 348.

⁵⁷¹ See also *Hinnekens*, 1996, p. 348.

environment, differences as outlined above impair the comparability of controlled and uncontrolled transactions.

6.3.1.1.3. The Impact of ICT on the Identification of Transactions

Even if controlled transactions were comparable to uncontrolled transactions, still all relevant attributes would have to be identifiable in practice for the purpose of taxation. However, since the transfer of intangibles and the provision of services has become more important in the age of ICT, the identification of the characteristics of a transaction becomes more and more difficult.⁵⁷² Particularly for digitised goods such as software programs or other intangible assets such as know-how which can be transferred via the Internet or other means of ICT, the identification of the goods transferred or services rendered often raises problems.⁵⁷³ In contrast to a transaction performed physically, the transfer of digital products and the provision of services by means of ICT do not leave any traceable attributes that are relevant to taxation. Additionally, since several transactions often form a bundle of transactions, for example if products are transferred in combination with the respective services rendered, it is hard to separate these transactions.⁵⁷⁴ Furthermore, the identification of separate transactions becomes even more difficult if they form a part of a value added network with mutual relationships between several parties, for example in the case of worldwide simultaneous co-operations, such as R&D networks or global trading.⁵⁷⁵ As a consequence, the functions performed and risks assumed by the partners of a transaction are not always easy to identify.

One proposal to cope with the aforementioned issues is to bundle several transaction under the “package deal” and to assess them altogether using the most appropriate arm’s length method.⁵⁷⁶ Eligible for aggregation are particularly those transactions which are so closely linked or continuous that they cannot be assessed adequately on a separate basis, such as in the case of global trading or e-commerce. However, even if this package deal may reduce several feasibility issues of the traditional transaction methods, it cannot cope with other issues such as the lack of comparables.⁵⁷⁷ To summarise, in the age of ICT, it becomes more difficult to identify individual transactions which is necessary for applying the arm’s length principle.

⁵⁷² See *Herzig*, 1998, p. 285. In addition, due to the possibility of payments through unaccounted systems remaining invisible unless declared, the tax administration has less possibilities to identify the participating party, the location and the amount of income. For more details, see *United States Department of the Treasury*, 1996, pp. 37-38; *Fairpo*, 1999, p. 6.

⁵⁷³ See *Oestreicher*, 2000, p. 44.

⁵⁷⁴ See *Oestreicher*, 2000, p. 43, and also the example of the M Group in chapter 2.4.5.

⁵⁷⁵ For further details, see chapter 2.4.3. and *Kaminski / Strunk*, 1999, p. 221; *Wichmann*, 1999, p. 195.

⁵⁷⁶ See *Herzig*, 1998, p. 285; *OECD*, 2001, section 1.42; *Vögele / Borstell / Raab*, 2004, Chapter B, sections 194-196.

⁵⁷⁷ See also *Herzig*, 1998, pp. 285-286.

6.3.1.1.4. The Impact of ICT on Cost-Effectiveness

Moreover, the costs of taxation under the arm's length principle are affected by the changed organisational structures. Tax compliance costs on the side of the taxpayer include costs for finding comparables, documenting the respective transfer prices and defending these prices in audits. It is estimated that large multinational groups incur compliance costs related to transfer pricing of approximately 4 to 5,5 million € a year.⁵⁷⁸ With the advent of ICT, the tax compliance procedure for transfer pricing becomes even more cost-intensive, since the necessary data for finding comparables is often not readily available. Furthermore, the large scale of integration, the emergence of value added networks and the decreasing quantity of contributions to the value added imply that the identification and documentation of such small contributions to the creation of value is very complex.⁵⁷⁹ Moreover, the substantial increase in the quantity of transactions and the increasing number of entities taking part in a transaction accumulate compliance costs to a great extent.

On the side of the tax administration, costs related to transfer pricing include costs of control and verification of transfer prices, prevention of manipulation and costs of transfer pricing disputes. Since manipulation becomes more frequent, also the costs for preventing manipulation are increased.⁵⁸⁰ In recent years, the documentation requirements for the taxpayer with regard to transfer pricing were extended in several countries.⁵⁸¹ Whilst the costs for the tax administration might thereby be lowered to a certain extent, in turn, costs on the side of the taxpayer increase considerably.

6.3.1.1.5. The Impact of ICT on Profit Shifting

The arm's length principle provides the incentive to shift profits to low-tax countries in order to optimise the allocation of the tax base for tax purposes. As shown in chapter 4.2.2., particularly the relocation of functions and risks as well as international transfer pricing policy constitute effective tax-planning tools to shift profits from countries with a high tax burden to those with a relatively low tax burden.⁵⁸² Therefore, it becomes more and more difficult for the tax administration to control the appropriateness of transfer prices. The advent of ICT reinforces the possibilities of profit shifting, as ICT provide for a shift to highly mobile intangible assets and a new mobility of

⁵⁷⁸ See *Commission of the European Communities*, 2001, p. 267. Moreover, it is estimated that compliance costs for large companies amount to 1,9% and for SMEs to 30,9% of the taxes paid. See *Commission of the European Communities*, 2004e, p. 23.

⁵⁷⁹ See also *Gummert / Trapp*, 2001, p. 127; *Strunk / Wichmann*, 2001, p. 429.

⁵⁸⁰ See *Commission of the European Communities*, 2001, p. 262. The incidence of transfer pricing audits has increased between 2001 and 2003. See *Ernst & Young*, 2003, p. 11.

⁵⁸¹ See *Commission of the European Communities*, 2001, p. 263; *Ernst & Young*, 2003, pp. 8, 19. With regard to German documentation regulations for cross-border transactions, see *Kroppen / Rasch*, 2003.

⁵⁸² See also *McLure Jr.*, 1989, p. 245; *ibid.*, 1997, p. 864; *Newlon*, 2000, p. 216; *Commission of the European*

activities.⁵⁸³ Although it is difficult to assess the degree to which transfer prices are used to shift profits, evidence of profit shifting by use of transfer prices can be found within the European Union and the United States.⁵⁸⁴

6.3.1.1.6. Double Taxation

When applying the arm's length principle, a double taxation of profits can arise since the transfer prices determined by the two jurisdictions involved in a cross-border transaction often differ.⁵⁸⁵ For example, one jurisdiction may adjust a given transfer price because the price is not deemed to be at arm's length. In most cases, the other jurisdiction does not make a corresponding adjustment. Then, cross-border transactions turn out to be less cost-efficient for the company. Under the EU Tax Arbitration Convention, an agreement between the respective jurisdictions is obligatory, which constitutes a good means to avoid double taxation.⁵⁸⁶ Outside the scope of the convention, the taxpayer does not qualify for a respective adjustment.

6.3.1.2. Assessment of the Arm's Length Principle in Light of the Evaluation Criteria

As shown in the preceding chapters, the ICT-induced organisational changes have an impact on the suitability of the current tax law. The outcome of the application of the current tax law to the changed economic circumstances is subsequently evaluated in light of the evaluation criteria.

To be consistent with *inter-nation equity*, a method of profit allocation should allocate the profits according to their source, i.e. in accordance with the profit-generating activities of the company. As the source of income cannot be clearly determined under economic criteria, different approaches based on various conventions to define the source of income exist.⁵⁸⁷ The arm's length principle follows the supply approach, since the provision of a consumer market does not play any role for

Communities, 2001, p. 261.

⁵⁸³ See also *Doernberg / Hinnekens / Hellerstein / Li*, 2001, pp. 309-310.

⁵⁸⁴ For further details, see *Bartelsman / Beetsma*, 2000; *Newlon*, 2000, pp. 221-229. In general, the allocation of the taxable base is independent from whether the residence principle or the source principle is applied. See *Advisory Council of the German Federal Ministry of Finance*, 1999, pp. 67-68; *Spengel*, 2003, p. 315. However, the incentive to shift profits to low-tax countries mainly accrues under the source principle. In contrast, under the residence principle, a possibly lower tax burden is overridden by the final taxation according to the valuations of the residence country. The benefit of shifting income to the source country then exists in deferring taxation, as the profits are not taxed until distribution. For further details, see chapter 3.4., chapter 4.2.3.1.5. and chapter 6.4.2.

⁵⁸⁵ See also *Herzig*, 1998, pp. 282-283; *Newlon*, 2000, pp. 220-221. According to a recent survey, in practice, one third of audits conclude with an adjustment. See *Ernst & Young*, 2003, pp. 14-15, 23. In 2003, 40% of transfer pricing adjustments resulted in double taxation.

⁵⁸⁶ See *Commission of the European Communities*, 2004d for a proposal for a code of conduct for the effective implementation of the Arbitration Convention, and *Herzig*, 1998, p. 286. The EU Tax Arbitration Convention is preferred over Mutual Agreement Procedures, since the Mutual Agreement Procedures according to Double Tax Conventions often take a long time and an agreement is not obligatory. See *Commission of the European Communities*, 2001, pp. 275-278.

⁵⁸⁷ For more details on inter-nation equity and the difficulties of determining the source of income, see chapter 5.1.2.

the apportionment of the tax base.⁵⁸⁸

If transactions between third parties are carried out under market conditions, the profits are attributed on the basis of reasonable assumptions and in accordance with the profit-generating activities. However, as outlined above, transactions between affiliated groups do in general not take place under market conditions due to economies of integration generated within a group. As discussed in chapter 5.1.2. and chapter 6.3.1.1.1., it is impossible to identify the source of these firm-specific excess profits in an unambiguous way. Thus, it is not possible to allocate profits in line with the profit-generating activities under the arm's length principle, but the profits are allocated according to an artificial assumption, since the arm's length principle does not take the existence of economies of scope within groups of companies into account.⁵⁸⁹ It has been suggested to adjust the arm's length transfer prices by respective reductions or supplements in order to take the economies of scope into account.⁵⁹⁰ However, since the source of the excess profits cannot be determined, it is not possible to calculate such differences in an exact way. Thus, also this proposal cannot lead to a better solution. To conclude, as the currently applied separate accounting rules cannot provide an allocation of the excess profits in line with the profit-generating activities within the group, these rules are bound to fail with regard to inter-nation equity.⁵⁹¹ This issue already existed before the advent of ICT, but it comes into existence on a larger scale these days, since the number of multinational groups and the degree of integration have increased.

According to the requirement of *feasibility*, the profit allocation between companies has to be workable in practice and cost-effective.⁵⁹² As outlined above, the scope for finding and identifying comparable uncontrolled transactions is strongly diminishing.⁵⁹³ Thus, since the arm's length principle is deprived of its fundamental basis, i.e. the existence of comparable transactions, its feasibility in practice is impaired to a great extent. In addition, the application of the arm's length principle has become very cost-intensive with the missing comparable transactions and the strong

⁵⁸⁸ See also *Oestreicher*, 2000, p. 180.

⁵⁸⁹ See *Li*, 2002, pp. 838-839; *ibid.*, 2003, p. 538, who argues that since excess profits are often attributed to the parent company or to intangible assets which are in turn often attributed to the parent company, residual profits are by design and by default allocated to the residence jurisdiction. However, as shown in chapter 4.2.2.1., intangible assets might also often be centralised in a company created in a lower-taxing country and, consequently, residual profits would be attributed there.

⁵⁹⁰ See *Langbein*, 1992, pp. 719-730; *Higinbotham / Levey*, 1998, p. 244 and the comments in *Oestreicher*, 2003, p. 40. However, it is not further specified how these adjustments can be calculated.

⁵⁹¹ See *McLure Jr.*, 1984, pp. 95-96; *Schreiber*, 1992, pp. 846-847; *Hellerstein*, 1993, p. 1136; *Higinbotham / Levey*, 1998, p. 237. "The fact that the group draws its strength from the integration of its sections ... is entirely at odds with the philosophy that profits can be allocated realistically only by adhering to the arm's length principle." *De Hosson*, 1991, p. 146.

⁵⁹² For further details, see chapter 5.3.

⁵⁹³ See also *Horner / Owens*, 1996, p. 521; *Avi-Yonah*, 1997, p. 546; *Commission of the European Communities*, 2001, p. 264; *Doernberg / Hinnekens / Hellerstein / Li*, 2001, p. 312; *McLure Jr.*, 2001, p. 336; *Portner*, 2001, p. 93.

increase in intragroup transactions. As outlined above, those feasibility issues are aggravated to a great extent as regards both quality and quantity with the use of ICT and the resulting organisational changes.⁵⁹⁴

The criterion of *taxpayer equity* calls for a taxation in accordance with the ability to pay of each taxpayer. This implies that an over- or undertaxation of cross-border income has to be avoided. Thus, the risk of double taxation inherent in the arm's length principle as outlined above is not consistent with equity between different taxpayers, since in this case, a taxpayer would not be taxed according to his ability to pay, but at a higher tax rate.⁵⁹⁵

To cope with the issues of feasibility and taxpayer equity, *advance pricing agreements* (APAs) have been proposed as a remedy for the proceeding of transfer pricing negotiations. In advance of controlled transactions, companies conclude APAs with the tax administration to specify an appropriate set of criteria for the determination of the transfer price, such as the transfer pricing method to be applied to those transactions over a fixed period of time.⁵⁹⁶ By use of these agreements, a transfer price should be determined in advance to avoid the aforementioned feasibility issues and a double taxation of profits. However, it is debatable to what extent APAs can render taxation more cost-effective, since they may also be cost-intensive and time-consuming. On the side of the taxpayer, costs of providing information are very high, as the documentation requirements are extensive.⁵⁹⁷ On the side of the tax administration, the conclusion of APAs requires a lot of resources as well.⁵⁹⁸ The high costs on both sides are also caused by the long duration of the negotiation of APAs which in general lasts at least two years, for multilateral APAs even longer.⁵⁹⁹ It is therefore debatable whether a proceeding that causes such a high administrative effort can cope with the complicated exchange of products and services between related enterprises.⁶⁰⁰ In addition, due to the element of subjectivity inherent in the use of APAs, such as differing negotiation skills of the taxpayers, different transfer prices may result which would

⁵⁹⁴ The extent of the feasibility issues depends on the nature of the controlled transaction and on the standard transfer pricing method applied. The issues of comparability and identification particularly have an impact on the CUPM, as it is directly based on comparable uncontrolled transactions. See also *Wichmann*, 1999, p. 196. Furthermore, the RPM and the CPM are impaired by the lack of comparables, as they are also based on comparable uncontrolled transactions to identify comparable margins.

⁵⁹⁵ See also *Li*, 2002, p. 840; *ibid.*, 2003, p. 553. For further details on taxpayer equity, see chapter 5.1.1.

⁵⁹⁶ See *OECD*, 2001, section 4.124.

⁵⁹⁷ Thus, costs for double taxation and fines have to be compared to the costs of the APA. See *Herzig*, 1997, p. 116. One suggestion to cope with the high administrative effort was to develop simplified administrative procedures in the form of a "mini-APA" available for small and medium-sized enterprises on de minimis grounds. See *Commission of the European Communities*, 2001, pp. 355-356.

⁵⁹⁸ See *Commission of the European Communities*, 2001, p. 356; *OECD*, 2001, section 4.151.

⁵⁹⁹ See *Herzig*, 1997, pp. 116-117.

⁶⁰⁰ See *Jacobs* (Ed.), 2002, p. 1086.

infringe the criterion of taxpayer equity.⁶⁰¹ As regards the prevention of double taxation, unilateral APAs cannot prevent double taxation and are therefore not recommendable.⁶⁰² The conclusion of bi- or multilateral APAs represents a suitable method to prevent double taxation, but is more complex and time-consuming.⁶⁰³ However, APAs do not constitute a means to cope with the other feasibility issues of the arm's length principle, such as the lack of comparables and the difficulties of identification.

To conclude, due to several reasons, an increasing number of cases emerges in which the arm's length principle is no longer feasible. Thus, with the ICT-induced changes in the business organisation, the already existing feasibility issues with regard to transfer pricing are now aggravated to a great extent. Consequently, in those cases, also other objectives of profit allocation such as an allocation providing inter-nation and inter-taxpayer equity cannot be achieved.

As outlined above, under the arm's length principle, transfer pricing and the relocation of functions constitute very effective tax-planning tools to *shift profits* from countries with a high tax burden to those with a relatively low tax burden.⁶⁰⁴ Thus, the arm's length principle as a method of profit allocation entails the incentive to shift profits.

6.3.2. Profit Attribution to a Permanent Establishment

6.3.2.1. Application of the Current Tax Law

As outlined in chapter 3.3.2.1., the separate entity approach based on the arm's length principle is the predominant method of profit attribution to permanent establishments according to current tax law. Under the authorised OECD approach, the application of a consolidation and apportionment method is even considered as redundant.

With regard to the arm's length principle, the same implications as discussed in chapter 6.3.1. are again valid. However, a permanent establishment constitutes an even less independent part of a company compared to a subsidiary, since it forms an independent part in legal and factual respects. Here, only intra-company benefits exist and contracts between the permanent establishment and the rest of the enterprise it belongs to cannot be concluded.⁶⁰⁵ Consequently, for a permanent

⁶⁰¹ See *Li*, 2002, pp. 840, 842; *ibid.*, 2003, p. 556; *Oestreicher*, 2003, p. 42.

⁶⁰² See also *Herzig*, 1997, p. 115; *OECD*, 2001, section 4.148.

⁶⁰³ See *Herzig*, 1997, p. 115; *OECD*, 2001, sections 4.131, 4.143; *Jacobs* (Ed.), 2002, p. 1085. The average amount of time for unilateral APAs in the United States in 1999 was 23 months, for bilateral or multilateral APAs up to more than 35 months. See *Oestreicher*, 2003, pp. 42-43. See also *Bergquist*, 1992, pp. 387-402; *Pagan / Wilkie*, 1993, sections 8.19-8.28, who illustrate Apple's positive experiences with the world's first bilateral APA concluded with the tax authorities of the United States and Australia. For the use of APAs in practice, see the findings in *Ernst & Young*, 2003, pp. 22-23. In 2003, 14% of the parent companies and 18% of the subsidiaries used the APA process.

⁶⁰⁴ For more details, see chapter 4.2.2.

⁶⁰⁵ See also *Förster / Naumann*, 2004, p. 1778.

establishment, the application of the arm's length principle is based on even advanced hypothesis and fictions compared to an affiliated group, thus enhancing the degree of abstraction.⁶⁰⁶ Therefore, the critical remarks already mentioned in the context of groups of companies now hold to an even greater extent. Firstly, again, the assumptions underlying the arm's length principle differ in the case of a permanent establishment even further from the economic reality. Secondly, due to the legal and factual entity between a permanent establishment and the head office, it is often difficult to identify the functions performed and risks assumed by the parties and to allocate them correctly.⁶⁰⁷ Thirdly, the identification, delineation, and assessment of separate dealings between the permanent establishment and the head office is particularly difficult due to the missing agreements valid under civil law.⁶⁰⁸ As a consequence of all these developments, the issues of comparability and identification of transactions occur again.

6.3.2.2. Evaluation in Light of the Evaluation Criteria

As outlined above, from an economical point of view, an affiliated group representing one economic entity can be considered as being comparable to an individual enterprise disposing of a permanent establishment.⁶⁰⁹ Consequently, according to the *neutrality criterion*, an equal taxation of these two comparable situations is required. Indeed, the current authorised OECD approach harmonises the profit attribution for permanent establishments and subsidiaries insofar as in both situations, the arm's length principle is applicable.⁶¹⁰ However, numerous issues are raised when applying the arm's length principle.

Above all, the application of the arm's length principle for allocating profits to permanent establishments raises a lot of *feasibility issues* since it is very difficult to identify and assess the dealings taking place between the permanent establishment and its head office. These issues become even more relevant with the economic changes such as value added networks in the case of global development and global trading.⁶¹¹ It is therefore assumed that the arm's length principle cannot be applied in a cost-effective way. Consequently, the application of the arm's length

⁶⁰⁶ See also Förster / Naumann, 2004, p. 1790.

⁶⁰⁷ See also Ditz, 2002, p. 211. In the end, only the whole company can be the responsible body for civil law rights and duties, e.g. acquiring ownership of property. For more details, see Ditz, 2004, pp. 44-45.

⁶⁰⁸ See also Ditz, 2002, p. 212; Graf, 2003, pp. 221-222; Ditz, 2004, pp. 369-370.

⁶⁰⁹ For more details, see chapter 3.3.1.

⁶¹⁰ This approach has been appreciated for providing a harmonisation on the arm's length approach for profit allocation. See Ditz, 2002, p. 211; Konrad, 2003, pp. 791-792; Ditz, 2004, pp. 130-131, 177-182. Also arguing in favour of an exclusive application of the arm's length principle, see Sieker, 1996, pp. 110-113; Sprague / Heresy, 2003, pp. 16-19.

⁶¹¹ See also Ditz, 2002, p. 213; Graf, 2003, p. 223. For a detailed discussion of profit attribution to permanent establishments carrying on global trading of financial instruments according to the authorised OECD approach, see OECD, 2004a. If traditional transaction methods can not be applied reliably, consideration should be given to profit methods. See OECD, 2004a, section 240.

principle to permanent establishments is deemed to be even less feasible than it is for groups of companies.⁶¹² Additionally, since it is more difficult to attribute profits according to the profit-generating activities when applying the arm's length principle to permanent establishments, it is also difficult to provide *inter-nation equity*.⁶¹³

To summarise, with regard to the attribution of profits, the same issues regarding feasibility and inter-nation equity as discussed for groups of companies occur, but to a greater extent.

6.3.3. Conclusion

To conclude, in the era of ICT, pressure is put on several of the foundation stones of the arm's length principle.⁶¹⁴ Namely, the separate treatment of each transaction, the separate entity approach and the comparability requirement are challenged. Due to the ICT-induced changes in the organisational structure, the arm's length principle tends to be no longer conform to today's organisational structures of affiliated entities such as groups of companies and permanent establishments and their head office. This is due to the general inappropriateness of the theoretic rationale underlying the arm's length principle for affiliated entities. In addition, the arm's length principle cannot adequately capture the many subtle and largely not quantifiable transfers of value taking place between the different parts of an affiliated group or between a permanent establishment and the head office. Thus, various feasibility issues arise such as difficulties of finding comparables or identifying separate transactions.

These issues inherent in the arm's length principle which already existed before the advent of ICT are nowadays accumulated to a great extent and raised in a new dimension.⁶¹⁵ As a consequence, the arm's length principle is further questioned in the age of ICT.⁶¹⁶ The more often these issues occur, the more important it gets to consider alternative approaches which can address and overcome these problems.⁶¹⁷ An alternative might consist in replacing the controversial separate entity approach by a consolidated tax base in combination with formula apportionment.⁶¹⁸

⁶¹² See also *Baron*, 2001a, pp. 8-10.

⁶¹³ For more details on the determination of the source of profits, see chapter 5.1.2. See also *Kleineidam*, 1999, p. 695, who states that the arm's length principle, applied to permanent establishments, cannot guarantee taxpayer equity.

⁶¹⁴ See *Li*, 2002, p. 835.

⁶¹⁵ See also *Horner / Owens*, 1996, p. 519; *Wichmann*, 1999, p. 194.

⁶¹⁶ See also *Oestreicher*, 2000, p. 26.

⁶¹⁷ See also *Musgrave*, 1972, pp. 403, 407; *ibid.*, 1984, p. 237; *Herzig*, 1998, p. 286.

⁶¹⁸ See the detailed discussion of this reform approach in chapter 7.3.2.

6.4. Taxation According to the Source Principle or the Residence Principle

6.4.1. Introduction

In general, two methods to avoid double taxation relying on two different principles of international taxation exist. Under the “source principle” as defined here, the foreign profits generated in the source country are finally taxed according to the valuations of the source country, since the income is exempted from taxation in the residence country. The source principle ensures capital import neutrality. Taxation pursuant to the “residence principle” as defined here means that the world-wide income is finally taxed according to the valuations of the residence country. Under the tax credit method, the foreign income is included in the taxable base in the residence country and taxes paid in the source country are credited against the tax due in the residence country. The residence principle together with the world-wide principle ensures capital export neutrality.⁶¹⁹

6.4.2. Discussion of the Two Principles in Light of the Evaluation Criteria

It is often brought forward in favour of the source principle providing capital import neutrality that under this approach, economic activities abroad will not be hindered and that, otherwise, the competition between companies acting on the same market would be distorted, since investors from high tax countries would be discriminated in the source country.⁶²⁰ Thus, a lower tax burden and possible further tax incentives provided by the source country should be preserved finally and should not be offset. This argument is of special importance for developing countries.⁶²¹ The source principle has further been based on the argument that all firms doing business in the source country have to be taxed equally, since they face the same competitive conditions. This argument is based on the assumption that all foreign and domestic investors operating in the source country *and* selling on the same market in the source country are competing with each other and must therefore face the same fiscal competitive environment.⁶²² However, exports from the source country to third countries or to the country of residence are not taken into account in this argumentation.⁶²³

⁶¹⁹ For more details on the two methods to avoid double taxation and the two theoretical principles behind, see chapter 3.4. and chapter 5.2.

⁶²⁰ Inter alia, see *Zeitler*, 1993, p. 956; *Hauser*, 1996, p. 50.

⁶²¹ See *Skaar*, 1991, pp. 573-574; *Hauser*, 1996, p. 51; *Scheffler*, 1996, p. 166. For a counterstatement, see *Homburg*, 2000, pp. 18-19; *Scheffler*, 2002, pp. 69-70, who argues that capital export neutrality prevents international undertaxation, since unjustified preferential tax treatments are offset in the residence country. A further argument in favour of capital import neutrality is that the final tax burden to be applied is independent of the relationship between the tax burden in the residence and in the source country. To some extent, it has also been argued that only the tax exemption method complies with the freedom of movement of labour and the idea of having a common market in the EU. For more details, see *Wattel*, 1996, pp. 161-162; *Dautzenberg*, 1997, p. 1358; *Kemmeren*, 2001, pp. 131-140.

⁶²² See *Musgrave*, 1987, p. 206; *Spengel*, 2003, p. 238.

⁶²³ For example, goods may be produced in the source country and then exported to the country of residence. Since the producing company then competes with businesses producing and selling in the country of residence, there is no neutral tax treatment of foreign and domestic producers operating on the same consumer market. The same

Moreover, the source principle is based on the assumption of spatially distinguishable economic consumer markets with different conditions. However, these assumptions underlying the competitive argument of the source principle are no longer entirely valid in light of the changed economic and organisational structure of companies and markets in the era of ICT and globalisation. Nowadays, with a substantial increase in cross-border trade, the location of production corresponds less often to the location of consumption. Since companies compete with one another on a world market rather than on a limited market in one jurisdiction, the distinction between different consumer markets cannot be upheld totally. Consequently, at least for today's competitive environment of multinational firms, the competition argument with regard to the source country inherent in the source principle is not a sound argument. Thus, this argument in favour of the source principle and capital import neutrality is less important these days.⁶²⁴ Moreover, also the assumption that different market conditions depend on different jurisdictions cannot be upheld entirely nowadays. For example, particularly within the internal market of the EU, the market conditions of at least several jurisdictions are comparable.⁶²⁵ To conclude, the two assumptions on the competitive environment underlying the source principle are in many cases no longer appropriate in today's competitive world of multinationals.

It is further argued in favour of the source principle and capital import neutrality that there is a link between the level of benefits provided by a jurisdiction and the level of national taxes.⁶²⁶ An investor would base his decision on both the level of such benefits and the level of taxation.⁶²⁷ Given this correlation, the source principle takes this relation into account, whereas taxation under the residence principle providing for capital export neutrality does not consider this correlation and is therefore not neutral with regard to investment decisions.⁶²⁸ The assumption that an investor takes into account the level of public benefits provided in a country is correct. Therefore, a general right to tax for the jurisdiction can be deduced from this fact, but it is debatable whether implications for the level of taxation can be deduced from this argument. Firstly, the country of residence also provides some public benefits to the company investing abroad, at least in the form of legal

issue arises if goods of a company producing in the source country and those of another company producing in the country of residence are both exported to the same third country. Again, businesses located in the country of residence compete with those established in the source country on a given consumer market but do not face the same fiscal treatment. See *Schreiber*, 1994, p. 241; *Brunsbach*, 2003, pp. 157-158.

⁶²⁴ See *Schreiber*, 1994, p. 241; *Jacobs* (Ed.), 2002, p. 32; *Spengel*, 2003, p. 239.

⁶²⁵ See *Devereux / Pearson*, 1989, pp. 18, 64; *Jacobs*, 1994, pp. 224-226; *Schreiber*, 1994, p. 241; *Scheffler*, 1996, p. 168.

⁶²⁶ For the following argumentation, see *Gandenberger*, 1983, pp. 25-26; *Vogel*, 1985, p. 27; *ibid.*, 1988, pp. 312-314.

⁶²⁷ See *Zuber*, 1991, p. 131.

⁶²⁸ Given this correlation, the residence principle either discriminates investments abroad if the benefits provided abroad are lower or promotes foreign investments if the benefits are higher. See *Spengel*, 2003, p. 242.

protection.⁶²⁹ Secondly, even if there seems to be a correlation between the provision of public benefits and the level of taxation, up to now, no clear empirical evidence for this correlation has been found.⁶³⁰ Furthermore, some categories of income can be realised independently of the provision of public benefits, such as interests. Thus, the validity of this argument supporting the source principle is limited.⁶³¹

When evaluating the economic effects of the two concepts, the majority of economists prefer production efficiency over consumption efficiency. Thus, capital export neutrality is favoured compared to capital import neutrality with regard to *allocation considerations*.⁶³² In light of the *taxpayer equity*, the only dimension to measure a taxpayer's ability to pay are his earnings.⁶³³ Consequently, the ability to pay of a taxable entity does not depend on the economic circumstances in a given jurisdiction and it does not make any difference for the ability to pay from which jurisdiction the revenues flow, since earnings of the same amount result in an ability to pay of exactly the same degree.⁶³⁴ Therefore, the basic argumentation of the source principle, i.e. that different economic structures lead to a different ability to pay, cannot be maintained.⁶³⁵ Furthermore, under feasibility considerations, it is much more practical for the residence

⁶²⁹ See *Musgrave*, 1969, p. 116; *Spengel*, 2003, p. 243, and the discussion in *Gandenberger*, 1983, p. 23.

⁶³⁰ See *Spengel*, 2003, p. 243 for further quotations, and also *OECD*, 1991, p. 41; *Scheffler*, 1996, p. 166. Furthermore, company taxes do not bear an equivalence for utility. See *Spengel*, 2003, p. 243. Moreover, it has been argued in favour of capital import neutrality that differing tax burdens in the source country and the residence country would – in addition to competitive disadvantages – lead to liquidity advantages or disadvantages, compared to taxation under capital import neutrality. See *Gandenberger*, 1983, p. 10; *Vogel*, 1988, p. 312; *Zuber*, 1991, pp. 128-129; *Fischer / Warnecke*, 1998, pp. 280-283. For higher liquidity outflows, the possibility of self-financing would be limited and thus the company's competitiveness would be impaired. This argument also applies if it is considered that the tax base does not represent the true economic profit of a company, but also includes cost elements, such as the interest on equity capital. See *Gandenberger*, 1983, pp. 12-15; *ibid.*, 1985, p. 44; *Zuber*, 1991, pp. 130-131. Whilst this is true, it may also be argued that these liquidity disparities could only be avoided under capital import neutrality if production and consumption take places within the same jurisdiction. For more details, see *Maiterth*, 2001, p. 212; *Spengel*, 2003, p. 242.

⁶³¹ See *Spengel*, 2003, p. 243 and also the discussion in *Zuber*, 1991, pp. 132-134; *Scheffler*, 1996, pp. 165-166; *Schreiber*, 1998a, p. 123; *Maiterth*, 2001, p. 225. It has further been argued against capital import neutrality that, since from an economic point of view the profits generated abroad are attributable to the parent company, an equal taxation of these profits in the source country is not reasonable. See *Brunsbach*, 2003, p. 158; *Homburg*, 2003, pp. 287-288.

⁶³² For a literature survey, see *Gandenberger*, 1983, pp. 4-6; *ibid.*, 1985, p. 43, and also *Richman*, 1963, pp. 125-126; *Musgrave*, 1969, p. 111; *ibid.*, 1987, p. 206; *ibid.*, 1992, pp. 181-182; *Bird / Wilkie*, 2000, p. 82; *Homburg*, 2000, pp. 14-17; *ibid.*, 2003, p. 287; *Spengel*, 2003, p. 230; *Devereux*, 2004, p. 81. This argumentation has also been based on the fact that international capital substitution, i.e. the elasticity of investment with respect to differences in after-tax rates of return, is higher than the relatively low inter-temporal substitution in consumption, i.e. the interest elasticity of saving. See *Tanzi*, 1995, p. 77; *Weichenrieder*, 1995, p. 80; *Advisory Council of the German Federal Ministry of Finance*, 1999, p. 94. For an overview of further arguments and quotations with regard to an efficient allocation in favour of capital import neutrality, see *Vogel*, 1984, pp. 47-48; *ibid.*, 1988, p. 222; *ibid.*, 1993, pp. 386-387.

⁶³³ For more details on the principle of taxpayer equity, see chapter 5.1.1.

⁶³⁴ See *Musgrave / Musgrave*, 1972, pp. 68-69; *Homburg*, 2003, p. 267..

⁶³⁵ A further issue with horizontal equity immanent to the source principle is the restricted loss offsetting. See *Jacobs* (Ed.), 2002, p. 306; *Homburg*, 2003, p. 268; *Spengel*, 2003, p. 320. As regards vertical equity, the application of the source principle is disadvantageous if a progressive income tax rate is deemed to be preferable.

jurisdiction to take the ability to pay of its residents into account than it is for the source country.⁶³⁶ Therefore, the residence principle can better guarantee a taxation in accordance with taxpayer equity than the source principle.⁶³⁷

A further argument in favour of the residence principle is that nowadays, jurisdictions rather provide social contributions than infrastructure, since the biggest part of the tax revenues are used for social contributions.⁶³⁸ Thus, a tax transfer system is considered as insurance and taxes are interpreted as an insurance premium. The insured person should be burdened with the premium of the jurisdiction from which he draws the fringe benefits. Since this is the residence country of the taxpayer, a taxation according to the residence principle should be favoured. In addition, a competition between various tax transfer systems can only function if the taxpayer is confronted with the benefits and costs of such a system, since only then, he can weigh up the advantages resulting from a higher social protection against the disadvantage of higher taxes.

Moreover, the source and the residence principle rely on the *tax attributes* in the source and the residence jurisdiction.⁶³⁹ Under the source principle, the tax attributes in the source country are relevant and, therefore, need to be clearly determinable. As analysed in chapter 4.2.2.1., chapter 4.2.3.1.1. and chapter 6.2., due to the changed economic structures, issues of determining the source and the amount of income for defining the tax attributes in the source country can arise.⁶⁴⁰ In general, these issues are also relevant under the residence principle, since the tax credit method relies on the amount of tax paid in the source country and creditable in the residence country,⁶⁴¹ but the final amount of tax due is not affected.⁶⁴²

In addition, the two principles have to be compared with regard to their *incentive compatibility* to shift profits abroad. Since the source principle provides for the final taxation according to the tax level of the source country, it enables the taxpayer to make use of tax advantages in the source

⁶³⁶ See Fohr, 2001, p. 80.

⁶³⁷ Coming to the same result, see Ault / Bradford, 1990, p. 41; Dautzenberg, 1997, pp. 1358-1359; Bird / Wilkie, 2000, p. 82; McLure Jr., 2000, p. 11 in the context of taxation of individuals; Fohr, 2001, pp. 72-73, 79-80; holding a different view, see Zuber, 1991, pp. 90-91; Schaumburg, 1995, pp. 131-133, and also Vogel, 1985, p. 26, who argues that the risk to generate profits abroad is higher than at home. Therefore, the profits generated abroad do not have to be treated in the same way as profits generated in the residence country.

⁶³⁸ For further details with regard to this argument, see Homburg, 2005, p. 21.

⁶³⁹ See also Bird / Wilkie, 2000, pp. 94-98, who argue that the "nexus" question is prior to the question of source or residence taxation.

⁶⁴⁰ See also Bird / Wilkie, 2000, p. 81; Homburg, 2000, p. 52; Spengel, 2003, pp. 325-326. A further administrative drawback of the source principle consists in the difficulty to allocate the expenses to the respective jurisdictions. For more details, see Spengel, 2003, p. 328. See also Kemmeren, 2001, pp. 536-554, who nevertheless argues in favour of a complete source-based taxation based on the assumption that only people can create income, and the comments thereon in Rädler, 2004, pp. 365-366.

⁶⁴¹ See also McLure Jr., 2000, pp. 12, 14.

⁶⁴² This is valid under the assumption of a tax credit method without limitations. However, given a limitation of the tax credit, the tax credit method approaches to capital import neutrality but differs with regard to the tax base since, for example, losses are set off. See Jacobs (Ed.), 2002, p. 48.

country such as a lower tax burden. Thus, the source principle itself entails the incentive to shift profits to lower-taxing countries in order to reduce the tax burden. In light of the increased mobility of businesses and the increased issues of determining the source of income in the era of ICT, it is debatable whether international taxation shall be based on a concept that is not neutral with regard to the place of investment.⁶⁴³ Also the identification of the company's residence may now be influenced with less effort by establishing a company's residence in a country with a lower tax burden as discussed in chapter 4.2.1. and chapter 6.1. Consequently, also the residence principle providing for a final taxation according to the tax level in the residence country gives the incentive to shift profits. However, due to several reasons, a relocation of residence is supposed to be not that frequent and not as easy as a relocation of source. Particularly with the re-definition of the company's residence as shown in chapter 7.1., a company's residence can be determined more easily than the source of income, since the latter is more mobile and more obscure.⁶⁴⁴ Thus, compared to the incentives provided under the source principle, the issues inherent in the residence principle are deemed to be less serious. To sum up, the residence principle is assumed to be less susceptible to profit shifting and more robust with regard to competition about mobile production factors.⁶⁴⁵

However, in practice, severe *feasibility issues* with regard to the implementation of the residence principle arise for income from foreign corporations. To avoid the shelter effect of foreign corporations, a current taxation with a general application of the tax credit method and a general add back taxation is necessary.⁶⁴⁶ Such a world-wide application of the tax credit method poses administrative problems, since it is deemed to be complicated and since it requires a high administration effort, particularly in the case of portfolio participations of natural persons.⁶⁴⁷ In addition, a general add back taxation is not in line with EU Law⁶⁴⁸ and can hardly be administered.⁶⁴⁹ Moreover, the residence principle requires a high level of control on the international level which is difficult particularly for interest income.⁶⁵⁰ Thus, it is debatable whether the necessary degree of co-ordination and the huge administrative effort can be realised in practice. Furthermore, the implementation of both principles has to be *enforceable on the political level* to

⁶⁴³ See also *United States Department of the Treasury*, 1996, p. 23; *Homburg*, 2000, pp. 51-52; *Jacobs* (Ed.), 2002, p. 311; *Spengel*, 2003, pp. 325-326.

⁶⁴⁴ See also *Advisory Council of the German Federal Ministry of Finance*, 1999, pp. 93-94; *Homburg*, 2000, p. 52; *Jacobs* (Ed.), 2002, p. 309; *Spengel*, 2003, pp. 324-326.

⁶⁴⁵ See also *Schreiber*, 1998, p. 54.

⁶⁴⁶ For more details, see chapter 5.2.

⁶⁴⁷ See *OECD*, 1991, p. 180; *Jacobs* (Ed.), 2002, p. 312, and for further details, see *Spengel*, 2003, pp. 234, 326-327; *Devereux*, 2004, pp. 82-83.

⁶⁴⁸ For more details and numerous quotations, see *Kessler / Spengel*, 2004, p. 7.

⁶⁴⁹ For more details, see *Spengel*, 2003, p. 234.

⁶⁵⁰ For more details, see *Spengel*, 2003, pp. 324-325.

reach a workable solution.⁶⁵¹ Since currently most of the European jurisdictions apply the tax exemption method, it is with regard to the political feasibility not likely that they will agree to implement the tax credit method.

6.4.3. Summary

From a theoretical point of view, the residence principle providing for capital export neutrality is favourable in light of allocation efficiency and taxpayer equity. In addition, the suitability of some assumptions underlying the source principle providing for capital import neutrality is restricted today. As regards the impact of ICT and the resulting organisational changes, the feasibility issues of determining the source and amount of income in the source country have a stronger impact on the source principle than on the residence principle. In addition, the residence principle is less susceptible to tax planning. However, it is debatable whether the residence principle can be implemented in practice in such a way that its effectiveness can be guaranteed. If a workable implementation of the residence principle cannot be realised, also its theoretical advantages cannot unfold their positive impact. In contrast, the implementation of the source principle can be administered easier.⁶⁵²

⁶⁵¹ See *Bird / Wilkie*, 2000, p. 105.

⁶⁵² See also the further discussion in chapter 7.4.

7. Reforming International Taxation

The objective of this chapter is to develop suitable reforms for the taxation issues analysed in chapter 6. Again, the tax attributes in the residence and in the source country, the profit allocation and the choice between the residence and the source principle are analysed. The respective reform proposals should be consistent with the evaluation criteria outlined in chapter 5.

7.1. Reforming the Criteria to Determine a Company's Residence

As elaborated in chapter 6.1., the main taxation issue in the context of taxation in the residence country consists in defining a company's residence. The criterion of the place of residence should provide legal certainty, should be workable in practice and a company's residence should not be located at a place where the company does not exert any economic activities.

With regard to the criterion of the place of management, the problem is that the place of management is defined as the place where the key management takes decisions of main importance for the company. However, given the changed organisational structures of companies and the increase in the use of ICT, a company's place of management may under certain circumstances be mobile, it may be different from the place of the main activities of the company and it may not be possible to pinpoint one most important place of management. These issues can be traced back to the fact that merely the place of decision-making is considered which is neither a permanent nor a clear-cut element today and which is not geographically related to the economic activities of the company. Furthermore, it seems to be inappropriate in today's organisational structure of groups that a place of management has to be determined for each legal entity.

The criterion of the place of management is used in several national laws and in the OECD Model as a tie-breaker rule for dual resident companies. The reform proposals discussed in the following are valid for both regulations. Possible reforms of the definition of a company's residence could consist in an adjustment of the criterion of the place of effective management – as a solution with the fewest changes to the current situation – or in a substitution of this criterion by another one. However, it is only reasonable to abandon the criterion of the place of management if other alternative criteria can be found which provide a more suitable way of determining a company's residence.

In the following, first of all, possible modifications of the criterion of the place of management itself are discussed. Second, alternative criteria to determine a company's residence are considered and it is questioned whether they should be preferred over the place of management criterion. In a third step, the possibility of introducing a hierarchy of tests as it is applied to natural persons is considered in more detail. Advanced reform approaches with regard to the taxation of groups of

companies and changes in the definition of the taxable subject are considered in chapter 7.3.2.

7.1.1. Refinement of the Place of Management Definition

As regards the possibility of a refinement of the place of management definition, it is debatable whether the criterion of the place of management with some modifications is deemed to be in general suitable in the age of ICT or whether this criterion of the place of decision-making should be abandoned completely because it is considered to be no longer workable. As analysed in chapter 6.1., there are still a lot of situations in which a company's place of management can be determined. In addition, it still seems reasonable to determine a company's residence according to where the company is effectively managed and where the central management is located. Thus, since the management function still exists for every company also in the age of ICT, the criterion does not have to be discarded completely from the outset, but still constitutes in principle a reasonable approach to define a company's residence.⁶⁵³ However, it is debatable whether and how the aforementioned issues inherent to the place of management can be solved.

In order to analyse whether a refinement of the definition of the place of management could deal with the issues outlined above, in a first step, the identification of the most relevant person or group of persons responsible for the management is considered. As shown in chapter 6.1.1., with the operational structure differing from the statutory structure, the most senior manager may not be a director at the head office managing the subsidiary's business operations, but it may be a manager or a group of managers of a division the subsidiary belongs to according to the operational structure of the group. Therefore, the search for the most senior manager or group of managers should be based on the operational structure of the company in order to identify the relevant managers.⁶⁵⁴ Here, a substance-over-form approach is to be applied, meaning that the person or group of persons who takes the decisions in substance is relevant and not those persons who formally finalise them.⁶⁵⁵ This substance-over-form approach is already stipulated in paragraph 24 of the Commentary on Article 4 of the OECD Model where the place of management is defined as the

⁶⁵³ See *Brunsbach*, 2003, p. 214.

⁶⁵⁴ See *Michel*, 2001, p. 247; *Brunsbach*, 2003, p. 213.

⁶⁵⁵ For the proposal of refining the place of management definition in the OECD Model by replacing paragraph 24 of the Commentary on Article 4 of the OECD Model, see *OECD*, 2003a, section 7. One example considered is a board of directors formally finalising in its meetings the relevant decisions which are in substance made in another country. In this case, the latter country should be the place of management. In addition, it is conceivable that a controlling interest holder such as a parent company or an associated enterprise effectively makes the key management and business decisions instead of the board of directors of the company and should therefore be considered as the relevant person or group of persons. A third scenario considered is a board of directors routinely approving the decisions made by the executive officers. Here, the latter would be the relevant persons for determining the place of management, since they considered the decisions and ultimately developed them. For commentaries on these proposals, see *Hinneken*, 2003, pp. 316-317, who discusses the effectiveness and practical usefulness of this fine-tuning approach.

place where the decisions are in substance made.⁶⁵⁶ Even if it may nowadays be more difficult to identify the relevant senior managers, since there are more persons to be considered, it seems that if the real operational structure of a company is taken as a basis, it is in most cases possible to identify the most senior manager or group of managers also in the case of the changed business structures.⁶⁵⁷ Consequently, even if the application of this substance-over-form approach may sometimes be complex, it is assumed to provide reasonable results and shall not be manipulated easily.

Once the most senior persons responsible for the decision-making are identified, in addition, the issues regarding the place of the decision-making have to be solved. First of all, there is the problem that one cannot determine one single permanent place of decision-making, i.e. that the place may be mobile or that there may not be one single place of management, since the managers do not meet while taking their decisions.⁶⁵⁸ It should be kept in mind that these cases are rather seldom, since already nowadays, a weighting according to the geographical location and according to the persons responsible for management is necessary to determine the one single most important place of management.⁶⁵⁹ For example, in the case of a mobile place of management, no single jurisdiction would be identifiable where decisions are taken more often than in other ones.

In order to address the issue related to mainly focussing on the place of decision-making, in a refinement of the place of management, other facts and circumstances with regard to the fulfilment of the management task should be taken into account. For example, in the case of a mobile place of management, it is possible that rather static criteria such as the physical location of the headquarter, the functions performed and influence exerted at the headquarter, the location of the company's central management and control according to the memorandum of association or the residence of the key managers might provide a more clear-cut definition of the place of management.⁶⁶⁰ This refinement of the place of management could explicitly be included in the Commentary on Article 4 of the OECD Model where it is already stipulated in paragraph 24 that all relevant facts and circumstances should be taken into account in order to determine the place of management.⁶⁶¹ In so

⁶⁵⁶ Holding the same view, see *Burgstaller / Haslinger*, 2004, pp. 383-384.

⁶⁵⁷ When weighting the different functions performed and responsibilities assumed as outlined in chapter 6.1.1., an identification of the most relevant person or group of persons is assumed to be possible. For further details on management offices representing a permanent establishment, see also footnote 722.

⁶⁵⁸ However, to determine a company's residence, it is necessary to find one single most important place of management. Thus, the judgement of the German Supreme Tax Court which states that a company can have several places of effective management does not really provide a solution for determining a company's residence. For further details, see footnote 145.

⁶⁵⁹ As regards the geographical weighting, see also the analysis in chapter 6.1.2.

⁶⁶⁰ See also *OECD*, 2001c, section 64.

⁶⁶¹ Although the OECD has suggested these factors among others for a refinement in 2001, the refinement approaches proposed in 2003 do not include these factors but focus on clarifying the criterion of decision-making. See footnote 655, and *Hinnekens*, 2003, p. 319. The place of the location where the senior management takes its decisions which is often the headquarter is proposed as a second option in a hierarchy of tests. For more details,

doing, the basic idea that the place of management should be located where the company is managed is maintained. In addition, this solution is deemed to be feasible in practice and shall not be circumvented easily, since the determination of residence is based on several matters of facts. Given that even when considering all these relevant facts and circumstances regarding the management of a company in a refinement of the place of management definition no clear-cut determination of residence is possible, it would be necessary to add a further criterion to the place of decision-making as discussed in chapter 7.1.3. below.

Once rules are found to identify one single place of management, the issue still exists that this place might not coincide with the place of the *company's main activities*. To ensure that the place of decision-making is located at a place where the company's activities take place, a solution might be to add the condition that the company really has to exert a certain degree of economic activities at the place where it is resident.⁶⁶² In so doing, the issue that the place of management could be located in a jurisdiction where the company does not exert any activities could be prevented. However, it has to be noted that the need to define the required extent and the nature of economic activities constitutes a disadvantage inherent in this approach with regard to its feasibility in practice. Thus, if the application of the criterion of the place of management results in a definition of residence in a jurisdiction where the company does not exert any activity, it would be necessary to consider alternative criteria.⁶⁶³ In the following chapters, alternative criteria and the implementation of a hierarchy of tests are analysed.

To conclude, the issues regarding a mobile place of management and that no place of management can be determined at all are deemed to be resolvable with the reform approaches outlined above in the majority of cases. Thus, the criterion of the place of management is for many situations supposed to still be applicable in the age of ICT with the modifications mentioned above which could be included in the Commentary on Article 4 of the OECD Model. In those exceptional cases in which a determination of the place of management is not possible, alternative criteria would be necessary. Beyond, the fact that the place of management may often not coincide with the main economic activities cannot always be solved in a satisfying way. These issues often occur in the range of affiliated groups and are largely due to the fact that each legal company is considered a taxable entity. Thus, further reform approaches might be helpful with regard to the definition of a taxable entity.⁶⁶⁴

see chapter 7.1.3.

⁶⁶² For a similar approach, see *Breuninger / Krüger*, 1999, p. 112; *Brunsbach*, 2003, p. 217.

⁶⁶³ See also *Brunsbach*, 2003, p. 218.

⁶⁶⁴ See the proposal of a consolidated and apportionment approach in chapter 7.3.1.

7.1.2. Alternative Criteria

Even if the criterion of the place of management is considered to still be applicable in many cases in the age of ICT, it is worth considering alternative criteria in order to find out whether a replacement by other criteria might be preferable in terms of feasibility or with regard to the residence country's jurisdiction to tax in accordance with the benefit principle. Subsequently, legal criteria, the residence of the managers or the shareholders and the economic nexus are discussed with regard to their suitability as replacing criteria.

A substitution of the economic criterion of the place of management by a *legal criterion* such as the statutory seat or the place of incorporation would imply that legal criteria constitute the sole criterion for determining a company's residence instead of being applied as a second criterion in addition to the economic one.⁶⁶⁵ The main advantage of such legal criteria is that they are easily verifiable and therefore provide certainty with regard to the determination of the place of residence.⁶⁶⁶ Administration and compliance costs with regard to the incorporation would then be minimised.⁶⁶⁷ However, these approaches are rather artificial as – in the case of a definition of residence based solely on these criteria – the residence is determined without considering the effective place of the activities performed by the company. Consequently, the place of incorporation or of the statutory seat can differ completely from the centre of the company's operations which is not consistent with the concept of the residence country's jurisdiction to tax according to the benefit principle.⁶⁶⁸ Therefore, even if under feasibility considerations the legal criteria have some advantages, a determination of the residence solely based on these criteria cannot be recommended due to the results differing from the economic reality and the risk of manipulation.⁶⁶⁹

A further suggestion is to base the residence of a company on the *residence of the key managers or directors*.⁶⁷⁰ This proposal rests on the assumption that the residence of a natural person is easier verifiable and not as mobile as the one of a legal person.⁶⁷¹ As mentioned above, it can be reasonable to consider this rather stable criterion among others in the context of a refinement of the place of management, since it may in certain cases provide a more stable definition, for example in

⁶⁶⁵ For details on the criteria for determining a company's residence, see chapter 3.2.1. above.

⁶⁶⁶ See also *Peter*, 2002, p. 262.

⁶⁶⁷ See *OECD*, 2001c, section 51. However, the costs of preventing manipulation should not be underestimated. If only a legal criterion is applied, it can be manipulated easily since the company may choose to be incorporated or to have its statutory seat in the country with the most favourable tax system just by a legal act, without establishing any physical presence there.

⁶⁶⁸ See also chapters 3.2.1. and 6.1.3. and *Avi-Yonah*, 1997, pp. 527-528; *Doernberg / Hinnekens / Hellerstein / Li*, 2001, p. 302.

⁶⁶⁹ See also *Bernütz / Weinreich*, 2001, p. 700 and the discussion in *OECD*, 2001c, sections 52-57.

⁶⁷⁰ See *Doernberg / Hinnekens / Hellerstein / Li*, 2001, p. 372.

⁶⁷¹ See *Hinneken*, 1998, p. 66.

the case of a mobile place of decision-making. However, if the company's residence cannot be defined according to the criterion of the place of management, it is probably also impossible to identify it according to the managers' residence. Given the example that the managers do not meet physically in order to take their decisions but communicate via ICT, this phenomenon is partially just due to the fact that the managers work and reside in different countries. Thus, the criterion of their residence would not necessarily provide an easier or more workable definition of the company's residence than the place of management. In addition, it has to be noted that in certain cases the criterion of the managers' residence does not necessarily lead to a determination of the residence in accordance with the economic activities of a company. Therefore, it is not assumed to be reasonable to base the determination of a company's residence solely on the residence of the key managers or directors, since this criterion cannot provide a more clear-cut solution than the criterion of the place of management.

A further proposal is to base the residence of a company on the *residence of its shareholders*, meaning that the company's residence is located in the jurisdiction where the biggest portion of the shares is held by the residents.⁶⁷² This approach is based on the idea that, finally, a corporation is nothing more than a network of contractual relationships between natural persons, among them the shareholders who ultimately own the company. In the case of a subsidiary belonging to a multinational group, the subsidiary's residence would in general be located at the place of the head office. In those cases in which the main shareholder also takes the main decisions of the subsidiary, this rule provides for similar results as the approach of the place of management. Apart from these cases, the shareholders often reside in many different jurisdictions and especially the private shareholders' residence may often be unknown.⁶⁷³ Thus, this criterion is not always feasible and might lead to results that are not consistent with the determination of a company's residence according to the benefit principle. Consequently, it seems that a company's residence can better be determined according to the place of management and a replacement of this criterion by the residence of the shareholders is not reasonable.

Another possibility consists in determining a company's residence according to the place where the *economic nexus* is the strongest, i.e. where the company has the closest economic relations according to all facts and circumstances.⁶⁷⁴ First of all, the location of the factors of production is relevant. One factor to be considered is the country in which the entity has most of its employees,

⁶⁷² See Doernberg / Hinnekens / Hellerstein / Li, 2001, p. 372; OECD, 2001c, section 58. See Rivier, 1987, p. 57, who gives the examples of Australian and Swedish tax law taking this criterion into account.

⁶⁷³ For example, a publicly-traded corporation would be resident where it is traded. However, this might lead to ambiguous results, especially in the case of global trading.

⁶⁷⁴ See Doernberg / Hinnekens / Hellerstein / Li, 2001, p. 374; OECD, 2001c, section 59.

since the human capital becomes more and more important for the generation of a company's profits. In addition, another factor of production to be considered is the location of a company's assets. Also intangible assets should be taken into account, as they constitute another decisive element of the generation of profits for a company. However, it is often rather difficult to determine the location of intangibles.⁶⁷⁵ Furthermore, the location where the company carries on most of its activities should be considered. This factor can be determined on the basis of a functional analysis in order to specify in which country the functions performed by the company are most important.⁶⁷⁶ As regards the suitability of the criterion of the economic nexus, as outlined above it is useful to consider this criterion additionally when determining the place of management in order to prevent those special cases in which the company does not exert any business activities at its place of management. When considering a complete replacement of the place of management by the criterion of the economic nexus, it could be guaranteed that the company's residence is not located in a jurisdiction where no activity of the company takes place. This outcome would be consistent with the benefit principle to determine the residence country's jurisdiction to tax. However, as indicated above, the choice and definition of the factors in practice might raise feasibility problems.⁶⁷⁷ Thus, it is doubtful that this rule is feasible in practice as the main criterion to determine a company's residence. In addition, the concept of economic nexus rather serves as the underlying rationale for source taxation.⁶⁷⁸ Thus, it seems to be more suitable for residence taxation to identify the jurisdiction where the main operative management of the company is located rather than where the main activities are exerted. To conclude, in the special cases outlined above it seems reasonable to consider the economic nexus within the place of management rule. However, a mere application of the economic nexus rule seems to be less feasible than the place of management rule and the underlying rationale is less appropriate for residence taxation.

To sum up, it has turned out that none of the alternative criteria discussed here can be favoured over the criterion of the place of management as the main criterion to determine a company's residence. Therefore the place of management shall persist and, in the following, the alternative criteria are

⁶⁷⁵ For the localisation and valuation of intangibles in the context of formula apportionment, see chapter 7.3.2.4.2.

⁶⁷⁶ Further factors proposed by the OECD to determine the company's closest economic relations are the country in which the company derives most of its revenues. See also *Hinneken*, 2003, p. 317. This factor is not considered here, since it is assumed that it is less suitable to represent the economic nexus than the company's factors of production and the functions performed. Moreover, the factor of the headquarter is not considered, since it is deemed to be already included in the context of the criterion of the place of effective management. Moreover, the company's legal status does not necessarily represent the entity's economic relations and should rather be considered as the third rule in a hierarchy of tests.

⁶⁷⁷ See also *OECD*, 2001c, section 61.

⁶⁷⁸ See also the discussion in *OECD*, 2001c, section 60 and *Baron*, 2001, p. 7, who assumes that an implementation of this criterion could lead to an interesting re-formulation of the whole basis for allocating taxing rights and, furthermore, would render residence taxation redundant since it would merely constitute a second layer of taxation levied on the basis of the same rationale as source taxation.

assessed with regard to their applicability in a hierarchy of tests in addition to the criterion of the place of management.

7.1.3. A Hierarchy of Tests to Identify a Company's Residence

In order to provide a clear-cut and unambiguous definition of a company's residence, it is for both domestic law and the OECD Model necessary to consider further criteria if the residence of a company cannot be determined definitely according to the criterion of the place of management. Here, for both domestic law and the OECD Model, a hierarchy of tests would be a suitable approach.⁶⁷⁹ This proposal has first been put forward by the OECD in order to implement a rule equivalent to the one for individuals in paragraph 2 of Article 4 of the OECD Model.⁶⁸⁰

Since the refined criterion of the place of management is still applicable and can in most cases provide a determination of the country of residence, it shall persist as the first criterion in the hierarchy. As a second criterion, it is considered to be useful to include a criterion taking into account the economic activities of the company.⁶⁸¹ Here, the criterion of the economic nexus as outlined above, i.e. the place where the company has the closest economic relations to, should be applied. This criterion can guarantee a determination of residence in accordance with the economic reality and with the objective of specifying the residence country's jurisdiction to tax according to the benefit principle. Such a criterion of the company's closest economic relations including all relevant facts and circumstances determined by factors such as the location of the employees, the assets or the main functions and activities of the company can provide a definition of a company's residence in the majority of cases in which the residence cannot be determined according to the place of effective management. Thus, the criterion of the company's closest economic relations is deemed to be suitable as a second criterion in the hierarchy of tests. As a third rule, it is reasonable

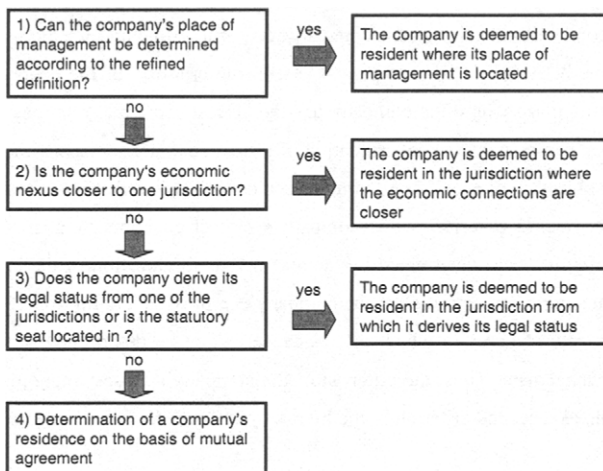
⁶⁷⁹ The alternative suggestion to consider different factors in a formula, such as the residence of managers, shareholders and employees, the place of the company's property and of incorporation, is not preferred. See *Doernberg / Hinnekens / Hellerstein / Li*, 2001, pp. 372-373.

⁶⁸⁰ See *OECD*, 2001c, sections 69-72.

⁶⁸¹ See also *Hinneken*, 2003, p. 317; *Burgstaller / Haslinger*, 2004, p. 385. For the proposal of two options for a new paragraph 24.2 of the Commentary on Article 4 of the OECD Model, see *OECD*, 2003a, section 9. Additionally, it has been proposed by the OECD as a further option to consider the place at which the clear majority of senior executive decisions are taken which will usually be the jurisdiction where the headquarters of the company are primarily located. With the refinement of the place of management as outlined above – particularly the fact of weighting the geographical locations and the functions performed, the consideration of the operational structure and the consideration of the physical headquarter – this criterion is not deemed to be suitable as a second criterion in a hierarchical test, since it does not lead to a more clear-cut solution than the criterion of the place of management and therefore does not provide any more guidance for determining a company's residence. However, since it has been outlined above that it is necessary to extend the place of management definition to other facts and circumstances besides the mere decision-making by including among others the place of the headquarter, this option proposed by the OECD is partly already considered in the refinement of the place of effective management. See chapter 7.1.1. above.

to consider a legal criterion, i.e. the place of incorporation.⁶⁸² The application of such a legal criterion can provide certainty and is therefore reasonable as a criterion in the hierarchy of tests. As a last resort, the OECD has proposed to settle the question of a company's residence by *mutual agreement* between the jurisdictions concerned.⁶⁸³ Even though according to Article 25 of the OECD Model the initiation of a Mutual Agreement Procedure is already possible, the inclusion of this procedure clarifies this option.⁶⁸⁴ Thus, in the end, it is expected that this hierarchy of tests finally provides a clear-cut determination of a company's residence. As in the case of the hierarchy of tests for individuals, the hierarchy of tests for determining a company's residence should be included directly in Article 4 section 3 of the OECD Model. Such a hierarchy of test could be formulated as shown in the following table.

Figure 7.1: A Hierarchy of Tests to Identify a Company's Residence



7.1.4. Summary

To conclude, also in the age of ICT, the place of management is still a suitable criterion to define a company's residence for both domestic law and the OECD Model since the management function

⁶⁸² For more details on the application of legal criteria in domestic laws depending on the underlying theory in corporate law, see chapter 3.2.1. See also the proposal for a new paragraph 24.3 of the Commentary on Article 4 of the OECD Model in *OECD*, 2003a, section 9.

⁶⁸³ See also the proposal for a new paragraph 24.4 of the Commentary on Article 4 of the OECD Model in *OECD*, 2003a, section 9.

⁶⁸⁴ See also the discussion in *Hinneken*, 2003, p. 318; *Burgstaller / Haslinger*, 2004, p. 386, who point out the problems inherent in the Mutual Agreement Procedure, such as the long duration and the missing obligation to settle the question. Here, the EU Tax Arbitration Convention or, in the long run, a European Double Tax Convention might be a suitable means. See also chapter 6.3.1.1.6.

as such still exists and constitutes a suitable basis for determining a company's residence. However, a refinement of this criterion is necessary in order to ensure that the most important place of management can be determined in the majority of cases. To identify the persons relevant to the management, a substance-over-form approach is recommended. Based thereon, for the determination of the place of management, other facts and circumstances should be considered beyond the mere decision-making, such as the place of the headquarter or even the residence of the key managers. To avoid that this place is located in a jurisdiction where the company exerts no activities at all, it is useful to include the condition that the company exerts economic activities at the place of management.

When considering alternative criteria for the determination of residence, it turned out that none of these criteria are advantageous compared to the place of management. Thus, for those rare cases in which the criterion of the place of management does not lead to a clear-cut solution, further criteria are necessary which should be considered in a hierarchy of tests. For both domestic law and the OECD Model, the introduction of a hierarchy of tests consisting of the place of management, the economic nexus, the place of incorporation and the final settlement by mutual agreement is deemed to provide a clear-cut solution in the end. However, it is still in principle debatable whether the definition of the taxable entity should be changed.⁶⁸⁵

7.2. A Reform of the Permanent Establishment Definition

On the basis of the issues inherent in the permanent establishment definition outlined in chapter 6.2., subsequently, different possible approaches to reform taxation in the source country are outlined and assessed on the basis of the evaluation criteria to develop a permanent establishment definition that is consistent with these criteria. The analysis is again made for the different economic changes. The evaluation criteria to be considered are the inter-nation equity, the neutrality and feasibility.

7.2.1. Internal Organisation

7.2.1.1. Fragmentation of Business

As outlined in chapter 6.2.2.1., the fragmentation of business entails in certain cases a taxation that is not consistent with inter-nation equity and neutrality. The current paragraph 4 of Article 5 of the OECD Model does not always guarantee that exactly a company's preparatory and auxiliary activities are exempted from taxation in the source country, since possibly, significant profits may

⁶⁸⁵ For further quotations and more details on the discussion of a consolidation and apportionment approach, see chapter 7.3.2.2.1.

be attributed to the activities excluded. In addition, differing tax consequences result depending on whether the activities are performed in one or in several locations. Even though these issues already existed before, they are reinforced to a certain extent in the age of ICT. Subsequently, several reform proposals are discussed and assessed on the basis of the evaluation criteria.

7.2.1.1.1. Elimination of the Threshold Inherent in the Business Activity Test

To cope with the issues of tax planning by a fragmentation of functions, one suggestion was to eliminate all the exceptions in paragraph 4 of Article 5 of the OECD Model, i.e. to abolish the threshold inherent in the business activity test.⁶⁸⁶ This approach implies that even if only preparatory or auxiliary activities are exerted in a country, a permanent establishment exists. This modification is in line with *inter-nation equity*, since it allows a country to tax all profits having their source within the jurisdiction. However, as stated above, an exemption for preparatory and auxiliary activities is deemed to be justifiable in light of *inter-nation equity*.⁶⁸⁷ In addition, a complete elimination of the exemption rule guarantees a *neutral and equitable taxation*, since no distinction is made depending on whether the activities are exerted at one place or not.⁶⁸⁸ However, under feasibility considerations, the proposal of eliminating all the exceptions in paragraph 4 of Article 5 of the OECD Model is assumed to entail a too high *administrative burden* for both the tax administration and the taxpayer, in particular since it would have to be applied to all kind of business. Additionally, international trade would be impaired.⁶⁸⁹ Moreover, although the taxation issues with regard to a fragmentation of businesses could be solved by introducing this reform proposal, the problems would be shifted from finding out whether or not a permanent establishment exists according to international tax law to the issue of attributing profits to a permanent establishment exerting only a very small amount of activities. Therefore, this reform proposal is not favoured.

7.2.1.1.2. Preparatory or Auxiliary Activities as the only Exemption Rule

An alternative reform proposal is to eliminate all the exceptions explicitly mentioned in subparagraphs 4 a) to 4 d) and 4 f) of Article 5 of the OECD Model. Thus, the only rule that would persist is the threshold in subparagraph 4 e) with the explicit exemption of preparatory and auxiliary activities.⁶⁹⁰ With this reform approach, it can be guaranteed that really only preparatory and

⁶⁸⁶ See the discussion in *OECD*, 2003, section 176, 178.

⁶⁸⁷ See chapter 6.2.2.1.2.

⁶⁸⁸ See also *OECD*, 2003, section 183.

⁶⁸⁹ This argument particularly holds for the OECD Model, since – in contrast to domestic tax codes – the avoidance of impairing international trade is the underlying aim of the OECD Model. See also the discussion of the business activity test in chapter 6.2.1.1.

⁶⁹⁰ A reform proposal by the OECD based on the same intention is to subject all activities in one country to the

auxiliary activities are exempted from the permanent establishment definition. Thus, the threshold for the business activity test is more clear-cut.⁶⁹¹ In addition, this threshold can be justified by reasons such as practicability and the facilitation of international trade. As mentioned above, such a deviation from the business activity test can reasonably be tolerated with regard to the sharing of the international tax base. Since this reform proposal ensures that exactly preparatory and auxiliary activities are exempted, it is in accordance with *inter-nation equity* based on the supply approach.⁶⁹² Certainly, it has to be defined whether the activities are preparatory or not. This may create uncertainties particularly regarding the new technologies. However, these issues can be solved on the basis of some precedents. Already before the advent of ICT, this question had to be decided on a case-by-case basis in the end according to the guidelines provided in paragraphs 21 to 30 of the Commentary on Article 5 of the OECD Model and the respective interpretations.⁶⁹³ In 2003, special ICT-related provisions and examples were introduced in paragraphs 42.7 to 42.9 of the Commentary on Article 5 of the OECD Model. Altogether, these rules constitute a useful basis, since they include examples in which an activity is deemed to be preparatory or auxiliary and in which the scope of activities exceeds this threshold. In contrast, the current exemptions of specific activities in paragraph 4 of Article 5 of the OECD Model do not constitute a feasible basis for this decision. As mentioned above, they do not necessarily represent preparatory or auxiliary activities and it would have to be clarified whether the activities mentioned and some notions are applicable in an appropriate way to business activities in the age of ICT.⁶⁹⁴ A further advantage of this reform proposal compared to the one outlined before is that issues of determining the profits attributable to a permanent establishment exerting only preparatory or auxiliary functions can be avoided.⁶⁹⁵ Thus, the proposal of maintaining the preparatory and auxiliary threshold is in this regard more feasible.

To conclude, it is considered to be suitable in the age of ICT to reduce the exceptions to the

overall condition that they are auxiliary or preparatory. See *OECD*, 2003, section 177. This rule may perhaps already implicitly be applicable according to the last sentence of paragraph 21 of the Commentary on Article 5 of the OECD Model. See *OECD*, 2003, section 188. Additionally, it has been proposed to eliminate the exception of storage, display and delivery based on the argumentation that there might be reasonably significant profits attributable to the activities in question and a permanent establishment could be avoided by taking advantage of this exception. For further details, see *OECD*, 2003, sections 196-212.

⁶⁹¹ For example, already now, the exceptions in subparagraphs 4 b) and 4 c) of Article 5 of the OECD Model are rather declaratory according to the prevailing opinion, since in those cases the requirements for a permanent establishment according to the basic rule are not fulfilled. See *Utescher*, 1999, p. 115 for further quotations.

⁶⁹² See also *Storck*, 1980, p. 152, who argues that the requirement of a certain minimum threshold can be justified by neutrality arguments, i.e. that an equal treatment of permanent establishments and resident companies can only be justified if the activities performed in the source country reach a certain minimum degree.

⁶⁹³ For more details on the interpretation of these rules, see the discussion of the business activity test in chapter 6.2.1.1., i.e. whether the activities constitute a significant part of the company's activities in both quantitative and qualitative respects.

⁶⁹⁴ See *OECD*, 2003, sections 197-198, 201. For more details, see footnote 497.

⁶⁹⁵ In the end, with regard to feasibility, a decision between the first and the second proposal is mainly a decision between the issue of determining the attributable amount of profits and the issue of delimiting preparatory or auxiliary activities.

business activity test insofar as really only preparatory and auxiliary activities should fall under this rule. When comparing this approach to the complete elimination of all exemptions as discussed in the precedent chapter, the maintenance of the exemption rule is preferable, in particular under feasibility considerations.

7.2.1.1.3. Modifying the Business Connection Test by Adding a Force-of-Attraction Rule

7.2.1.1.3.1 Formulation of a Reform Proposal

As outlined in chapter 6.2.2.1., with the fragmented business structure, there may be cases in which the current tax system is not neutral with regard to whether the activities are performed at one place or at different places. Certainly, these taxation issues will diminish insofar as they are deemed to occur less often and to a minor extent if the reform approach mentioned in the precedent chapter is implemented, but still then, such scenarios are possible. It is therefore debatable whether the requirement of an organisational and geographical entity for a permanent establishment shall still be upheld. One way to eliminate this requirement is to modify the business connection test by introducing a force-of-attraction rule. Under this rule, the requirement of a geographical coherence is given up insofar as business profits realised in a source country in which already a permanent establishment exists are attributed to this permanent establishment.⁶⁹⁶ Dependent on whether the organisational entity is abolished additionally, this rule can either be applied to all kind of profits realised in the source country or only to those profits resulting from related business activities. A force-of-attraction rule for activities of the same or similar kind is already implemented in paragraph 1 of Article 7 of the UN Model.⁶⁹⁷ In contrast, according to the Commentary on Article 7 of the OECD Model, the source country only has a taxing right for those profits generated through a permanent establishment and not for all the company's profits generated within its jurisdiction once a permanent establishment exists.⁶⁹⁸

⁶⁹⁶ See also *Skaar*, 1991, pp. 328-332 for examples of national jurisprudence supporting such force-of-attraction rules. Additionally, it has been discussed by the OECD that profits derived from sales or other business activities carried on in another country through a web site shall be deemed to be attributable to the permanent establishment. The proposal is based on the assumption that e-commerce often leads to a co-existence between a physical presence and a web site which are clearly interrelated. See *OECD*, 2003, sections 213-231. However, it is consistent with the currently international consensus based on the supply approach that remote selling does not entail taxation. Thus, an increase in remote selling is not considered as an argument in favour of a force-of-attraction rule here.

⁶⁹⁷ In practice, this rule is only implemented in a minority of bilateral tax treaties. See *OECD*, 2003, section 230. In 1999, 5 of the 48 tax treaties that have been negotiated by the United States adopted restricted force-of-attraction rules for business profits. Another five treaties have adopted a force-of-attraction rule that goes beyond the one set out in the UN Model. See *Cockfield*, 1999, pp. 207-208.

⁶⁹⁸ Thus, the different sources of profits have to be considered separately when deciding whether a permanent establishment exists. This approach has been confirmed in the OECD working hypothesis for attributing profits to a permanent establishment. See *OECD*, 2001b, sections 13, 22; *OECD*, 2004, sections 10, 19. For more details on this hypothesis, see chapter 3.3.3. For a discussion of both approaches, see paragraph 5 of the Commentary on Article 7 of the OECD Model.

7.2.1.1.3.2 Evaluation in Light of the Evaluation Criteria

The implementation of a force-of-attraction rule is subsequently discussed in light of the evaluation criteria. As regards the criterion of *inter-nation equity* based on the supply approach which is favoured here, a mere consumer market does not entail a company's right to tax the profits. Thus, from this point of view, the introduction of a force-of-attraction rule under which also activities of doing direct business are taxed cannot be supported.⁶⁹⁹

As regards the requirement of *neutrality*, the reform proposal provides for a taxation that does not differentiate between business activities performed at the same place or not. Consequently, the reform approach is more neutral in this regard.⁷⁰⁰ However, issues of non-neutrality compared to preparatory or auxiliary activities in a country without an additional physical permanent establishment arise, since these activities fall under the general exemption for preparatory or auxiliary activities. Furthermore, another serious issue of the proposed force-of-attraction rule for permanent establishments is that it is not neutral compared to subsidiaries.⁷⁰¹ Thus, even if some issues can be resolved, other neutrality problems are created.

Moreover, as regards *feasibility considerations*, the introduction of a force-of-attraction rule imposes an additional administrative burden on companies and tax administrations, since it is necessary to track sales to any country where a permanent establishment exists.⁷⁰² In addition, investments may be discouraged and the international trade may be impaired, since the mere activity of doing direct business is taxed if a company disposes of a permanent establishment in the source country. In contrast, it can be argued in favour of the force-of-attraction rule that it can prevent tax planning strategies such as splitting off some activities or completely avoiding a permanent establishment by doing direct business.⁷⁰³ Thus, a restricted force-of-attraction rule might be suitable as an anti-abuse rule.⁷⁰⁴ However, a general implementation of the force-of-

⁶⁹⁹ The implementation of a force-of-attraction rule can be justified under the supply-demand approach and would have in a way the same effect as the inclusion of the demand-factor in a formula to apportion profits. For more details, see chapter 7.3.2.4.3. It has also been discussed whether the implementation of a force-of-attraction rule can be justified under the supply approach interpreted as a pure nexus rule and not as an administrative threshold. For further details, see *OECD*, 2003, sections 219-220.

⁷⁰⁰ See also *Skaar*, 1991, p. 333; *OECD*, 2003, section 221.

⁷⁰¹ For more details, see *OECD*, 2003, sections 221, 226-227.

⁷⁰² See also paragraph 8 of the Commentary on Article 7 of the OECD Model. For counter-arguments, see *OECD*, 2003, section 223.

⁷⁰³ See also paragraphs 7 and 9 of the Commentary on Article 7 of the OECD Model. For further details on tax planning strategies, see chapter 4.2.3.1.2.

⁷⁰⁴ See also *Jacobs* (Ed.), 2002, p. 485. The tax planning strategy of splitting one integrative business operation into several activities to assert that each of the activities is preparatory or auxiliary is explicitly mentioned in paragraph 27.1 of the Commentary on Article 5 of the OECD Model. For a discussion of this new paragraph, see also *Caridi*, 2003, pp. 41-42.

attraction approach is not favoured due to the aforementioned issues inherent in this approach.⁷⁰⁵

7.2.1.2. Telecommuting: Employees Working Distantly from the Company

7.2.1.2.1. Formulation of a Reform Proposal

As elaborated in chapter 6.2.2.2., the current definition of a permanent establishment raises issues in several respects when considering employees working distantly from the company's premises. A certain amount of a company's value added can be created by employees working abroad under the authority of the company without a company's physical presence established there. In those cases, no taxation takes place under the current permanent establishment rule, which has turned out to be inconsistent with the evaluation criteria. As discussed above, the source country should be allowed to tax the company's business profits generated by employees telecommuting from abroad if the employees are present in the source country for that purpose for a certain time.

The necessary reforms can be based on either the basic-rule permanent establishment definition or on the agency rule. In general, the reform proposals must provide that taxation is in accordance with inter-nation equity and neutrality between taxpayers. In addition, potential feasibility issues have to be avoided, i.e. with regard to the determination of the source and the attributable amount of income.

When considering reforms of the basic-rule permanent establishment, it is possible to adjust the *right to use test* insofar as a right to use also exists in those cases in which an employee works under the authority of the company, meaning that the company has the right to give instructions, but he does not necessarily work at a fixed place that is at the disposal of the company.⁷⁰⁶ The right to use is then extended to the company's human capital. This rule takes into account that the provision of services has become an important income-generating factor.⁷⁰⁷

Furthermore, to define whether a permanent establishment exists, in addition to the right to use test, the *permanence test* has to be met. This test is then applied in respect of an activity performed in the source country and not in respect of the use of a place of business. Consequently, the place of

⁷⁰⁵ Additionally, if the precedent reform approach of subjecting all activities under the preparatory and auxiliary condition is implemented, the tax planning issues are considered to be less extensive. In the end, it depends on the relative weight given to the respective arguments whether the introduction of a force-of-attraction rule is favoured. Here, the issues inherent in a force-of-attraction rule are considered to be more severe than the potential tax planning issues. See also paragraph 10 of the Commentary on Article 7 of the OECD Model. Holding a different view, see *Skaar*, 1991, p. 574; *Cockfield*, 1999, pp. 205-215, supporting a force-of-attraction rule to enforce source-state taxation.

⁷⁰⁶ See also *Utescher*, 1999, pp. 379-385, who proposes that employees telecommuting from home represent a permanent establishment since the company has the right to give them instructions or alternatively a complete abandonment of the right to use test.

⁷⁰⁷ See also *OECD*, 2003, section 238.

business test and the location test lose their significance to a certain extent for the benefit of the permanence test which becomes a more decisive criterion. Thus, the notion of a permanent establishment is then rather based on the requirement of a certain duration of an activity performed in the source country instead of the requirement of a permanent use of the place of business at one specific location.⁷⁰⁸

In practice, the extension of the right to use test can be implemented by adapting the permanent establishment definition in Article 5 of the OECD Model. For example, as in subparagraph 3 b) of Article 5 of the UN Model, a new nexus for employees exerting activities for a certain amount of time in the source country can be added to Article 5 of the OECD Model. Under the new nexus rule, a permanent establishment exists if an employee is physically present and works for a certain minimum time period in the source country even if the company itself has no physical presence there.

When implementing such a new nexus, a *criterion for measuring the duration* of the employee's presence has to be chosen. In this context, either the duration of the employee's physical presence in the source country or the duration of carrying out the respective activities can be used as a benchmark.⁷⁰⁹ Given that the performance of activities is relevant here, this criterion should be preferred as a benchmark to determine the duration of presence, since it provides for a more realistic result.⁷¹⁰

To determine whether *one or several permanent establishments* exist when several employees of one company are working in the source country, the current permanent establishment rules for a fixed place of business are again applicable. Thus, a geographical entity is necessary, meaning that it has to be tested for every place where an employee acts whether a permanent establishment exists or not. In addition, according to the UN Model, the activities performed in one permanent establishment have to be related to a single project or to related projects, meaning that an economic entity is required.⁷¹¹ However, this rule is not considered to be essential. In the case of mobile telecommuting, it is decisive that the employee works for a certain minimum duration in the source country, irrespective of whether he works permanently at one place or not.

In addition, the *minimal duration* of the employee working in the source country that is necessary

⁷⁰⁸ See Skaar, 1991, p. 570.

⁷⁰⁹ For the following remarks, see also OECD, 2003, section 234. Currently, the days-of-physical-presence rule is applied in subparagraph 2 a) of Article 15 of the OECD Model and subparagraph 1 b) of Article 14 of the UN Model, whereas subparagraph 3 b) of Article 5 of the UN Model is based on the days of activities performed.

⁷¹⁰ Particularly in the case of home-based telecommuting, a determination of the time period on the basis of the employee's physical presence is not reasonable.

⁷¹¹ Thus, an enterprise could be furnishing services in a country throughout the year without triggering source taxation, provided that the services are furnished under unrelated projects. For the geographic and the economic

for the existence of a permanent establishment has to be determined.⁷¹² Paragraph 6 of the Commentary on Article 5 of the OECD Model suggests a minimum time period of approximately 6 months, depending on the relevant circumstances. Also subparagraph 3 b) of Article 5 of the UN Model requires a 6-month period within any 12-month period, whereas paragraph 3 of Article 5 of the OECD Model suggests a minimum time period of 12 months for a building site or a construction project. Since the employee can work in a mobile way and is rather independent of a fixed place in the source country, it is recommended to apply a minimum time period of 12 months for the provision of services under the OECD Model. Whilst this threshold can serve as a general benchmark, the required period of time has to be determined on a case-by-case basis, also taking into account the general considerations mentioned in paragraphs 6 to 6.3 of the Commentary on Article 5 of the OECD Model.

Based on the precedent considerations, the new nexus can be formulated as follows:⁷¹³

The term “permanent establishment” likewise encompasses:

Activities performed by an enterprise through employees or other personnel engaged by the enterprise for such purposes, but only while activities of that nature are performed within the country for a period of more than 12 months.

Since the exception for auxiliary or preparatory activities in paragraph 4 of Article 5 of the OECD Model is again applicable, the new nexus rule is only applied if a company’s core business activities are performed by the employee in the source country.⁷¹⁴

7.2.1.2.2. Evaluation of the Proposal in Light of the Evaluation Criteria

The suitability of this nexus rule is now assessed in light of the evaluation criteria. Firstly, the proposal is in line with *inter-nation equity* based on the supply approach, since it allows the creation of a permanent establishment in those cases in which substantial activities of the company are performed by employees in the source country. Then, the contribution of the source country goes beyond providing a mere consumer market.⁷¹⁵ The departure from the place of business test stipulating a fixed place of business at the disposal of the company is not assumed to constitute a problem. In contrast, this departure is reasonable and even necessary for a fair taxation between

entity, see paragraphs 5.1 to 5.4 of the Commentary on Article 5 of the OECD Model.

⁷¹² For the following discussion, see also *OECD*, 2003, section 236.

⁷¹³ This formulation is based on subparagraph 3 b) of Article 5 of the UN Model. By introducing this nexus rule for employees telecommuting distantly from the company’s premises, some differences that currently exist between the OECD Model and the UN Model can be bridged. See *Joseph*, 2004, p. 400.

⁷¹⁴ For more details on the proposed reform for this exemption rule, see also chapter 7.2.1.1.2.

⁷¹⁵ See also *OECD*, 2003, section 240.

jurisdictions in the era of ICT with the increased importance of value added created by employees working distantly from the company's premises and the decreasing importance of a fixed company site.

Secondly, as regards *taxpayer neutrality*, introducing a nexus rule for employees working distantly from the company's premises provides for a neutral treatment of activities performed within a company's fixed place of business in the source country and those which are performed physically but without a fixed company site.⁷¹⁶ Since in both cases, the same degree of activities is performed, an equal treatment of these cases is reasonable.⁷¹⁷

Thirdly, with regard to *feasibility*, the administrative effort coming along with an introduction of this rule will increase for taxpayers and tax administrations, for example since the determination of the time the personnel spent in the source country may be complex.⁷¹⁸ However, the verification whether an employee provides services for a certain time in the source country is already required under Article 15 of the OECD Model. Thus, even if the extent of the administrative effort has risen, the introduction of this new nexus is considered to be feasible in practice. In addition, since already a number of developing and also industrialised countries have included this provision in their tax treaties, the probability of political acceptance should be rather high.⁷¹⁹ However, it has been argued that the determination of profits could raise problems, particularly with regard to the fact that separate accounts do not exist.⁷²⁰ Whilst this is true, it does not constitute an insuperable burden and a profit allocation may nevertheless be possible. In general, the functions performed by the employee working in the source country shall be the starting point for allocating the profits reasonably. Since such a kind of nexus rule is already implemented in a number of tax treaties, there should already be some experience in profit allocation. Alternatively, it is worthwhile to consider formula apportionment as a rule for allocating profits.⁷²¹

To summarise, the implementation of a nexus rule for core activities performed by employees working distantly from the company's premises but under the authority of the company would be a reasonable and necessary modification of the nexus in the source country in the era of ICT. By

⁷¹⁶ See also *OECD*, 2003, section 241.

⁷¹⁷ Furthermore, with the 2003 change of the Commentary on Article 5 of the OECD Model, the right to use test is construed extensively insofar as a permanent establishment can for example exist if painter services are provided permanently at the customer's premises. See paragraph 4.5 of the Commentary on Article 5 of the OECD Model. This interpretation is then applied respectively to all kind of activities performed by employees from home, from the customer's premises and in a mobile way to provide a neutral taxation between different forms of activities.

⁷¹⁸ See also *OECD*, 2003, section 242.

⁷¹⁹ See *OECD*, 2003, section 249, who quote an IBFD research project according to which around 27% of the tax treaties conducted between 1980 and 1997 included a provision based on that in subparagraph 3 b) of Article 5 of the UN Model.

⁷²⁰ See *Utescher*, 1999, p. 381; *OECD*, 2003, section 243.

⁷²¹ For more details, see chapter 7.3.2. Especially in the case of the examples discussed here, a formula based on

introducing this rule, international tax law is more in line with the evaluation criteria. The overall administrative burden is assumed not to be too high, as the cases in which this rule applies are restricted by the minimum time period of 12 months and by the condition that more than auxiliary and preparatory activities have to be performed.⁷²²

Alternatively, it has been proposed to achieve the aim of creating a permanent establishment for employees working distantly from the company's premises by reforming the *agency rule*.⁷²³ However, for reaching this aim, it is deemed to be more appropriate to reform the basic rule, since the agency rule has only been introduced as a subordinate clause and is intended to include those cases in which employees really act in relation to third parties.⁷²⁴

7.2.2. Organisational Changes of Market Structures

With the organisational changes of market structures, it is possible for a company to participate in the market of the source country without a physical presence. The fact that in such scenarios no taxation takes place has been assumed as being consistent with the evaluation criteria.⁷²⁵ Subsequently, several suggestions that have been made to reform the permanent establishment definition are discussed.

7.2.2.1. Excluding Specific ICT-Related Items from the Permanent Establishment Definition

7.2.2.1.1. Reform Proposal

Several suggestions with regard to the explicit exclusion of specific ICT-related items from the permanent establishment definition have been discussed. For example, activities that do not involve human intervention by personnel,⁷²⁶ servers in itself⁷²⁷, and functions attributable to software when applying the preparatory or auxiliary exception⁷²⁸ have been considered to be excluded.⁷²⁹ The

payroll can represent an alternative.

⁷²² In general, the introduction of this new nexus can also be applied if management services are provided. However, probably, a permanent establishment often exists anyway under the agency rule. For the establishment of management offices, see also paragraph 24 of the Commentary on Article 5 of the OECD Model.

⁷²³ See *Brunsbach*, 2003, p. 226.

⁷²⁴ Furthermore, it has been argued that particularly in the era of ICT, an agent disposing of the authority to conclude contracts shall only be qualified as a permanent establishment if he in fact exercises business judgements and not if the agent simply follows a script provided by the company. See *Sprague / Hersey*, 2003, pp. 338-342. Whilst the underlying idea of this proposal is presumed to be useful, this interpretation might already now be intended by paragraph 32 of the Commentary on Article 5 of the OECD Model, which says that the rule should only be applied to those persons which effectuate that the principal is involved to a particular extent in business activities in the state concerned.

⁷²⁵ See the detailed analysis in chapter 6.2.3.

⁷²⁶ See *Utescher*, 1999, pp. 386-387, and the discussion in *OECD*, 2003, sections 127-143.

⁷²⁷ See the discussion in *OECD*, 2003, sections 144-159.

⁷²⁸ See the discussion in *OECD*, 2003, sections 160-175. This proposal is based on the assumption that the existence of tools supporting the business activities is in general excluded when analysing the business activities to

exclusion of a server or activities that do not involve human intervention is based on the assumption that in those cases only limited functions are supposed to be conducted in the source country. Thus, only little – if any – profits could be attributed to such a permanent establishment. In addition, such exclusions would have significant feasibility advantages with regard to certainty, compliance and administrative costs.⁷³⁰

7.2.2.1.2. Evaluation of the Proposal in Light of the Evaluation Criteria

When evaluating the aforementioned proposals in light of the evaluation criteria, several issues are raised. In light of the *neutrality criterion*, the proposed exclusions would not be neutral against different forms of doing business. For example, a differentiation would be made between companies doing the same kind of business by using either only means of ICT or additionally using manpower. As the same kind of functions may be performed by either personnel or automated equipment, such a differentiation according to the way in which functions are performed is not justified and creates distortions between different ways of carrying on similar functions.⁷³¹ The decision whether a permanent establishment exists shall rather be based on the nature and extent of functions performed at a specific place and not on the nature of the equipment used there.⁷³² In light of *feasibility*, these modifications can reduce the administrative burden, since all cases in which only automated equipment is maintained in a source country are no longer relevant to the question whether a permanent establishment exists.⁷³³ However, new administrative issues may be raised. For example, in the case of occasional human intervention, it has to be decided whether the exemptions are applicable.⁷³⁴ Moreover, the argument that a tax-motivated shift of only automated equipment to low-tax jurisdictions could be prevented by introducing these reform proposals is not

determine whether a permanent establishment exists. Since also software constitutes a tool supporting the business activities, an exclusion is deemed to be consistent with the treatment accorded to other business tools. Furthermore, as only little profits can be attributed to the use of software, it would be more practical to in general exclude functions attributable to software.

⁷²⁹ For a far more advance approach, see *Lejeune / Vanham / Verlinden / Verbeken*, 1998, pp. 54-55, who argue in favour of the complete abandonment of the permanent establishment concept and exclusive residence-based taxation.

⁷³⁰ See *Utescher*, 1999, p. 386; *OECD*, 2003, sections 130, 135, 137. Furthermore, also difficulties of profit allocation to such entities would be avoided.

⁷³¹ See also *OECD*, 2003, sections 132, 164, 166. The criterion of human intervention is rather coincidental. See also the evaluation of the current tax rules in light of neutrality in chapter 6.2.3.2.2.

⁷³² See also *OECD*, 2003, section 154. Furthermore, in special cases, the assumption that only limited functions can be performed by servers or by automated equipment without human intervention is not necessarily true. Since in those rare cases the source country should have the right to tax the profits generated within its jurisdiction, the reform proposals are not in line with *inter-nation equity*. See also the discussion in *OECD*, 2003, sections 131.

⁷³³ See also the arguments in *OECD*, 2003, sections 137, 156, 168. As discussed in chapter 6.2.3.2., there are possibilities to identify the functions performed by use of a server or a certain software. Thus, it is not necessary to implement these reforms in terms of feasibility considerations.

⁷³⁴ See also *OECD*, 2003, section 138. Additionally, the proposals give rise to uncertainty with regard to the distinction between activities of dependent and independent agents. See *OECD*, 2003, section 136.

supported.⁷³⁵ It is rather debatable to what extent such forms of international tax planning are really implemented, since only little amounts of profits could be shifted by use of such a strategy.⁷³⁶

Instead of introducing the reform proposals discussed here, it is always examined whether the activities performed exceed the activities listed in paragraph 4 of Article 5 of the OECD Model. This test which is also applicable if only automated equipment without human intervention is set up is considered to provide reasonable results.⁷³⁷

7.2.2.2. Further Extension of the Source Country's Jurisdiction to Tax

7.2.2.2.1. Introducing a Virtual Permanent Establishment as an Alternative Nexus

7.2.2.2.1.1 Reform Proposal

A further reform proposal is to extend the source country's right to tax by lowering the permanent establishment threshold and, thus, extending the permanent establishment definition to a virtual permanent establishment.⁷³⁸ The requirement of a physical place of business is discarded and the foreign enterprise is deemed to have a permanent establishment in the source jurisdiction once a certain minimum level of the company's economic activities in the source country is exceeded. Thus, this nexus does not depend on the existence of a fixed place of business, but focuses on the company's economic presence within a jurisdiction while providing services or other business activities at the customer's location.⁷³⁹ In order to implement this approach, it is necessary to specify a certain minimum threshold representing a significant level of economic activity. Here, a facts and circumstances test is possible including qualitative criteria, for example the presence of infrastructure such as web sites or computer servers or the use of trademarks, and quantitative

⁷³⁵ See the reasoning in *OECD*, 2003, section 140.

⁷³⁶ See also *OECD*, 2003, section 139 and the discussion in chapter 6.2.3.2. Furthermore, it is conceivable that new forms of international tax planning occur, for example with regard to the form of employment contracts to influence the extent of human intervention. Thus, international tax planning activities may to a certain extent be shifted to other tax fields instead of being reduced significantly.

⁷³⁷ For more details on reform proposals with regard to this test, see chapter 7.2.1.1.2.

⁷³⁸ The underlying idea of this reform proposal is to create a new nexus that does not require a fixed place of business but that still effectively and closely connects the business to the territory of the source country. For discussions of this approach, see *McLure Jr.*, 1997a, pp. 295-296 for state sales taxes; *Hinneken*, 1998a, pp. 195-199; *Lejeune / Vanham / Verlinden / Verbeke*, 1998, p. 54; *Eicker / Scheifele*, 1999, p. 792; *McLure Jr.*, 2000, pp. 12-15, who suggests a test based on gross receipts; *Doernberg / Hinneken / Hellerstein / Li*, 2001, pp. 351-353; *McIntyre*, 2001, pp. 503-506; *Peter*, 2002, pp. 205-214; *OECD*, 2003, sections 319-320; *Pinto*, 2003, pp. 191-205; *Cockfield*, 2004, pp. 650-654; *ibid.*, 2004a, pp. 121-122, who suggests a mere quantitative economic presence test. For an explanation of the notion "virtual", see footnote 18.

⁷³⁹ The difference compared to the reform approach in chapter 7.2.1.2. for employees working distantly from the company is that now, neither a company's fixed place is installed nor an employee is physically present in the source country. See also *OECD*, 2003, section 325. Here, the services performed by personnel located abroad are considered as being performed at the customer's location and, therefore, shall be taxed in the source country. For an example of the French jurisprudence according to which a complete cycle of operations results in a permanent establishment, see *Conseil d'Etat*, 1968; *Conseil d'Etat*, 1979, and the discussion in *Peter* 2002, pp. 207-208.

criteria in the form of monetary thresholds such as turnover or volume of transactions.⁷⁴⁰ An example of a virtual place of business is a company's web site through which the company conducts its business.⁷⁴¹

One major intention behind the extension of a source country's jurisdiction to tax is to attribute a bigger portion of the tax revenues to the source country, since it is presumed that with the possibility of doing business without establishing a physical presence there, less income is attributed to source countries according to the current tax law. However, as analysed in chapter 4.3., a shift of tax revenues from source countries to residence countries is not presumed to take place to a great extent.⁷⁴² Consequently, the implementation of these extensions of the permanent establishment definition cannot be based on the argument of revenue shifting from source to residence jurisdictions.

7.2.2.1.2 Evaluation of the Reform Proposal in Light of the Evaluation Criteria

In the following, the aforementioned extensions of the source country's jurisdiction to tax are discussed in light of the evaluation criteria. It is argued in favour of the reform approaches discussed here that an extensive participation in the source country's economic life is possible without a fixed place of business. Therefore, the source country should have the right to tax these profits in order to guarantee *inter-nation equity*. However, the company's participation mainly consists in the use of a consumer market by selling goods or providing services and is therefore rather a participation *with* the economic life of a country than *in* the economic life.⁷⁴³ Consequently, under the favoured supply approach, a source country's taxing right in the scenarios discussed here cannot be justified in light of *inter-nation equity*.⁷⁴⁴

With the use of ICT, it is possible to penetrate a foreign market without establishing a physical presence there. In contrast, in former times, a physical presence was necessary for the same degree

⁷⁴⁰ Also limitations on the types of activities covered are possible. For details on proposals for the minimum threshold, see *Avi-Yonah*, 1997, pp. 535-536; *Hellerstein*, 1997, p. 497; *Strunk*, 1999, pp. 277-279; *Pinto*, 2003, pp. 196-197; *Cockfield*, 2004, p. 650.

⁷⁴¹ Additionally, the existing agency rule could be extended to electronic equivalents of a dependent agent, such as a company's web site through which contracts binding on the foreign company are habitually concluded. See *OECD*, 2003, p. 321, and *Grادل*, 2000, pp. 176-179, who advocates that a web site can constitute an agency permanent establishment.

⁷⁴² This particularly holds when considering the reform proposals favoured above, especially the new nexus for employees working distantly from the company's premises in chapter 7.2.1.2. Additionally, it should be kept in mind that there is not much income allocated to a virtual permanent establishment.

⁷⁴³ For further details and quotations, see chapter 6.2.3.1.

⁷⁴⁴ In contrast, it has been argued in favour of the supply-demand approach that functions which require the interaction of the customer, such as sales and many service transactions, are at least partly carried out in the demand jurisdiction. Therefore, the demand jurisdiction should be entitled to tax the profits. However, the supply-demand approach is not favoured here. For more details, see chapter 5.1.2.

of penetration.⁷⁴⁵ Therefore, it has been argued in favour of the enlargement of the permanent establishment definition that under *neutrality considerations*, commercial operations conducted without any physical presence should be treated the same way as the respective commercial operations performed via a physical presence.⁷⁴⁶ However, since these two scenarios differ with regard to the participation in the economic life of the source country, it is in terms of neutrality reasonable that these two situations representing different competitive positions are taxed differently in the source country.⁷⁴⁷ In addition, in the case of a virtual permanent establishment, there may be significant *feasibility issues* of taxing a non-resident without a physical presence in the source country since it poses practical problems to define the minimum threshold for economic activities and to determine and enforce a tax on a non-resident conducting trade in the source jurisdiction without having any physical presence there.⁷⁴⁸ Furthermore, in the case of a virtual permanent establishment, issues of profit allocation would arise, since probably, only a small amount of profits is attributable to such a virtual permanent establishment.⁷⁴⁹ To conclude, due to the drawbacks discussed here, the implementation of a virtual permanent establishment is not supported.

7.2.2.2.2. Implementing a Withholding Tax According to the Base Erosion Approach

7.2.2.2.2.1 Reform Proposal

Various approaches of implementing a withholding tax to all or some cross-border payments have been proposed in order to extend the source country's right to tax, among them the base erosion approach.⁷⁵⁰ According to this approach, irrespective of the category of income, a withholding tax is

⁷⁴⁵ See also *OECD*, 2003, sections 253, 324.

⁷⁴⁶ Inter alia, see *Strunk*, 1999, pp. 267-268, 273; *Strunk / Wichmann*, 2001, p. 420; *Pinto*, 2003, p. 199.

⁷⁴⁷ See also the discussion in chapter 6.2.3.1., where it is concluded that since the scenarios of remote selling via the Internet are economically comparable to the scenario of doing direct business from abroad, an equal treatment of these two situations is reasonable and necessary. Holding the same view, see *Brunsbach*, 2003, p. 227.

⁷⁴⁸ See also chapter 6.2.3.1. and *Utescher*, 1999, p. 366; *McLure Jr.*, 2000, p. 13; *Doernberg / Hinnekens / Hellerstein / Li*, 2001, p. 348; *OECD*, 2003, sections 330-333; *Pinto*, 2003, pp. 203-204; *Sprague / Hersey*, 2003, p. 312; *Knödler*, 2004, pp. 165-166.

⁷⁴⁹ See also *Pinto*, 2003, p. 204; *Knödler*, 2004, p. 166. Moreover, it has been argued that the proposed reform approaches could be circumvented easily, for example by relocating the web site to another server in a low tax jurisdiction. For further details regarding possible tax planning strategies related to such a virtual establishment, see *OECD*, 2003, sections 337-339.

⁷⁵⁰ The following discussion is focussed on this base erosion approach which has first been advocated by Doernberg. See *Doernberg*, 1998, pp. 1013-1022; *ibid.*, 2000, pp. 2417-2430, and for a discussion of this approach, see *Indian Ministry of Finance* (Ed.), 2001, pp. 75-79, who support the base erosion approach in the form of a final withholding tax as a replacement for the permanent establishment concept; *OECD*, 2003, sections 269-292; *Pinto*, 2003, pp. 174-190. See also *Avi-Yonah*, 1997, pp. 537-541, who proposes a withholding tax regime for e-commerce; *Portner*, 1999, p. 645; *Strunk*, 1999, pp. 279-281, who suggests to levy a withholding tax if a utilisation of the goods sold or services provided in the source country exceeds a certain threshold; *Li*, 2003, pp. 592-596, who proposes a uniform withholding tax for portfolio income; *Pinto*, 2003, pp. 207-233, who recommends for all international e-commerce transactions a withholding tax being refundable if the total gross sales of a business in a source country remain below a minimum threshold. For a discussion of implementing a

permitted in the source country on any payment that has the effect of eroding the source country's tax base.⁷⁵¹ Thus, a foreign vendor without a fixed place of business in the source country is liable to withholding taxes there. The withholding tax can then be credited against the tax due in the residence country. Alternatively, to avoid a potential excessive tax burden due to the gross basis of taxation, vendors can opt for filing on a net basis in the source country. The base erosion approach is intended to supplement the traditional permanent establishment rules. The proposal of a withholding tax is not new. For example, the general implementation of a withholding tax on cross-border interests has been discussed in the context of the reform of paragraph 8 a of the German Corporate Income Tax Act.⁷⁵² However, the "Interest and Royalties Directive" provides that interest or royalty payments arising in a Member State should be exempted from any taxes imposed on those payments, whether by deduction at source or by assessment.⁷⁵³

7.2.2.2.2 Evaluation in Light of the Evaluation Criteria

In general, it has been argued in favour of such a withholding tax that tax law would be simplified in certain respects and that it can be enforced in an effective way. In addition, international tax avoidance and tax evasion can be curbed and the tax base would be apportioned in a fair way between residence and source countries.⁷⁵⁴ However, there are also some drawbacks inherent to this approach. The main intention behind the base erosion approach is to avoid an undue shift of the tax base from source countries to residence countries by attributing more tax revenues to the source country.⁷⁵⁵ As stated above, such a shift in the tax revenues from source countries to residence countries is not presumed to take place.⁷⁵⁶ This particularly holds when taking into account the implementation of the supported reform proposals discussed above.⁷⁵⁷ Consequently, the assumptions underlying the justification for implementing a withholding tax cannot be confirmed. In addition, the base erosion approach is not consistent with the aim of the OECD to reduce withholding taxes to stimulate international investment and trade.⁷⁵⁸ Furthermore, within the European Union, the "Interest and Royalties Directive" prohibits withholding taxes on cross-border interest and royalty payments. Moreover, the implementation of a gross basis tax is not consistent

final withholding tax for certain e-commerce transactions, see *OECD*, 2003, sections 252-268.

⁷⁵¹ A payment erodes the tax base if it is deductible by a source country purchaser. See *Pinto*, 2003, pp. 177-178. Thus, payments made by private consumers are not subject to withholding.

⁷⁵² For further details, see the discussion in *Spengel / Golücke*, 2003, p. 347, and also *Pöllath / Rädler*, 1980, p. 6.

⁷⁵³ See Article 1 of the Council Directive on a Common System of Taxation Applicable to Interest and Royalty Payments made Between Associated Companies of Different Member States.

⁷⁵⁴ For further details, see *Li*, 2003, pp. 592-593, and the quotations in footnote 750.

⁷⁵⁵ See *OECD*, 2003, section 273; *Pinto*, 2003, p. 178.

⁷⁵⁶ For more details, see chapter 4.3.

⁷⁵⁷ This is particularly valid for the new nexus for employees working distantly from the company's premises discussed in chapter 7.2.1.2.

⁷⁵⁸ See also *eCom Taxpert Group*, 2002, p. 23; *Cockfield*, 2004, p. 649.

with the idea of an income tax.⁷⁵⁹

Furthermore, this reform proposal attributes a taxation right to the source country solely for providing a consumer market. Thus, the approach is based on the supply-demand approach.⁷⁶⁰ Consequently, the introduction of the base erosion approach is not consistent with *inter-nation equity* based on the favoured supply approach. With regard to *neutrality*, if the approach is intended to be applied only to e-commerce transactions, it unduly differentiates between different forms of doing business which is not consistent with the neutrality requirement and the Ottawa framework conditions agreed by the OECD.⁷⁶¹ Otherwise, if the approach is to be applied to all kinds of cross-border transactions, it imposes a more burdensome taxation on imported goods than on goods of domestic origin and is therefore discriminatory against offshore vendors which might be subject to challenge under international trade rules.⁷⁶² Under *feasibility considerations*, as mentioned above, an advantage of the base erosion approach is that it simplifies the tax law by eliminating complicated income characterisation and sourcing rules.⁷⁶³ However, new characterisation issues arise, for example with regard to distinguishing B2B- and B2C-transactions. Moreover, this proposal imposes an increased compliance burden for taxpayers and governments.⁷⁶⁴

To conclude, even if there are some arguments in favour of a withholding tax, the implementation of a withholding tax is not supported due to various reasons.⁷⁶⁵

7.2.3. Summary of Reforms for the Permanent Establishment Definition

To summarise, it has turned out in the analysis that also in the era of ICT, the permanent establishment concept should remain the appropriate standard upon which taxation of foreign enterprises is based. Even if the nature of inputs and outputs may have changed to a certain extent,

⁷⁵⁹ See *eCom Taxpert Group*, 2002, p. 22; *OECD*, 2003, section 275.

⁷⁶⁰ See *OECD*, 2003, section 274.

⁷⁶¹ See *OECD*, 1998, p. 4; *ibid.*, 2003, section 276. Moreover, under neutrality considerations, this approach would not be neutral with respect to the type of transaction, since it differs between B2B-transactions and B2C-transactions. See *OECD*, 2003, section 277; *Pinto*, 2003, pp. 185-186.

⁷⁶² For example, paragraph 4 of Article III of the GATT might be infringed. See also *eCom Taxpert Group*, 2002, p. 22; *OECD*, 2003, section 289. This rule might also not be consistent with EU law. In addition, it has been stated that since it is unlikely that the supplier's country of residence will grant relief from double taxation by credit for such a new withholding tax, a double taxation results. For a detailed discussion of this issue with selected country analyses, see *eCom Taxpert Group*, 2002, pp. 23-31.

⁷⁶³ See also *OECD*, 2003, sections 282-283; *Sprague / Hersey*, 2003, p. 309. The simplicity of the base erosion approach depends on whether it is applied in its purest form or not. See *OECD*, 2003, sections 284-285. It has further been argued that the base erosion approach is feasible and likely to be enforceable. See *Pinto*, 2003, p. 182; *Sprague / Hersey*, 2003, p. 309.

⁷⁶⁴ For example, it is necessary to determine the origin of product purchases on a transaction-by-transaction basis, since only payments to non-residents would be subject to tax.

⁷⁶⁵ In the event it would ever be necessary to attribute more income to source countries, this aim can rather be achieved by use of a consumption tax. See *OECD*, 2003, section 254. See also *Portner*, 1999, p. 647; *ibid.*, 1999a, p. 26, who argues that the introduction of a consumption-based taxation would seem rushed at present, since a shift in tax revenues has not been proved yet.

the essential fact remains the same in the age of ICT: Companies still use capital and labour to perform their activities, i.e. to create products and to provide services.⁷⁶⁶ Consequently, the principle that income tax revenues are attributed to the location where a company is engaged in value-creating activities remains the appropriate basis for the imposition of an income tax also in the era of ICT.⁷⁶⁷

However, even if the permanent establishment threshold remains the standard threshold upon which taxation is based, several adjustments are necessary due to the various ICT-induced economic changes. Firstly, the auxiliary and preparatory condition inherent in the business activity test has to be re-defined. To guarantee that really only preparatory and auxiliary activities are exempted, the exceptions referring to specific activities should be abolished. Secondly, employees working distantly from the company's premises in the source country should also constitute a permanent establishment if they work permanently in the source country and perform more than auxiliary or preparatory activities. Thus, less emphasis should be put on the place of business test and the right of use test, but more emphasis on the permanence test. Thirdly, the business activity test should persist insofar as the permanent establishment definition should not be extended to those cases in which the company has no presence at all in the source country. Thus, as regards the organisational changes in market structures, possible reforms concerning an enlargement of the permanent establishment concept, such as the proposals of a virtual permanent establishment or of introducing a withholding tax, are not supported. This is due to the fact that the underlying assumption of a shift in tax revenues from source countries to residence countries is not considered to take place and that feasibility issues are supposed to occur.

7.3. Reforming the Allocation of the Taxable Base

In the analysis conducted in chapter 6.3., the traditional transaction methods have turned out to be inappropriate for today's changed organisational structures in many respects. Thus, subsequently, transactional profit methods and a consolidated tax base combined with formula apportionment are discussed as possible reforms. The reform concepts have to conform to the evaluation criteria stipulated above. Furthermore, considerations developed by other countries or by supranational institutions such as the OECD are taken into account. Here, special interest is devoted to the proposals of the European Commission for possible reforms of company taxation in the Internal Market.⁷⁶⁸

⁷⁶⁶ See also *eCom Taxpert Group*, 2002, p. 19; *Sprague / Hersey*, 2003, pp. 311-312.

⁷⁶⁷ See also *Sprague / Hersey*, 2003, p. 310.

⁷⁶⁸ See *Commission of the European Communities*, 2001.

7.3.1. Transactional Profit Methods

The transactional profit methods were mainly developed for those situations in which transactions are so interrelated that they cannot be evaluated on a separate basis.⁷⁶⁹ The intention behind was to preserve the arm's length principle but to interpret it broadly enough to permit the use of non-traditional methods in last resort cases, but with strict limitations.⁷⁷⁰ Thus, it is discussed in the following whether the transactional profit methods constitute a suitable alternative to the traditional transaction methods which are challenged in the era of ICT due to various issues such as the incompatibility with the economic situation of affiliated entities or the identification of transactions and the finding of comparables.

The Transactional Profit Split Method (TPSM) seeks to split the profits resulting from a transaction among the relevant parties on a basis approximating the division that would have been concluded between uncontrolled parties.⁷⁷¹ Therefore, the functions performed and risks undertaken have to be identified and assessed for each transaction in a functional analysis. External data from uncontrolled transactions is necessary to assess the value of the parties' contributions to the transactions, but not directly to calculate the division of profits.⁷⁷² Since the TPSM does not directly rely on the use of comparable transactions, comparability is less emphasised in this approach than in the traditional transaction methods.⁷⁷³ The application of the TPSM presupposes that the profit is determined in a uniform way on the basis of identical methods by the jurisdictions involved.⁷⁷⁴

The Transactional Net Margin Method (TNMM) works in a way similar to the Resale Price Method (RPM) and the Cost Plus Method (CPM) since it compares the net profit margin of controlled transactions with the net profit margin of uncontrolled transactions.⁷⁷⁵ This method requires the use of comparables, but does not presuppose the same amount of detailed information on the cost base as the RPM and the CPM and the prerequisites with regard to the comparability of companies are not that high.⁷⁷⁶ In addition, the net margin is more tolerant to some functional differences between the controlled and the uncontrolled transactions than the gross margin used in the CPM and the RPM.⁷⁷⁷ However, it may still be that comparable data on uncontrolled transactions is not available

⁷⁶⁹ See *OECD*, 2001, section 3.5, and *Portner*, 1999b, p. 535.

⁷⁷⁰ For more details on the development of these methods, see *Horner / Owens*, 1996, p. 520. Transactional profit methods are equally applicable to permanent establishments. See *Ditz*, 2004, p. 382.

⁷⁷¹ For more details, see chapter 3.3.2.1.

⁷⁷² See *OECD*, 2001, section 3.6.

⁷⁷³ See *OECD*, 2001, section 3.6, and *Horner / Owens*, 1996, p. 520; *Portner*, 1999b, p. 536; *Oestreicher*, 2000, p. 66; *Commission of the European Communities*, 2001, p. 258.

⁷⁷⁴ See *Portner*, 1999b, p. 535; *Kaminski*, 2000, p. 152; *Portner*, 2001, p. 95; *Graf*, 2003, p. 242.

⁷⁷⁵ For more details, see chapter 3.3.2.1.

⁷⁷⁶ See *OECD*, 2001, section 3.28, and *Commission of the European Communities*, 2001, p. 258; *Jacobs* (Ed.), 2002, p. 940.

⁷⁷⁷ See *OECD*, 2001, section 3.27, and *Kaminski*, 2001, p. 136; *Jacobs* (Ed.), 2002, pp. 940-941.

at the time of the controlled transaction and it may be difficult to calculate arm's length net margins since the net margins can be influenced by factors that either do not have an effect or have a less substantial effect on price or gross margins.⁷⁷⁸

When evaluating the transactional profit methods in light of *inter-nation equity*, it is assumed that the TPSM can to a certain extent take specific facts and circumstances of affiliated enterprises into account,⁷⁷⁹ whereas the TNMM does not consider the particularities of affiliated groups at all. Consequently, under the TNMM, with regard to inter-nation equity, the same issues as those for traditional transaction methods occur. In addition, also the TPSM considers the particularities of affiliated entities only to a certain extent and its application has to be in line with the arm's length principle. Therefore, according to both approaches, the issues outlined in the analysis of the traditional transaction methods occur again, since the profits generated by affiliated entities cannot readily be allocated according to their source. Thus, the requirement of inter-nation equity is not met.⁷⁸⁰

As regards *feasibility*, the TPSM does not require the same degree of comparability as traditional transfer pricing methods. The TPSM may therefore be more feasible in a way, for example in those cases in which no such transactions between uncontrolled parties can be found, as for interrelated transactions or unique intangibles.⁷⁸¹ However, it is debatable whether the data necessary for the profit split is available with reasonable effort.⁷⁸² Moreover, it is presumed to be difficult to identify the contribution of each entity for the functional analysis.⁷⁸³ A double taxation of profits can only be prevented if the criteria applied by the respective jurisdictions for profit splitting are the same.⁷⁸⁴ As regards the TNMM, in principle, the same feasibility issues as with the RPM and the CPM occur, except that the TNMM requires less detailed information. In addition, since the TNMM is based on the net profit margin, differences between controlled and uncontrolled transactions in the functions performed have less influence.⁷⁸⁵ Thus, in these regards, the TNMM can be considered to

⁷⁷⁸ See *OECD*, 2001, section 3.29-3.30, and *Kaminski*, 2001, p. 137.

⁷⁷⁹ The TPSM is therefore considered to be flexible insofar as it can take these differences into account while still constituting an arm's length approach by reflecting what independent parties would reasonably have concluded in a comparable situation. See *OECD*, 2001, section 3.6. For more details on the characteristics of affiliated entities, see chapter 6.3.1.1.1.

⁷⁸⁰ For more details on the analysis of the traditional transaction methods with regard to inter-nation equity, see chapter 6.3.1.2. For a comparison between the TPSM and the consolidation and apportionment approach, see *Portner*, 1995, p. 357.

⁷⁸¹ See *OECD*, 2001, section 3.6, and *Commission of the European Communities*, 2001, p. 258; *Vögele / Borstell / Raab / Diessner*, 2004, chapter D, section 311.

⁷⁸² See *Portner*, 1995, p. 357; *Kaminski*, 2000, p. 156; *OECD*, 2001, sections 3.8-3.9.

⁷⁸³ See *Kaminski*, 2001, pp. 189-190.

⁷⁸⁴ See *Kaminski*, 2001, pp. 160, 194-195; *Graf*, 2003, p. 242. At least in theory, with this two-sided approach, only the profit actually achieved by the group is taxed. See also *OECD*, 2001, section 3.7.

⁷⁸⁵ See *OECD*, 2001, section 3.27, and also *Jacobs* (Ed.), 2002, p. 941, who argues that the feasibility of the TNMM is restricted due to the numerous requirements established by the OECD.

be more feasible than the traditional transaction methods, but the other feasibility issues still exist. For example, a double taxation of profits can only be prevented if the jurisdictions apply the same method for determining and defining profits.⁷⁸⁶ To sum up, even if some feasibility issues can be softened by the use of the transactional profit methods compared to the traditional transaction methods, the general problems of finding the necessary data and identifying comparable transactions still exist. Other important issues inherent to the transactional profit methods are that, in practice, independent parties only rarely establish their prices based on a profit method.⁷⁸⁷ Furthermore, profit margins or splits can be effected by factors that are irrelevant to the determination of transfer prices, such as management inefficiencies.⁷⁸⁸

To sum up, transactional profit methods constitute an improvement compared to the traditional transaction methods in certain respects.⁷⁸⁹ However, since they are still based on separate transactions, the feasibility issues that result from taking into account separate transactions still exist. In addition, the TPSM and the TNMM are still intended to approximate arm's length pricing by requiring that profits arising from controlled transactions are comparable to profits arising from uncontrolled transactions.⁷⁹⁰ Thus, the structural issues inherent in the arm's length principle, such as the general incompatibility with the economic reality of affiliated entities and the issues of comparability, can be lowered only to a certain extent and still exist. As a consequence, it has to be examined whether a method of profit allocation based on a consolidation of profits and formula apportionment can resolve these issues in a better way.

7.3.2. Consolidated Tax Base and Apportionment of Income

7.3.2.1. General Attributes of the Consolidation and Apportionment Approach

The development and use of the consolidation approach along with formula apportionment can be traced back to the fact that the application of the arm's length principle to the changed organisational structures does not provide reasonable results. As analysed above, the arm's length principle cannot adequately capture the many subtle and largely not quantifiable transfers of value

⁷⁸⁶ See *Kaminski*, 2001, pp. 137, 144-145.

⁷⁸⁷ See *OECD*, 2001, sections 3.2, 3.54, and *Commission of the European Communities*, 2001, p. 258.

⁷⁸⁸ See *Commission of the European Communities*, 2001, p. 258.

⁷⁸⁹ As regards the argument that for e-commerce transactions, the TPSM can lead to a more reasonable allocation of profits than the traditional transactional methods and constitutes a more pragmatic approach, see *Horner / Owens*, 1996, p. 521; *Portner*, 1998a, p. 550; *ibid.*, 1999b, p. 536; *ibid.*, 2000, p. 895; *ibid.*, 2001, p. 95. See also *Kaminski*, 2001, pp. 185-194, who argues that the TPSM is not suitable for e-commerce transactions since it is difficult to determine the profits generated by a certain transaction and since the necessary data is not documented adequately. Before the advent of ICT, the TPSM was in particular suggested for licence agreements and global trading. See *Portner*, 1995, pp. 357-360; *Kaminski*, 2001, pp. 166-177. The TPSM is also suggested as an alternative method of profit allocation for permanent establishments. See *Portner*, 1998a, p. 551; *ibid.*, 2000, pp. 896-897; *ibid.*, 2001, p. 99; *Ditz*, 2004, pp. 382-384.

⁷⁹⁰ See *OECD*, 2001, section 3.3.

taking place between different parts of an affiliated group.⁷⁹¹ Particularly due to the increased use of ICT within the economy, the issues inherent in the arm's length principle are accumulated to a great extent and are now raised in a new dimension. It is in the following examined whether and to what extent the approach of a consolidated tax base in combination with formula apportionment constitutes a more suitable method of profit allocation in light of the different evaluation criteria. The analysis comprises both affiliated groups and head offices with permanent establishments. The focus of the analysis is on issues that arise due to the increased use of ICT. In addition, the analysis is focussed on the implementation of a consolidated and apportionment approach in the European Union, since implementing such an approach represents a suitable alternative particularly for economic markets such as the European Union. This is due to the widespread use of ICT across Europe and to the ongoing European integration with regard to economic and financial markets with cross-border transactions taking place to a great extent. Up to now, this level of integration has not been achieved in the field of taxation. Currently, 25 different company tax systems are coexistent. As a consequence, the aforementioned issues inherent in the arm's length principle with regard to the ICT-induced organisational changes are raised to a great extent in the European Union. In the study issued by the European Commission in 2001, transfer pricing issues turned out to be one of the main current tax obstacles in the European Union.⁷⁹² Based on these results, the European Commission has made different suggestions for reforming and harmonising company taxation in the European Union which are all based on the approach of a consolidated tax base.⁷⁹³

The basic characteristics inherent to the consolidation and apportionment approach differ from the basic attributes of the arm's length principle insofar as the former is not based on comparable data but considers the unique economic situation of only one economic entity. As a consequence, it is not presumed that transactions between controlled parties are comparable to those between uncontrolled parties. Thus, the issues of finding and identifying comparable transactions resulting from the increased use of ICT which play a decisive role for the functioning of the arm's length principle do not have an impact in the case of the consolidation and apportionment method.⁷⁹⁴ In addition, the consolidation approach considers an affiliated entity as one single entity for tax purposes. Thus, the basic economic essentials immanent in an affiliated group, i.e. the fact that affiliated groups are highly integrated and that excess profits result within the group, are taken into account.⁷⁹⁵ In contrast to the arm's length principle, the theoretical rationale of the consolidation

⁷⁹¹ For more details on the formula apportionment approach, see chapter 3.3.2.2. For a detailed analysis of the appropriateness of the arm's length principle, see chapter 6.3.

⁷⁹² See *Commission of the European Communities*, 2001, p. 371.

⁷⁹³ For more details, see chapter 3.3.2.2.

⁷⁹⁴ For a discussion of these issues inherent in the arm's length principle, see chapters 6.3.1.1.2.-6.3.1.1.4.

⁷⁹⁵ See also *Bird*, 1986, p. 343; *Coffill / Willson Jr.*, 1993, p. 1114. For more details on the excess profits generated

and apportionment approach is in accordance with the economic reality of groups of companies. Furthermore, even if both approaches in general seek to allocate the profits according to their source, the arm's length principle is focussed on determining the right operating profit of each company, whereas formula apportionment is rather aimed at providing for a non-arbitrary and verifiable profit allocation on the basis of suitable apportionment factors. Therefore, this approach can in general only provide an estimate of the geographic source of income.⁷⁹⁶ The formula should contain factors that reflect the geographic origin of income.⁷⁹⁷

Based on these differing basic characteristics, several general assumptions can be derived when comparing the formula apportionment approach to the arm's length principle with regard to the evaluation criteria stipulated above. The criterion of *inter-nation equity* calls for a profit allocation between different source jurisdictions according to the profit-generating activities.⁷⁹⁸ Since the consolidation approach takes into account the existence of economies of scope resulting from the integration between the different parts of the commonly owned business, the underlying theoretic rationale of the approach is in line with the economic reality. Therefore, the consolidation and apportionment approach has the potential to allocate the profits according to the profit-generating activities.⁷⁹⁹ Whether and to what extent an equitable allocation between jurisdictions can really be achieved when implementing the approach in practice depends on the definition of the consolidated group, on the scope of apportionable income and on the design of the allocation formula.⁸⁰⁰ It has to be kept in mind here that it is in practice not possible to determine the source of firm-specific excess profits on an economic rationale.⁸⁰¹

In addition, the intention behind the consolidation and apportionment approach was to provide a pragmatic solution for profit allocation among jurisdictions in order to better cope with the *feasibility issues* inherent to the arm's length approach. In those cases in which the arm's length principle is simply not feasible because comparable data does not exist or because single transactions cannot be identified, formula apportionment is intended to represent a more workable solution.⁸⁰² Furthermore, with regard to the benchmark for profit allocation, the complex search for comparables and their identification is replaced by a simple, generalised mathematical formula. Due

within affiliated entities, see chapter 6.3.1.1.1.

⁷⁹⁶ Thus, formula apportionment does not attempt to identify the precise geographic source of a company's profits. See *Weiner*, 2002a, p. 3; *Oestreicher*, 2003, p. 44.

⁷⁹⁷ See also *Commission of the European Communities*, 2004a, p. 5; *Hellerstein / McLure Jr.*, 2004, p. 208.

⁷⁹⁸ For more details, see chapter 5.1.2.

⁷⁹⁹ See also *Musgrave*, 1984, p. 236, who states that this fact provides a more fundamental rationale for applying the unitary approach than the feasibility issues with regard to the arm's length principle.

⁸⁰⁰ With regard to these aspects, see chapter 7.3.2.2. and chapter 7.3.2.4.

⁸⁰¹ For more details, see chapters 5.1.2., 6.3.1.1.1., and 6.3.1.2.

⁸⁰² See *McLure Jr.*, 1989, p. 246.

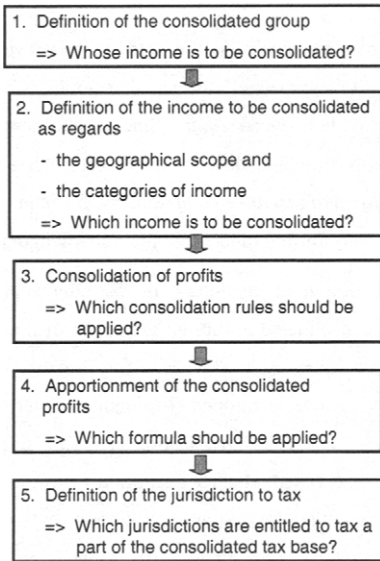
to the simplicity of this formula, the application of formula apportionment is supposed to be more cost-effective in practice than the arm's length principle.

Moreover, the consolidation and apportionment approach has the potential to prevent the risk of double taxation inherent to the separate entity approach if the same formula is applied across different jurisdictions and might therefore provide *taxpayer equity*. Since again these facts depend on the form of implementation in practice, a further examination of the allocation formula is necessary. In addition, with regard to *neutrality and incentive compatibility*, formula apportionment is deemed to better cope with the issue of income shifting inherent to the arm's length principle.⁸⁰³

However, when implementing the consolidation method along with formula apportionment in practice, it depends on the definition of the consolidated group, on the scope of the income to be consolidated and on the apportionment mechanism used whether a taxation based on formula apportionment is in accordance with the above-mentioned evaluation criteria. Since the organisational structures changed by the use of ICT also have an impact on the suitability of the formula apportionment approach, it has to be examined whether a solution for these issues can be found. For example, the fact that intangible assets are increasingly important for the generation of profits entails issues of locating and valuating intangibles also when applying formula apportionment. It has to be analysed in the following whether the objectives of inter-nation equity, feasibility, taxpayer equity and neutrality can be met in a better way than according to the arm's length principle. Therefore, subsequently, the delineation of the affiliated group, the scope of the apportionable income and the methods of profit apportionment are analysed in more detail with regard to their suitability in light of the evaluation criteria in the age of ICT. The stages necessary to implement the consolidation and apportionment approach that are discussed subsequently in more detail are shown in the following figure.

⁸⁰³ See *McLure Jr.*, 1989, p. 245; *ibid.*, 1997, p. 864; *McLure Jr. / Weiner*, 2000, p. 267; *Jacobs (Ed.)*, 2002, p. 949.

Figure 7.2: Stages to Implement the Consolidation and Apportionment Approach



7.3.2.2. The Delimitation of the Consolidated Tax Base

For implementing formula apportionment, first, the appropriate scope of the consolidated tax base has to be determined. In the following, it is discussed against the background of the ICT-induced economic changes whose income is to be consolidated, i.e. the definition of the group, and which income is to be consolidated, i.e. whether some parts of the income should be excluded from the apportionable base. It is further assumed that the territorial scope of the consolidated group is limited to the European Union according to the so-called water's edge approach.⁸⁰⁴

7.3.2.2.1. Defining the Consolidated Group

To implement the consolidation and apportionment approach, it is required to define the consolidated group. Whilst the inclusion of permanent establishments is obvious, the inclusion of subsidiaries depends on the delimitation of the consolidated group which can be defined either in

⁸⁰⁴ The question of the territorial scope of the consolidated tax base, i.e. the income from where should be apportioned, is not discussed in more detail, since this question is of a general nature and not particularly related to ICT. For a further discussion of this issue in the context of the EU, see *McLure Jr. / Weiner*, 2000, p. 259; *Commission of the European Communities*, 2004, pp. 9-12; *ibid.*, 2004a, p. 10; *Hellerstein / McLure Jr.*, 2004, pp. 206-207. For a detailed discussion of income from third countries in the context of HST, see *Lodin / Gammie*, 2001, pp. 54-55, 86-87, who argue in favour of exempting profits of branches located in, and dividends derived from, countries outside the EU.

terms of legal or economic relationships.⁸⁰⁵ In general, an affiliated group may be defined by legal criteria such as a minimum holding quota (financial integration) or by the economic criteria of an integration of central functions and the existence of economies of scope (economic integration) and a common control or a common management (organisational integration). In the following, these approaches are first outlined and then discussed with regard to their compatibility with the evaluation criteria in the era of ICT.⁸⁰⁶

7.3.2.2.1.1 Description of the General Approaches

According to the *legal definition* of an affiliated group, all affiliates exceeding a certain direct or indirect ownership threshold are included in the affiliated group.⁸⁰⁷ The level of ownership may amount from more than 50% up to 100%.⁸⁰⁸ Alternatively, the scope of the affiliated group and, thus, of the consolidated tax base, can be defined in *economic terms*. Under this approach, all entities which are related to one another as a single economically integrated business belong to the affiliated group. As regards the organisational integration, common control is considered to be a necessary prerequisite for the existence of an affiliated group, since in the absence of common control, firms can pursue their own objectives, rather as non-affiliated companies do.⁸⁰⁹ Common ownership is deemed to be usually, but not always, indicative of common control.⁸¹⁰ In addition, as regards the economic integration, the existence of economic interdependencies such as an integration of central functions is required, which may result in economies of scale and scope or in cost reductions due to shared expenses.⁸¹¹ To justify a finding of unity, these interdependencies must be substantial, so that an allocation based on separate accounting does not provide a reliable result and is practically impossible.⁸¹²

⁸⁰⁵ The delineation according to economic criteria can also be based on entities of the company's organisational structure, such as organisation departments or value added processes. For detailed approaches based on value added processes, see *Oestreicher*, 2000, pp. 208-217, 230; *Graf*, 2003, pp. 250-258.

⁸⁰⁶ For a discussion of the control-concept under IAS 27 as a basis for defining the consolidated group which is mainly based on legal aspects of exerting an influence, see *Schreiber*, 2004, pp. 222-223.

⁸⁰⁷ See also *Commission of the European Communities*, 2004, p. 4.

⁸⁰⁸ See also *Lodin / Gammie* 1999, p. 292; *Schön*, 2002, p. 281; *Commission of the European Communities*, 2004, p. 4.

⁸⁰⁹ See *McLure Jr.*, 1984, p. 105. Common control may even exist at a lower threshold than a certain majority ownership percentage, as it exists if the parent entity exercises some influence on the affiliated companies for the purpose of reaching its own objectives. See *Weiner*, 2002a, pp. 7-8; *Commission of the European Communities*, 2004, p. 4. From an economic point of view, common majority is neither necessary nor sufficient for the existence of an affiliated entity. See *McLure Jr.*, 1984, p. 103.

⁸¹⁰ See *McLure Jr.*, 1984, p. 105.

⁸¹¹ For examples for such economies of integration, see footnote 555.

⁸¹² See *McLure Jr.*, 1984, p. 105. For further details on the economic approach of defining a unitary business, see *McLure Jr.*, 1984, pp. 106-108; *McLure Jr. / Weiner*, 2000, p. 266, who propose the "three-stage test", an approach similar to the one outlined here.

7.3.2.2.1.2 Assessment of the Approaches in Light of the Evaluation Criteria

The two aforementioned approaches are now assessed in light of the above-mentioned evaluation criteria. To permit that an allocation of profits is consistent with *inter-nation equity*, the scope of the attributable profits should include all relevant sources of profits and these profits should be allocated in accordance with the profit-generating activities. In general, the economic approach of defining the consolidated group is assumed to be more in line with the economic reality and thus more coherent with the conception of merging the group income together and apportioning it.⁸¹³ Thus, the economic approach can better take the interrelations between different entities into account. Since these particularities such as economies of scale and scope between different legal entities are one major reason and justification for implementing a consolidation and apportionment approach, such interrelations should lay the foundations for determining the delineation of the entity whose tax base is to be apportioned.⁸¹⁴ It thus seems that economic criteria have the potential to better guarantee inter-nation equity than a legal criterion, since the economic approach can – due to the more realistic definition of an affiliate group – better provide an inclusion of all the relevant sources of profits.⁸¹⁵ Therefore, from a theoretical point of view, the delineation of the consolidated group according to economic criteria should be favoured.

However, in addition to these theoretical criteria, the method for the determination of the affiliated group also has to be *feasible*, meaning that it can be administered by both the taxpayer and the tax administration and that it can be implemented in a cost-effective way. Defining a consolidated group according to a legal ownership test is workable, cost-effective, provides certainty with regard to the entities to be included and can be implemented quickly.⁸¹⁶ In contrast, it seems that the definition of the consolidated group according to economic criteria requires a high administrative effort, is rather subjective and does not provide legal certainty.⁸¹⁷ Therefore, this approach is considered to be less feasible than the legal approach. Taking the example of the United States, there is no uniform definition of a unitary business for state tax purposes, but four tests are applied which have been developed by the courts and which are mainly based on economic criteria.⁸¹⁸ Even

⁸¹³ See *Commission of the European Communities*, 2004, p. 5.

⁸¹⁴ See also *Li*, 2002, p. 845; *Hellerstein / McLure Jr.*, 2004, p. 204.

⁸¹⁵ For example, it has been argued that under a legal approach, it is possible that a company is under a majority ownership but economically unrelated. Then, the income of these entities would be sourced by reference to apportionment factors that would not have contributed to the production of the income in question. See *Coffill / Willson Jr.*, 1993, p. 1114 for further examples; *Commission of the European Communities*, 2004, p. 33; *Hellerstein / McLure Jr.*, 2004, p. 205.

⁸¹⁶ See also *Li*, 2002, p. 845; *Commission of the European Communities*, 2004, p. 5.

⁸¹⁷ See also *Commission of the European Communities*, 2003, p. 22.

⁸¹⁸ These tests combine the aforementioned criteria of a financial, economic and organisational integration in a slightly different way. For further details, see *Miller*, 1984, pp. 140-149; *Coffill / Willson Jr.*, 1993, pp. 1113-1114; *McLure Jr. / Weiner*, 2000, pp. 264-265; *Oestreicher*, 2000, pp. 136-139.

though the unitary method has already been applied for a certain time in the United States, it is stated that almost overwhelming problems exist in attempting to define with any degree of precision what constitutes a unitary business.⁸¹⁹ Thus, already before the increase in the use of ICT, defining an affiliated entity was extremely difficult and constituted a major source of administrative complexity.⁸²⁰ The use of ICT reinforces the issue of defining an affiliated group, as with the increase in and the diversity of hybrid forms of co-operation, the economic entities' boundaries are blurring and economic interrelations are even harder to identify. Now, economic criteria can less than ever provide a clear-cut definition of an economic entity. Instead of boundaries that are clearly defined by attributes such as intercompany participation, ownership of property or a hierarchical organisation, various hybrid forms of co-operation constituting a complex network of relationships between companies or affiliated groups result in blurry boundaries.⁸²¹ Since it is often difficult to find out whether common control exists within these relationships, it becomes more and more difficult to determine the exact boundaries of an economic entity. Therefore, the emergence of hybrid forms of co-operation in the age of ICT increases the uncertainty with regard to the boundaries of an economic entity.

Moreover, the definition of an affiliated group shall not be *susceptible to manipulations*. One disadvantage of the legal approach is that it may open the door for abuse, since a minimum holding quota can be circumvented easily by companies carefully adjusting their ownership interests in other corporations for tax minimisation purposes, depending on whether consolidation or separate company reporting was more advantageous.⁸²² Here, anti-abuse measures can be helpful, such as setting a rather high threshold for inclusion in the group or stipulating a certain minimum amount of time before subsidiaries can benefit from the advantages of consolidation.⁸²³ In addition, both legal and economic criteria entail issues of manipulation in the form of profit shifting by use of transfer pricing if the definition of the consolidated group is more restrictive than the real scope of group control. Then, entities outside the group can be used for profit shifting.⁸²⁴

⁸¹⁹ See *Coffill / Willson Jr.*, 1993, p. 1114. See also *Hellerstein / McLure Jr.*, 2004, p. 204, who state that "... the use of economic criteria to define the consolidated group is a recipe for uncertainty and inconsistency in the determination of the consolidated group."

⁸²⁰ See *Luttermann*, 1996, p. 944.

⁸²¹ For further details and quotations on the emergence of hybrid forms of co-operation, see chapter 2.4.4.

⁸²² See *Coffill / Willson Jr.*, 1993, p. 1114; *Weiner*, 2001, p. 383; *ibid.*, 2002a, pp. 6-7; *Commission of the European Communities*, 2004, p. 5; *Hellerstein / McLure Jr.*, 2004, p. 205.

⁸²³ See *Commission of the European Communities*, 2004a, p. 10; *Hellerstein / McLure Jr.*, 2004, p. 205.

⁸²⁴ For example, it has been argued that if the delineation under economic criteria is more restrictive than under legal criteria, affiliates that are not within the scope of the group can be used for shifting profits by transfer pricing. For more details, see *Commission of the European Communities*, 2004, p. 6; *Oestreicher*, 2005, p. 89.

7.3.2.2.1.3 Conclusion

To summarise, basically, two possibilities exist: one that is conceptually attractive, but administratively cumbersome, and one that is administratively attractive but entails the issue of manipulation.⁸²⁵ In theory, an affiliated group should be defined according to economic criteria, as it depends just on the economic realities – the contribution and dependency between the activities of several affiliated entities – whether an affiliated group exists.⁸²⁶ However, since a legal approach seems to be the only workable approach, a minimum holding quota can provide a workable solution in practice.⁸²⁷ Under a rather narrow legal definition by use of a high threshold, issues of profit shifting as mentioned above occur, whereas with a lower threshold, issues of distortion and manipulation of the ownership threshold rather occur.⁸²⁸ Thus, the inclusion of 75%-shareholdings allowing for changes in the company statutes can constitute a middle course.⁸²⁹ The advantage of the consolidation and apportionment approach consists in the fact that it is no longer necessary to determine the residence of every company, since the taxable entity is the whole group. Thus, the issues of determining a company's residence discussed in chapter 6.1. and chapter 7.1. are mitigated to a certain extent.⁸³⁰

7.3.2.2.2. The Tax Base Distinguished from the Apportionable Tax Base

Furthermore, it is debatable whether all sources of income of the entities belonging to the affiliated group should be consolidated and apportioned by formula or whether particular elements should be excluded from apportionment and be allocated directly on the grounds of their particular nature. Here, a distinction can be made between business and non-business income.⁸³¹ Business income

⁸²⁵ See *Hellerstein / McLure Jr.*, 2004, p. 205.

⁸²⁶ See also *McLure Jr.*, 1984, p. 90.

⁸²⁷ Coming to the same result, see *Commission of the European Communities*, 2004a, p. 10; *Hellerstein / McLure Jr.*, 2004, p. 206.

⁸²⁸ If the group includes affiliates owned less than 100%, the question arises whether the entire 100% profits of such group units should be apportioned by formula or only that share of income equal to the ownership percentage of the consolidated group in the affiliates. For a detailed discussion, see *Commission of the European Communities*, 2004, p. 7; *Hellerstein / McLure Jr.*, 2004, p. 205. Given a high ownership threshold, it seems under feasibility aspects reasonable to include the whole income of the affiliate. Thus, the minimum holding quota of 50% under IAS 27.12 is not considered to be suitable for tax purposes. See *Commission of the European Communities*, 2003, p. 20; *Schreiber*, 2004, p. 223.

⁸²⁹ See also *Scheuchzer*, 1994, pp. 241-242 and section 2 of the Proposal for a European Directive on Cross-Border Loss Compensation which suggests a 75%-threshold, and *Schreiber*, 2004, p. 223, who suggests a minimum holding quota that allows for changes in the company statutes. For example, a 100% threshold is currently applied in Australia, Denmark and Japan, whereas more than 95% ownership are necessary in France, Luxembourg and the Netherlands. For an overview of national regulations, see *Endres*, 2003b, pp. 461-482; *ibid.*, 2003c, pp. S 37-S 40. With regard to the different proposals made by the European Commission, the HST approach differs from the other concepts insofar as it is based on the definition of an affiliated group in the home state. Thus, differing definitions of the affiliated group might lead to inconsistencies and double taxation. Since the other three concepts allow for a new, uniform Europe-wide definition of the affiliated group, they are deemed to be preferable.

⁸³⁰ See also *Doernberg / Hinnekens / Hellerstein / Li*, 2001, p. 372; *Brunsbach*, 2003, p. 209, and footnote 463.

⁸³¹ This distinction is made in the United States, since under the United States Constitution, a state is only allowed to

typically includes all income arising from the activities of the regular business, whereas non-business income typically includes income such as capital gains, dividends, interest receipts and rents. It is assumed that the source of these types of income is identifiable since they are connected with one taxing jurisdiction and would therefore be allocated to the jurisdiction where the income-producing activity is located.⁸³² However, royalties have to be included in the taxable base. If they were not included, the issue of profit shifting would still exist, since intangible assets can be relocated easily for tax purposes.

Normally, formula apportionment is intended to be applied to those parts of income whose source cannot be determined easily. Since, in practice, formula apportionment can lead to a rather inexact attribution of income, income whose source can be identified would, under formula apportionment, not be allocated according to its source. Consequently, under *inter-nation equity*, it is preferable not to include non-business income in the apportionable tax base but to directly allocate it to its source. In addition, the administrative burden of distinguishing between business and non-business income is assumed to be higher than the advantages resulting thereof, since the distinction is notoriously difficult to make.⁸³³ Furthermore, no automatic loss offset across all categories of the group income would be possible.⁸³⁴ Thus, in the end, it seems under *feasibility considerations* preferable to apportion all sources of income by formula apportionment.⁸³⁵ Subsequent to the determination of the scope of the profits to be included, the tax base is consolidated in order to obtain one consolidated tax base of the whole affiliated group.⁸³⁶

7.3.2.3. The Jurisdiction Entitled to Tax a Part of the Consolidated Tax Base

Pursuant to the delimitation of the group's consolidated tax base, it has to be determined in a next

tax income produced by the taxpayer's activities with which it has a substantial connection. For more details, see *Coffill / Willson Jr.*, 1993, p. 1112; *Hellerstein / McLure Jr.*, 2004, p. 202.

⁸³² See also *Musgrave*, 1984, p. 235.

⁸³³ See *Hellerstein / McLure Jr.*, 2004, p. 203, who state that in the United States, this distinction has been subject to considerable litigation. In addition, business income is in general far more significant than non-business income.

⁸³⁴ See *Commission of the European Communities*, 2004, p. 9.

⁸³⁵ See also *Commission of the European Communities*, 2004a, p. 10; *Schreiber*, 2004, p. 224. If 100% of the corporate tax collected is based on formula profits, a very high level of standardisation in the formula is required. See *Commission of the European Communities*, 2001, p. 420, who state that in the United States, up to 19% of the income is allocated according to a formula, in Canada up to 37% which is due to the level of standardisation in formulae.

⁸³⁶ For further details on the consolidation rules, see *Commission of the European Communities*, 2003, pp. 19-20; *Schreiber*, 2004, pp. 223-224. For an overview of the consolidation rules currently used in Europe, see *Endres*, 2003b, pp. 461-482; *ibid.*, 2003c, pp. S 37-S 40. In addition, an agreement on the basic rules for a uniform tax base has to be achieved. Here, the set of IAS / IFRS may serve as a common basis which has to be modified adequately for tax purposes. For a discussion of the suitability of IAS / IFRS as a starting point for a common European tax base, see *Oestreicher / Spengel*, 2001, pp. 889-902; *Commission of the European Communities*, 2003, pp. 16-21; *Spengel*, 2003, pp. 310-314; *ibid.*, 2003a, pp. 29-36, 67-72; *ibid.*, 2003b, pp. 253-266; *Centre for European Policy Studies*, 2004, pp. 4-9; *Rädler*, 2004, pp. 372-375; *Schreiber*, 2004, pp. 224-226; *Spengel*, 2004, pp. 130-140.

step which taxing jurisdictions are entitled to tax the consolidated tax base. It is assumed here that the apportionment of income is effected according to micro factors such as payroll, property, sales or value added.⁸³⁷ As a basic principle, only those jurisdictions in which at least one of the factors of the formula is found should be entitled to tax profits of the group.⁸³⁸

The approach of basing the jurisdiction to tax on the mere existence of apportionment factors in a country seems to be the most consistent with the logic of formula apportionment.⁸³⁹ However, this approach is supposed to be problematic with regard to administrative feasibility, cost-effectiveness and the encouragement of international trade.⁸⁴⁰ In addition, as regards the sales factor, a taxation of doing direct business would take place in the source country which is not consistent with the current international interpretation of *inter-nation equity* according to the supply approach which is favoured here. This tax treatment would even go beyond the introduction of a force-of-attraction rule as outlined in chapter 7.2.1.1.3. Thus, under feasibility considerations, minimum thresholds from which on a taxation takes place should be established for the apportionment factors.

Thus, it seems suitable to use the aforementioned modified definition of a permanent establishment as a minimum threshold to determine whether a company should be subject to tax in the source jurisdiction.⁸⁴¹ Taking this definition as a basis, at least either the payroll or the property factor would exist at the place of the permanent establishment, since they form the basis of the permanent establishment definition.⁸⁴² However, the factor of sales by destination is neither considered in the actual permanent establishment concept in the OECD Model nor in the proposed reforms. Thus, basing the jurisdiction to tax on the permanent establishment definition is insofar more restrictive, as a mere consumer market does not represent a justification for a jurisdiction to tax. When basing the jurisdiction to tax on the permanent establishment definition, an inclusion of the sales factor in the apportionment formula would be similar to implementing a force-of-attraction rule in the permanent establishment definition as discussed in chapter 7.2.1.1.3. The advantages of the permanent establishment approach are that this approach is already a common legal concept which

⁸³⁷ For a discussion of different micro factors, see chapter 7.3.2.4. The determination of the jurisdiction to tax depends to a certain extent on the choice of the apportioning formula. For further details on the choice of macro factors or the use of some industry aggregates and the implications for the jurisdiction to tax, see *Commission of the European Communities*, 2001, pp. 414-415; *Commission of the European Communities*, 2004, pp. 12-14; *Sørensen*, 2004, p. 96; *Wellisch*, 2004, p. 271.

⁸³⁸ Thus, the choice of factors has a bearing on the jurisdiction to tax.

⁸³⁹ See *OECD*, 2003, section 295.

⁸⁴⁰ See *OECD*, 2003, section 295, who argue that this approach might be difficult to administer and that it is debatable whether enough revenue is at stake to justify the cost of compliance. Thus, the same arguments that have been discussed in connection with the minimum threshold inherent in the permanent establishment definition are again valid. For more details, see chapter 7.2.1.1.

⁸⁴¹ See also *Mintz*, 1999, p. 405; *Commission of the European Communities*, 2004, p. 13. For more details on reforming the definition of a permanent establishment, see chapter 7.2.

⁸⁴² Thus, the situation that a permanent establishment exists but that no apportionment factor is located there does not

is considered to represent a suitable minimal threshold for the allocation factors of payroll and property and, as the case may be, for the value added factor. Therefore, this approach is considered to be *feasible* in practice. In addition, this minimum threshold does not infringe *inter-nation equity* in an unjustifiable way. With regard to the sales factor, it is deemed to be in line with the current interpretation of *inter-nation equity* that the mere existence of a consumer market in a source jurisdiction does not entail a taxing right. To conclude, the jurisdiction to tax shall not be based on the existence of at least one of the apportionment factors, but on the existence of a permanent establishment by taking into account the reform proposals outlined in chapter 7.2.

7.3.2.4. The Factors to be Included in the Formula

Subsequent to the definition of the apportionable tax base and the determination of the jurisdictions' right to tax, the apportionment mechanism has to be defined. Firstly, the method of formula apportionment on the basis of the three apportionment factors payroll, property and sales is discussed.⁸⁴³ An example of a formula with equal weights for all three factors is shown below.

$$TB_i^{FA} = CTB \left(\frac{1}{3} \frac{L_i}{\sum_i L_i} + \frac{1}{3} \frac{K_i}{\sum_i K_i} + \frac{1}{3} \frac{S_i}{\sum_i S_i} \right)$$

TB = Tax base
 FA = Formulary apportionment
 CTB = Consolidated tax base
 L = Labour
 K = Property
 S = Sales by destination

In the following, the different apportionment factors are assessed with regard to their appropriateness in light of the evaluation criteria. Firstly, to be in line with *inter-nation equity*, all relevant sources of the generation of income have to be included in the apportionment formula to provide an allocation that is as similar to the real location of profits as possible.⁸⁴⁴ Secondly, the apportionment factors have to be feasible in practice, meaning that the valuation and localisation of the factors should be possible without too much effort and that the apportionment formula has to be acceptable by the jurisdictions.⁸⁴⁵ In connection with this, the location of the factor and the resulting profit attribution should not be directly influenceable by the companies to ensure that the factor

occur.

⁸⁴³ For quotations on an allocation based on macro factors, see footnote 837.

⁸⁴⁴ See also *Wellisch*, 2004, p. 271.

⁸⁴⁵ See also *Schreiber*, 2004, p. 221.

cannot be manipulated easily.⁸⁴⁶ Here, the fact that the inclusion of a factor in the formula works as if the jurisdiction imposes the factor directly provides incentives for circumventive activities.⁸⁴⁷

7.3.2.4.1. Payroll Factor

The payroll factor reflects the contribution of labour as a production factor to the generation of income. The payroll can be *calculated* by the total cost of all kind of labour compensation paid to employees, such as salaries, commissions, and bonuses. These variables can in general be calculated easily.⁸⁴⁸ The payroll factor is *located* at the place where the employee actually works.⁸⁴⁹ If an employee exerts his activities at different places, the payroll could be allocated to each country on the basis of the time spent there.⁸⁵⁰ In the end, a clear localisation of the payroll factor is assumed to be possible.

Due to the increased importance of human capital as a value-creating factor, it is nowadays in either case necessary to include the payroll factor in the formula to consider all relevant factors of income production. Then, an allocation of income similar to the actual source of profits as required by the criterion of *inter-nation equity* could be achieved. The implementation of the payroll factor in the formula is also deemed to be *feasible*, since this factor can be valued and localised easily.⁸⁵¹ Thus, since the location and valuation of the payroll factor is often clear-cut, the payroll factor is deemed not to be prone to manipulation.⁸⁵²

⁸⁴⁶ See also *Schreiber*, 2004, p. 221; *Wellisch*, 2004, p. 272. For example, within the EU, the incidence of profit shifting depends on the degree of harmonisation of the corporate tax rates.

⁸⁴⁷ For a detailed analysis, see *McLure Jr.*, 1980, pp. 328-337, and also *Wellisch*, 2004, pp. 268- 269.

⁸⁴⁸ Also the alternative of using the number of employees instead of payroll is hardly satisfactory due to the differences in labour productivity. Therefore, the aforementioned definition of payroll is the relatively best alternative. For a detailed discussion of the issues of international differences in wage rates and the implicit assumption of equal labour productivity inherent in this approach, see *Oestreicher*, 2000, pp. 184-190; *Commission of the European Communities*, 2004, pp. 17-18.

⁸⁴⁹ This approach is similar to the one of determining the localisation of employees inherent in the permanent establishment definition outlined in chapter 7.2.1.2.

⁸⁵⁰ See also *Li*, 2002, pp. 847-848; *ibid.*, 2003, p. 600; *Schreiber*, 2004, p. 222. According to the practice in the United States, payroll is assigned to a country if the majority of the employee's services are performed there. If services are performed in several states, a kind of a tie-breaker rule is applied. The payroll is attributed to the state in which a part of the services is performed and where the employee's base of operations is located, where the services are directed or controlled or where the employee's residence is located. See *Multistate Tax Commission*, 2004, Reg. IV.14.(1); *Weiner*, 2001, p. 385.

⁸⁵¹ Therefore, the payroll factor is the least controversial of all three factors in the United States. See *Coffill / Willson Jr.*, 1993, p. 1107; *Hellerstein / McLure Jr.*, 2004, p. 211.

⁸⁵² See also *Schreiber*, 2004, p. 222, who argues that the payroll factor can only be influenced by a significant extension or reduction of business activities. The Workshop on the Experimental Application of "Home State Taxation" to Small and Medium-Sized Enterprises in the European Union recommended to use payroll as the sole factor, if a simple formula is sought to allocate profits between the Member States. See *Commission of the European Communities*, 2002a, p. 6, and *Rädler*, 2004, p. 371. Also in Germany, the payroll factor currently constitutes the only factor used. See section 29 subsection 1 of the German Trade Tax Act and *Oestreicher*, 2000, pp. 145-148. A formula based solely on payroll is not adequate in those rare cases in which a server is maintained in a certain country without any company staff. See also *Commission of the European Communities*, 2002, p. 6. Then, no tax revenues would be attributed to this jurisdiction, although profits are generated there.

7.3.2.4.2. Property Factor

The inclusion of a company's property as a factor in the formula reflects the contribution of the property as an income-producing factor. In the following, both tangible and intangible property are discussed, whereas the focus is on the latter, since intangibles are particularly relevant in the age of ICT.

A company's *tangible property* should include all real and tangible property owned or rented by the taxpayer, such as land, buildings, machinery, stocks of goods or equipment.⁸⁵³ Since the company's assets constitute a standard income-producing factor, the property factor should be included in the formula to provide an allocation that can reflect the source of profits as exactly as possible in light of *inter-nation equity*.⁸⁵⁴ The *localisation* of tangible property is easily possible in the majority of cases.⁸⁵⁵ With regard to the *valuation*, the measurement of property gives cause for concern. In theory, a valuation according to the actual fair market value of the assets is necessary. This is determined by the discounted value of the anticipated income inflow the property will generate. However, since this figure is in most cases unknown in practice or its determination would entail a huge administrative burden, it seems necessary to retreat to the property's book value.⁸⁵⁶ A further issue inherent in the property factor consists in the unrealistic assumption of equal productivity.⁸⁵⁷ Since the tangible property factor is verifiable and not very mobile and since a relocation of tangible property in order to shift profits is rather cumbersome, *manipulation* of the tangible property factor is not a serious issue.

In the digital age, *intangible assets* – the company's "crown jewels" – are becoming more important for the generation of profits, whereas the importance of tangible assets is decreasing.⁸⁵⁸ In light of *inter-nation equity*, the property factor should comprise all the relevant parts of a company's

⁸⁵³ This definition corresponds to the definition of the property factor currently used in the United States. See *Multistate Tax Commission*, 2004, Reg. IV.10.(a).

⁸⁵⁴ The jurisdiction in which a company's property is located is entitled to tax a portion of the income generated by use of the property, since it provides for example legal protection and infrastructure. See *Li*, 2002, p. 848; *ibid.*, 2003, p. 601. It has also been suggested that – given that corporation tax is intended to be a tax on the return to capital – assets should be the only apportionment formula. See *Sørensen*, 2004, pp. 95-96.

⁸⁵⁵ See *Li*, 2003, p. 601.

⁸⁵⁶ See also *McLure Jr. / Weiner*, 2000, p. 269. The historical costs should be adjusted by depreciation according to tax rules and indexed by a rate of inflation. For more details, see *Oestreich*, 2000, pp. 178-179, 190-191; *Commission of the European Communities*, 2004, p. 18; *ibid.*, 2004a, p. 5; *Wellisch*, 2004, p. 273. For the current practice of valuation at original cost in the United States, see *Multistate Tax Commission*, 2004, Reg. IV.11.(a).

⁸⁵⁷ For a further discussion, see *Hellerstein*, 1993, pp. 1140-1141; *McLure Jr. / Weiner*, 2000, p. 269; *Oestreich*, 2003, p. 44. Since this issue is not particularly related to ICT, it is not considered further.

⁸⁵⁸ See also *McLure Jr.*, 2000a, p. 1302; *Hellerstein / McLure Jr.*, 2004, pp. 211-212. For further details, see chapter 2.3.3. To define the scope of intangibles in general, IFRS 38 could serve as a basis. See IFRS 38 which defines an intangible asset as an identifiable non-monetary asset without physical substance. An asset is a resource that is controlled by the enterprise as a result of past events (for example, purchase or self-creation) and from which future economic benefits (inflows of cash or other assets) are expected. Thus, the three attributes of an intangible asset are identifiably, control (power to obtain benefits from the asset) and future economic benefits

property. In addition, since royalties are included in the apportionable tax base, the formula apportioning this tax base should include intangible assets.⁸⁵⁹ Thus, it is essential to include intangible assets in the property factor to take the most relevant income-producing factors into account and to achieve an apportionment of profits that is in accordance with the economic reality. Otherwise, a decisive income-producing factor would be missing in the formula and, consequently, the income would not be allocated to its actual sources.⁸⁶⁰ Thus, since especially today, intangible assets may have considerable value even though they may have no book value in the company's balance sheet, ignoring them would be inappropriate.⁸⁶¹ However, when including intangible assets in the formula, novel issues arise, since it is inherently difficult to measure the value of intangibles and to assign a situs to them, as discussed subsequently.⁸⁶²

With regard to the requirement of *feasibility*, both a valuation and a localisation of the income generated by use of a company's property have to be possible in practice. However, the inclusion of intangible assets in the property factor entails issues of valuing and locating intangibles. The theoretically preferable value of an intangible asset should be based on the discounted value of the anticipated income inflow generated by the property.⁸⁶³ Again, these figures can in most cases not be determined and they give leeway to manipulation.⁸⁶⁴ For example, one could calculate the value of a patented intangible asset by discounting the royalties paid for its use. However, since intra-company royalties may be distorted, transfer-pricing issues re-emerge to a certain extent.⁸⁶⁵

It is therefore debatable whether the *costs* for creating and maintaining an intangible might serve as an alternative.⁸⁶⁶ In its Transfer Pricing Guidelines, the OECD distinguishes between commercial intangibles such as patents, know-how or designs and marketing intangibles such as trademarks and trade names.⁸⁶⁷ This distinction is also used for the following analysis. Taking the example of *commercial intangibles*, the costs of R&D and of obtaining legal protection of the intangible could

(such as revenues or reduced future costs).

⁸⁵⁹ For more details on the determination of the apportionable tax base, see chapter 7.3.2.2.2.

⁸⁶⁰ It is assumed here that omitting intangibles from the formula has an effect on the way of apportionment. For a discussion, see *Coffill / Willson Jr.*, 1993, pp. 1107-1108; *Miller*, 1993, pp. 250-251, who assumes that the inclusion of intangible assets does not necessarily affect the apportionment percentage; *McLure Jr.*, 1997, pp. 865-867.

⁸⁶¹ See also *Coffill / Willson Jr.*, 1993, p. 1110; *McLure Jr.*, 1997, p. 865.

⁸⁶² See also *Frieden*, 2000, p. 240; *McLure Jr. / Weiner*, 2000, p. 270. The treatment of intangible assets is even called the "Achilles Heel" of formula apportionment. See *McLure Jr.*, 1997, p. 865.

⁸⁶³ See *McLure Jr.*, 1997, p. 866; *Schreiber*, 2004, p. 221.

⁸⁶⁴ See also *Schreiber*, 2004, p. 221.

⁸⁶⁵ See *Commission of the European Communities*, 2004, p. 19; *Hellerstein / McLure Jr.*, 2004, p. 212; *Sørensen*, 2004, p. 97. For further details of the transfer pricing issues, see chapter 6.3.

⁸⁶⁶ See also IAS 38.74 which stipulates that subsequent to initial recognition, intangible assets should be carried at cost less any amortisation and impairment losses.

⁸⁶⁷ See also footnote 57.

be used to determine the value of the intangible.⁸⁶⁸ The valuation of *marketing intangibles* seems to be more complex, since they are often developed over a period of years in the ordinary course of business.⁸⁶⁹ Here, all costs that were necessary to create the intangible, such as advertising and marketing costs, should be included.⁸⁷⁰ However, particularly in the case of intangibles such as brand names, the costs of creating and maintaining the intangible cannot really represent the actual value. Thus, determining the value of marketing intangibles may be problematic, since there is not necessarily a link between the costs and the actual fair market value of the intangible.⁸⁷¹ To sum up, it seems that even if a valuation at the actual value of the intangibles is preferable in light of international equity, under feasibility considerations, there is no better solution for the time being than a valuation at costs.⁸⁷²

In addition to the valuation of intangibles, assigning a *situs* to them is also particularly difficult since the real location of an intangible is rather fictional.⁸⁷³ If the intangibles are valued at the costs of creation and maintenance, they would be located in the jurisdiction where these activities take place. For example, *commercial intangibles* valued at R&D costs would be located where the biggest part of R&D is conducted, i.e. where the intangible property was developed.⁸⁷⁴ Whilst this approach may be workable for commercial intangibles, the location of *marketing intangibles* whose value is driven by various factors may not be that clear. Under the cost approach, marketing intangibles can either be located where the costs of developing the intangible occurred, which is the supply jurisdiction, or where the costs for marketing activities accrued, which is often the demand jurisdiction.⁸⁷⁵

⁸⁶⁸ R&D costs mainly consist of labour costs, but also of costs for materials, ingredients etc. In addition, headquarter costs related to the license agreement or perhaps costs of assisting the licensee in effectively installing and using the licensed product might be relevant. See *Frieden*, 2000, p. 217.

⁸⁶⁹ See *McLure Jr.*, 1997, p. 866.

⁸⁷⁰ See *Li*, 2002, p. 849; *ibid.*, 2003, p. 601. Again, labour costs, e.g. for publicity experts and marketing analysts, represent a huge part of the costs. The real value of marketable intangibles depends on many factors, including the reputation and credibility of the tradename or the trademark, the degree of quality control and ongoing R&D, the availability of the goods or services being marketed, the extent and success of promotional expenditure and the nature of any right created in the intangible. See *OECD*, 2001, section 6.4.

⁸⁷¹ See also *OECD*, 2001, section 6.27; *Li*, 2002, p. 849; *ibid.*, 2003, p. 601; *Commission of the European Communities*, 2004, p. 19, and *McLure Jr.*, 2000a, p. 1302, who argues that particularly in the age of e-commerce, the value of inputs has little relation to the value of the intangible.

⁸⁷² Furthermore, whatever factor is used for valuation, due to value added networks, it can be difficult to separate the respective contributions performed in different jurisdictions, since intangibles often arise from the synergy effects generated by the interaction of several affiliates in a group. See also *Commission of the European Communities*, 2004, p. 19.

⁸⁷³ See also *Hellerstein*, 1993, p. 1142; *Miller*, 1993, p. 250, who argues that the fictional *situs* of intangible property gave rise to its exclusion in the United States. The difficulties of assigning a *situs* to intangibles also arise due to the fact that a certain part of the excess profit generated within affiliated groups may be derived from intangibles. See *Li*, 2002, p. 848; *ibid.*, 2003, p. 602.

⁸⁷⁴ Certainly, this approach reflects a somehow limited view of the nature of intangibles. See *McLure Jr.*, 1997, p. 867, and *Li*, 2002, p. 849 for an example showing the difficulties of this approach.

⁸⁷⁵ See also *McLure Jr.*, 1997, pp. 865, 867; *OECD*, 2001, section 6.4; *Li*, 2002, pp. 849-850; *ibid.*, 2003,

Due to the difficulties of valuating and locating intangibles, it has been argued that their inclusion in the property factor would provide an additional instrument of tax planning and *profit shifting*.⁸⁷⁶ However, to shift profits on a large scale under the aforementioned cost approach, the location of costs, such as R&D expenditures, has to be influenced which requires at least a certain amount of effort. Furthermore, under a consolidated and apportionment approach, the profits resulting from intangibles cannot be centralised in one jurisdiction as it was the case under the separate entity approach, but are allocated to all jurisdictions under the apportionment formula.⁸⁷⁷ Therefore, the issues of profit shifting by use of intangibles are presumed to be not too serious and they are deemed to be less serious under formula apportionment than under the arm's length principle.

Given the feasibility issues mentioned so far, it is debatable whether such an imperfect approximation of intangibles in the apportionment formula is preferable compared to the complete exclusion of intangibles. The latter possibility is also the current practice in the *United States* where intangible assets are not included in the property factor to avoid the immense feasibility issues.⁸⁷⁸ When this rule was established in the 1950s, a manufacturing age, its possible negative impact as outlined above did not carry weight, since intangible assets were not a significant income-producing factor in this time.⁸⁷⁹ However, the fact that tangible property rather diminishes in importance raises the question about the utility of a property factor focussing exclusively on tangible property.⁸⁸⁰ As a counter-argument, it has been argued that this negative impact might be compensated through other factors. If intangibles are not considered separately, their value would be allocated on the basis of the remaining factors, i.e. payroll, tangible property and sales. For *commercial intangibles*, the activities that gave rise to the intangible and the ongoing costs of maintaining it are then reflected by the property and the payroll factor, since the costs of creating intangibles mainly consist of labour costs and investment costs for equipment.⁸⁸¹ The existence of *marketing intangibles* could be reflected by increased sales which are captured by the sales factor.⁸⁸²

pp. 602-603. Definitely, it has to be acknowledged that the determination of the jurisdiction to which the intangibles are attributable is fraught with difficulties and presents issues that are not likely to arise when limiting the property factor to tangible property. See *Hellerstein*, 1993, pp. 1141-1142. See also footnote 744 on further details on the participation of consumers in the generation of profits and the resulting entitlement to tax for the demand jurisdiction.

⁸⁷⁶ See *Commission of the European Communities*, 2004, p. 19.

⁸⁷⁷ See also *Li*, 2002, p. 850; *ibid.*, 2003, p. 603, and *Schreiber*, 2004, pp. 218-219 for a more detailed analysis.

⁸⁷⁸ In formulas for specific industries, such as financial services, intangible assets are included. See *Hellerstein / McLure Jr.*, 2004, p. 211.

⁸⁷⁹ See *Coffill / Willson Jr.*, 1993, p. 1107.

⁸⁸⁰ See *Frieden*, 2000, p. 241.

⁸⁸¹ See *Miller*, 1993, p. 251; *Li*, 2002, p. 850; *ibid.*, 2003, p. 603. Thus, to some extent, the R&D costs are reflected in the salaries paid to the research staff and in expenditures on equipment to carry out R&D.

⁸⁸² See *Li*, 2002, p. 850; *ibid.*, 2003, p. 603. However, it has to be noticed that the valuation of sales can give a hint to the existence of intangibles, whereas the location of sales at destination is different from the location of the intangibles. For a similar argumentation, see *McLure Jr.*, 1997, p. 865. See also *Hellerstein*, 1993, p. 1141, who

However, since intangible assets constitute a separate production-factor of increasing importance, they should not be omitted from the formula but should be considered explicitly in the property factor. If the difficulties of valuation and localisation of some intangibles are too serious, an alternative would be to restrict the circle of intangibles to those whose value can reasonably be approximated by the costs incurred, for example considering only commercial intangibles and omitting marketing intangibles.⁸⁸³ Moreover, the issue that the cost approach cannot adequately determine the actual value of intangibles can be mitigated by the fact that the difference between the costs incurred and the actual fair market value of the intangibles can be reflected to a certain extent in the sales factor.⁸⁸⁴ However, it has to be noticed that this approximation only works if the intangibles are located in the demand jurisdiction, as it may be the case for marketing intangibles.

To conclude, the omission of intangible assets has turned out highly unsatisfactory, since one of the most important factors for the generation of group profits would be ignored.⁸⁸⁵ Therefore, intangibles should be included and valued according to the cost approach. The issues of valuation and localisation under this approach are supposed to be not too big. Even if a valuation according to the actual market value is not possible, this alternative is supposed to be preferable to the complete omission of intangibles.

7.3.2.4.3. Sales Factor

The rationale for including sales in the formula is to consider the part that sales play in realising profits.⁸⁸⁶ By using sales at destination as one allocation factor, profits are attributed to the jurisdiction where the company generates its revenues by selling goods or performing services. The sales at destination factor should comprise the taxpayer's gross receipts, such as receipts from the sale of tangible and intangible property and from the performance of services outside the group.⁸⁸⁷ Since the sales factor is intended to represent the part that sales play in realising profits, the only

argues that it is not necessary to include intangibles in the property factor since the value of intangibles is adequately captured by the tangible property, the sales and the payroll factor. See also *Schreiber*, 2004, p. 222, who proposes to use wages as a substitute for intangible property since labour costs form the biggest part of the costs for intangibles and since the labour factor is not easy to manipulate. A formula apportionment approach without including intangible assets is still preferable to the treatment of intangibles under separate accounting, since residual profit of intangibles would not be assigned to the owner of the intangible alone, but to all jurisdictions considered by formula apportionment. See *Li*, 2002, p. 850; *ibid.*, 2003, p. 603.

⁸⁸³ See also *Schreiber*, 2004, p. 221. However, then, a clear-cut definition of the intangibles to be included is necessary.

⁸⁸⁴ See also *Li*, 2002, p. 849; *ibid.*, 2003, p. 603.

⁸⁸⁵ See also *Commission of the European Communities*, 2004, p. 19. Also the panel of experts held that an inclusion of intangibles is in general necessary if the property factor is to be really relevant. See *Commission of the European Communities*, 2004a, p. 6.

⁸⁸⁶ See *Commission of the European Communities*, 2004, p. 20.

⁸⁸⁷ See also *Commission of the European Communities*, 2004, p. 20, and for the definition in the United States, see *Multistate Tax Commission*, 2004, Reg. IV.15.(a), which defines sales as all gross receipts derived by the taxpayer from transactions and activity in the regular course of the trade or business.

reasonable possibility is to locate it at the place of demand, i.e. the place of destination or use which is in general the customer's location.⁸⁸⁸ Given the aforementioned assumption that the jurisdiction to tax is based on the existence of a permanent establishment in that country,⁸⁸⁹ the issue arises of how to attribute export sales or services provided outside the area covered by the formula. Here, a throwout rule is considered to be a more consistent approach than the throwback rule currently applied in the United States, even if under the throwout rule possibly a certain amount of income could be excluded.⁸⁹⁰ Moreover, with the jurisdiction to tax depending on the existence of a permanent establishment, an inclusion of the sales factor has a similar effect as a force-of-attraction rule discussed in the context of the permanent establishment definition.⁸⁹¹

An inclusion of the sales factor in the formula is deemed to be necessary in terms of *inter-nation equity* according to the supply-demand approach,⁸⁹² as the sales factor represents the demand side in the apportionment formula.⁸⁹³ Since here, the supply approach is favoured over the supply-demand approach, in general, an inclusion of the sales factor is not favoured in terms of inter-nation equity.⁸⁹⁴ However, one can argue that the inclusion of the sales factor could under certain circumstances capture the difference between the costs and the actual fair market value of the property factor, and here particularly of intangibles, if sales are located in the same jurisdiction as the property.⁸⁹⁵

Under *feasibility considerations*, the sales factor is easy to *measure* on the basis of an objective cash flow amount.⁸⁹⁶ As mentioned above, the sales factor has to be located at the place of demand, since

⁸⁸⁸ In the United States, sales of tangible property are in general attributed to the state of destination, whereas income from the sale of intangibles and from the performance of services is assigned to the state in which the income-producing activity is performed, or, if these activities are performed in multiple states, in which the greatest proportion is performed based on costs of performance. The sourcing of costs of performance is particularly difficult for e-commerce activities. For more details, see *Frieden*, 2000, pp. 214-221; *Hellerstein / McLure Jr.*, 2004, p. 212, and *Multistate Tax Commission*, 2004, Reg. IV.16.(a), Reg. IV.17. If the company is not taxable in the country of destination, a throwback rule is applied for attributing the income to the state of origin. If the income generated by use of intangible property cannot readily be attributed to any particular income-producing activity, the income should be excluded. See *Multistate Tax Commission*, 2004, Reg. IV.18.(c).(3).

⁸⁸⁹ For more details, see chapter 7.3.2.3.

⁸⁹⁰ See also *Commission of the European Communities*, 2004, p. 21, who argue that the throwback rule would re-introduce tax planning opportunities by manipulating the origin of profits.

⁸⁹¹ For more details on this discussion, see chapter 7.3.2.3. This effect would take place correspondingly for subsidiaries and would be neutral in this regard.

⁸⁹² It has to be noted that, here, the supply-demand approach is limited insofar as the jurisdiction to tax should depend on the existence of a permanent establishment. See chapter 7.3.2.3. Consequently, the underlying intention of attributing a portion of income to the demand jurisdiction cannot be realised if no tax attribute exists and the demand factor cannot fully unfold its effect. See *McLure Jr.*, 1997, p. 863; *Oestreicher*, 2000, p. 182. For more details on inter-nation equity, see chapter 5.1.2.

⁸⁹³ See also footnote 744, and for the following discussion, see *Oestreicher*, 2000, pp. 183-184.

⁸⁹⁴ A non-integration of the sales factor coincides with the basic understanding of "source" as it is immanent in the separate entity approach. See *Musgrave*, 1984, p. 240; *Oestreicher*, 2000, p. 180.

⁸⁹⁵ For more details, see chapter 7.3.2.4.2.

⁸⁹⁶ See *Commission of the European Communities*, 2004, p. 20.

the destination-based sales factor is intended to work as a counterpart of the payroll and the property factor both representing origin-based factors.⁸⁹⁷ However, the place of use might in various cases not be easy to determine.⁸⁹⁸ Particularly with the ongoing decentralisation and internationalisation and the increase in digital transactions, the *localisation* of the destination of sales and services provided becomes more complex in the age of ICT. It is thus more and more difficult to identify the place of demand in an exact and, at the same time, cost-effective way. For example, in the case of sales of digital products or the provision of services via ICT, the customer may remain anonymous and his place of residence may be hard to identify with reasonable effort.⁸⁹⁹ In addition, in e-commerce transactions, a clear localisation of sales may be difficult to determine.⁹⁰⁰ Here, various definitions for determining the place of sales come into question, such as the residence of the consumer, the place of consumption, the place of payment or the place of contracting.⁹⁰¹ Particularly in the age of ICT, these definitions do not have to be located at one place. Consequently, due to ICT, situations in which the income cannot readily be attributed and has to be excluded are assumed to occur more often. Also in the United States, the sales factor has generated the most practical controversy of all three factors.⁹⁰²

The location of sales itself is not easy to *manipulate*, since the consumers are rather immobile.⁹⁰³ However, the realisation of sales in a low-tax country entails the incentive to create a tax attribute in order to shift profits to the low-tax country.⁹⁰⁴ With the increased mobility of activities, establishing

⁸⁹⁷ See also *Miller*, 1993, p. 251; *ibid.*, 1995, p. 1030. Thus, by use of an origin-based sales factor, the origin of the profits would be considered twice. Also the aforementioned practice in the United States attributing in certain cases the location of sales to the origin is inconsistent with the underlying rationale of the sales factor. See also *Frieden*, 2000, pp. 221-222. These rules were drafted in a time when major businesses were involved in manufacturing and mercantile activities. See *Miller*, 1993, p. 251. In addition, the different location rules for the sales factor can create inconsistencies between products delivered in conventional form and over the Internet. For more details, see *McLure Jr.*, 2000a, p. 1300.

⁸⁹⁸ See also *McLure Jr.*, 1997, p. 868.

⁸⁹⁹ Although there are possibilities to trace the way and the final destination of data in the Internet, this is only achieved in a time-consuming and cost-intensive manner. See also *Weiner*, 2001, p. 385; *Hellerstein / McLure Jr.*, 2004, p. 213.

⁹⁰⁰ Given the example of eBay, under a destination-based source factor, the location of sales would be where the customer paying the agent's commission resides.

⁹⁰¹ See *Commission of the European Communities*, 2004, p. 20, and footnote 150 for further quotations.

⁹⁰² For example, the location of income-producing activities for localising intangible assets creates special problems. Thus, also under an origin-based determination of sales, feasibility issues with intangibles arise. See *Coffill / Willson Jr.*, 1993, pp. 1109-1110; *Weiner*, 2001, p. 385; *Hellerstein / McLure Jr.*, 2004, p. 213. However, contrary to these feasibility problems immanent in the sales factor, in the United States, a tendency towards an increased weight of the sales factor can be observed which is due to political reasons. As at the same time the payroll and property factors are decreased, business investments can be attracted, since a production site located in these states is not taxed on the basis of capital and payroll. See *Coffill / Willson Jr.*, 1993, p. 1106; *Weiner*, 2001, p. 385; *Schreiber*, 2004, p. 222. However, attracting economic activities does not have the intended effect if sales of intangibles and services are not attributed to market states. See *McLure Jr.*, 2000a, p. 1300.

⁹⁰³ See *Wellisch*, 2004, p. 272.

⁹⁰⁴ See *Schreiber*, 2004, p. 222. Therefore, it has been proposed to exclude sales to countries that do not tax income from the numerator of all sales factors but not from the denominator. See *Hellerstein / McLure Jr.*, 2004, p. 213.

such a tax attribute is now easier possible.⁹⁰⁵ Thus, when including the sales factor in the formula, issues of manipulation occur, but are quantitatively less important than under the separate entity approach.

To *conclude*, the implementation of the sales factor in an apportionment formula cannot be supported under the currently prevailing supply approach, but can only be justified under the supply-demand approach.⁹⁰⁶ Since the supply approach is favoured according to the currently prevailing international tax law, under inter-nation equity, a sales factor should not be included. In addition, it might be difficult to locate the place of sales at destination. However, an inclusion of the sales factor could be justified by the arguments mentioned in the subsequent summary.

7.3.2.4.4. Summary on the Design of the Formula

To sum up the discussion of the three factors above, it has turned out that the main problems are the difficulties with regard to the inclusion of intangibles in the property factor and the localisation of the destination-based sales factor.⁹⁰⁷ Based on this outcome, the design of the formula is discussed subsequently. In any case, the payroll factor has to be a part of the formula. Also the property factor has to be included and should comprise both tangible and intangible assets valued at costs. From a theoretical point of view, the sales factor should not be included in the formula. However, in general, the more factors the formula comprises, the greater is the degree of imperfection that is tolerable with respect to each individual factor because the impact of that factor on the tax burden is averaged with other factors.⁹⁰⁸ According to this argumentation, an inclusion of the sales factor could be justified. In addition, the sales factor can in certain cases count for the difference between the valuation of tangible and particularly intangible property at costs and their actual fair market value.⁹⁰⁹ It seems appropriate to weight the factors all equally.⁹¹⁰

⁹⁰⁵ In addition, for transactions with non-consolidated affiliates, the inclusion of sales entails the incentive to use transfer pricing strategies to lodge sales in low-tax jurisdictions. See *Hellerstein / McLure Jr.*, 2004, p. 213; *Commission of the European Communities*, 2004, pp. 20-21; *ibid.*, 2004a, p. 6. In contrast, under an origin-based treatment of sales, incentives to locate production activities and thus costs of performance in low-tax jurisdictions are accentuated. See *McLure Jr.*, 2000a, p. 1300.

⁹⁰⁶ It has also been proposed to use sales as the only apportionment factor. See *Avi-Yonah*, 1993, p. 1513. However, in addition to the fact that sales are rather to be considered in a consumption tax, a demand-only approach is not consistent with inter-nation equity as interpreted here and is likely to violate international trade rules. See also *Weiner*, 2001, p. 385; *Hellerstein / McLure Jr.*, 2004, p. 210. Another possibility is to use sales as a surrogate for payroll and property and thus to create a formula containing two elements: sales at origin and sales at destination. See *McLure Jr.*, 2000a, p. 1302.

⁹⁰⁷ See also *McLure Jr.*, 2000a, p. 1303.

⁹⁰⁸ See *Miller*, 1995, p. 1031.

⁹⁰⁹ Also favouring a formula based on payroll, property and sales, see *Wellisch*, 2004, p. 273. For an overview of the effects different formulae have on the distribution of income between the jurisdictions, see *Weiner*, 2001, pp. 382-383; *ibid.*, 2002, p. 18. For empirical results on the impact of the choice of the formula on the allocation of tax revenues, see *Sheffrin / Fulcher*, 1984, pp. 192-208 for the United States. As regards the incentives of manipulation for different allocation formulae, see *Pethig / Wagener* 2003, pp. 12-15. Within the EU, the incentive

It can be argued that a standard apportionment formula may produce an arbitrary apportionment or even inequities, as the factors of production vary in importance for different industries.⁹¹¹ Whilst this may be true for some special industries, the advantage of a uniform formula is that no double taxation of the company's profits occurs and that it is simpler to apply, since there is no need to determine the boundaries of different industries and to use the arm's length principle to split income between industries.⁹¹² Thus, for an implementation on a European level, either a uniform formula should be implemented or, if special formulas for special industries are considered to be necessary, they should be implemented uniformly within the European Union. A special formula for the ICT sector is not assumed to be necessary, since the standard formula is also applicable to ICT-intensive industries. In addition, it would be difficult to identify the scope of these industries, since, as outlined in chapter 2.4., every business uses ICT more or less intensively.

When applying such a formula to typical ICT-structures, in the case of a *server* without personnel for example, income would be attributable according to the property factor and, if applicable, partially according to the sales factor. For example, under business models such as eBay, the agent's commission might under the sales factor be apportioned to the server to the extent that the customers are located in the same jurisdiction as the server.⁹¹³ Otherwise, without the inclusion of the sales factor, income would be attributed to the server only on the basis of the property factor. Thus, it is assumed that there is not too much income attributable to the server. Independent of whether the sales factor is included or not, no income is apportioned to a demand jurisdiction in which the company does not have any permanent establishment, since the permanent establishment is here assumed as a threshold for the jurisdiction to tax. Given an *employee* working distantly from the company's premises, income would be attributable on the basis of the payroll factor and, if applicable, of the sales factor. Given a subsidiary in a jurisdiction in which the group's *intangibles* are centralised, the profits resulting from the intangibles would be allocated to the whole group on the basis of the formula.⁹¹⁴

to manipulate the factors can be lowered to a certain extent by stipulating a minimum corporate tax rate. See *McLure Jr. / Weiner*, 2000, p. 263; *Wellisch*, 2004, p. 275; *German Council of Economic Experts*, 2004, section 783; *Spengel*, 2004a, p. 5; and also the analysis in *Schreiber*, 2004, pp. 212-217. To encourage investments, Member States could then provide direct investment incentives. For more details with regard to the impact of the choice between the residence and the source principle on the issue of manipulation, see chapter 7.4.

⁹¹⁰ If sales are included, it can also be argued to weight the supply and the demand side equally.

⁹¹¹ See *McLure Jr. / Weiner*, 2000, p. 259 for further examples; *OECD*, 2001, section 3.67.

⁹¹² See also the discussion in *McDaniel*, 1994, pp. 710-711; *Luttermann*, 1996, p. 945; *McLure Jr.*, 1997, p. 861; *McLure Jr. / Weiner*, 2000, p. 259; *Oestreicher*, 2000, pp. 150-151; *OECD*, 2001, sections 3.64, 3.66; *Weiner*, 2001, p. 385.

⁹¹³ For details on sourcing income from e-auctions, see *Barron / Price*, 1999, p. 415. For more details on e-auction platforms, see chapter 2.4.2.

⁹¹⁴ See chapter 7.3.2.4.2. for further details.

7.3.2.4.5. Apportionment Based on a Value Added Key

7.3.2.4.5.1 Description of the Approach

In addition to an apportionment on a three factor formula as discussed above, the consolidated tax base can also be allocated according to a value added key. This apportionment method is not currently applied but has been proposed as a conceivable alternative particularly for the European Union, as the necessary data is already recorded and collected for the consumption-based VAT system.⁹¹⁵

To allocate the consolidated tax base of the group, the value added is calculated for each member of the group.⁹¹⁶ As shown in the formula below, the ratio of the individual company's part and the total value added of the group forms the base for the part of the consolidated tax base attributable to the company.

$$TB_i^{VA} = CTB \left(\frac{VA_i}{\sum_i VA_i} \right)$$

TB = Tax base

VA = Value added

CTB = Consolidated tax base

Under the *subtraction-based method*, the value added is calculated as follows:⁹¹⁷

Value added = Total value of the output (production) / Total value of the inputs (consumption)

Total output = Sales + Final stocks / Initial stocks (of final goods)

Total inputs = Purchases + Initial stocks / Final stocks (of inputs or materials used to make the final product)

The *addition-based value added* is calculated by measuring value added as the total remuneration to the production factors employed and thus shows where the value added by a company goes. When abstracting from spatial- and temporal-specific notations, the value added can be measured by

⁹¹⁵ However, special rules for the calculation of value added would be necessary for companies that are VAT-exempt, such as financial institutions and insurance companies. In the United States, this allocation factor is not used since there is no VAT on the basis of which the apportionment factor could be calculated. See *Lodin / Gammie*, 2001, pp. 47-48.

⁹¹⁶ See *Lodin*, 2004, pp. 6-8 for an example for a calculation scheme.

⁹¹⁷ See *Commission of the European Communities*, 2004, pp. 22-23. It has to be defined whether the total output should include only sales in the regular course of business or also proceeds from non-regular business, such as dividends, interests, sales of financial assets or rentals. See *Commission of the European Communities*, 2004, p. 32.

adding the labour compensation, interests and profits as shown in the formula below.⁹¹⁸

$$VA = wL + rI + \Pi$$

VA = Value added

w = Average wage per employee

L = Number of employees

r = Interest rate

I = Total level of capital borrowed

Π = Gross before-tax profits

The existing consumption-based VAT system is destination-based. For income tax purposes, an origin-based value added is more meaningful.⁹¹⁹ To convert the existing system into an origin-based system, exports have to be added and imports have to be subtracted. Additionally, the reports for profit allocation purposes have to be converted to an income-type measure for corporate income tax purposes insofar as depreciation has to replace the immediate deduction for acquisition of depreciable assets.

When comparing the two approaches of measuring value added, the subtraction-based method does not calculate profits explicitly – which is exactly what the consolidation and apportionment approach tried to avoid – and it can benefit from existing data collected for VAT reports. Therefore, this method is considered to be more feasible in practice and should be preferred over the addition-based method.⁹²⁰ Thus, the following discussion is based on the subtraction-based method.

As regards the constituents of the value added, it is supposed that labour costs can amount up to 75% of value added.⁹²¹ Thus, the tax burden on labour is extremely high. With the subtraction-based value added approach, there is no need to calculate the cost, value or user costs of capital, which is particularly important for intangibles.⁹²² Thus, intangibles are implicitly included in the tax

⁹¹⁸ When comparing the allocation formula under formula apportionment with the value added key, both concepts are based on similar factors: Both consider a labour and a capital factor, and where formula apportionment uses sales by destination, value added relies on profits. However, the way of weighting inherent the factors differs, since the weighting in formula apportionment is arbitrary, but with value added, it is endogenous and thus chosen by market forces. For more details, see *Commission of the European Communities*, 2004, pp. 31-32; *Hellerstein / McLure Jr.*, 2004, p. 214.

⁹¹⁹ Thus, value should be considered to have its origin where production takes place. This dimension of the definition of value added is of particular relevance for the apportionment of the consolidated tax base. See also *Lodin / Gammie*, 2001, p. 48; *Commission of the European Communities*, 2003, p. 21; *ibid.*, 2004, pp. 25-26; *ibid.*, 2004a, p. 7; *Hellerstein / McLure Jr.*, 2004, p. 215. A destination-based approach would have an objective similar to the one of a conventional destination-based sales factor. Such an approach would entail severe administrative issues, such as recording the destination of sales. For more details, see *Hellerstein / McLure Jr.*, 2004, p. 216.

⁹²⁰ See *Commission of the European Communities*, 2004a, p. 7. The valuation of the factors according to the subtraction-based method can take place on the basis of the profit and loss account and the balance sheet. According to the subtraction-based approach, profits are only calculated implicitly. Both methods should in theory amount to the same figure.

⁹²¹ See *Commission of the European Communities*, 2004a, p. 9.

⁹²² See *Hellerstein / McLure Jr.*, 2004, p. 214. Furthermore, there is no need for special formulas for certain industries. However, the need for new rules for measuring the value added of financial institutions and insurance companies entails a high administrative effort. Moreover, under the value added approach, the way subsidiaries are

base and do not have to be valued and localised explicitly.⁹²³ However, the main drawback of the value added approach is that it re-introduces transfer pricing problems. To determine the value added of each entity, transfer prices of transactions between different companies of the group have to be known.⁹²⁴ As mentioned before, this issue is of special importance for mobile and intangible assets such as intellectual property. In addition, a re-emergence of transfer pricing issues is problematic since this is the key reason why an allocation based on a formula has been suggested and why it may be favoured over the arm's length approach.⁹²⁵ The extent of the transfer pricing issues inherent in the value added approach compared to those inherent in the arm's length principle depends on the ratio between the profits and the value added of a company. It has been shown that the combined value added base for the whole group is often between four to seven times larger than total profit.⁹²⁶

7.3.2.4.5.2 Assessment of the Approach in Light of the Evaluation Criteria

The underlying notion of the origin-based value added approach is that it really seeks to source the origin of taxable profits. It is supposed that profits are at least partially attributed to where they have truly arisen.⁹²⁷ Thus, the value added approach is considered to be basically in line with *inter-nation equity* and is based on the supply approach, since it ignores the demand side.⁹²⁸ However, with the re-introduction of transfer pricing issues, the allocation of the tax base can be impaired by manipulation of transfer prices. Therefore, even if the underlying rationale of the value added approach is consistent with *inter-nation equity*, in practice, profits are not always allocated according to their source. This is a very important drawback of this approach, since exactly such transfer pricing issues should be removed by implementing a consolidation and apportionment approach.

As regards the requirement of *feasibility*, in general, the subtraction-based approach is assumed to be feasible, since the necessary data is often available. Thus, in most cases, the value added at

financed does not affect the value added or the distribution of the tax base. This is due to the fact that VAT includes both interest costs and profits. See also *Lodin / Gammie*, 2001, p. 47.

⁹²³ See *Lodin*, 2004, p. 1.

⁹²⁴ See *Wellisch*, 2004, p. 273.

⁹²⁵ It has been suggested to subtract labour costs from the value added and to base the apportionment on the residual amount. However, since transfer pricing issues are assumed to be aggravated to a great extent, this approach is not supported. For a more detailed discussion, see *Commission of the European Communities*, 2004, p. 35; *Hellerstein / McLure Jr.*, 2004, pp. 214-216.

⁹²⁶ See *Lodin / Gammie*, 2001, pp. 49, 71-73, and the example in *Lodin*, 2004, pp. 4-5.

⁹²⁷ Thus, the issue of apportioning non-business income linked to a certain location as discussed in chapter 7.3.2.2.2. and also the issues of misattribution of income occurring under a legal definition of the consolidated group are softened. See *Commission of the European Communities*, 2004, p. 33. However, see also *Mintz*, 2004, pp. 231-232, who shows that distortion in capital allocation under the value added formula may be greater than under the separate accounting approach.

⁹²⁸ See also *Commission of the European Communities*, 2004, p. 26.

origin can be calculated and localised.⁹²⁹ However, the existing European VAT-system still has to be transferred into an origin-based system which might turn out to be complex in certain cases. Particularly the need for new rules to measure the value added of financial institutions and insurance companies entails a high administrative effort. In addition, the fact that the value added approach puts a heavy weight on labour is not considered to be an appropriate base and is incoherent with other community principles.⁹³⁰

With the re-introduction of transfer pricing issues, also issues of *income shifting* emerge. These issues are supposed to offer limited tax advantages compared to shifting profits under the arm's length approach and it is expected that such a manipulation can be detected easier by the tax authorities and is easier to demonstrate before a court.⁹³¹ Nonetheless, these problems are severe, since such issues were the reason for implementing a consolidation and apportionment approach.

7.3.2.4.6. Comparing the Value Added Approach to Formula Apportionment based on Different Factors

Subsequently, the two approaches for apportioning the consolidated tax base are compared in light of the evaluation criteria. As regards *inter-nation equity*, in theory, an apportionment according to the value added can better represent the real economic activities and is less arbitrary than the formula apportionment approach. Thus, theoretically, the value added approach is superior to the formula apportionment approach. However, with the re-emergence of transfer pricing issues, also under the value added approach, the allocation is distorted which is an important drawback of this approach.

Moreover, the apportionment formula should minimise the scope for companies to *influence the sharing of profits*. As shown above, the formula apportionment approach does not entail transfer pricing problems, but, to a certain extent, entails the incentive to relocate the apportionment factors. However, with the implementation of formula apportionment as proposed above, this incentive is limited. In contrast, the value added base cannot be manipulated that obviously, since the different parts included in the formula are not separable and the relations between them cannot be changed. However, under the value added approach, transfer pricing issues re-emerge explicitly, which is a severe drawback, since exactly these issues should be prevented. Thus, both approaches entail the

⁹²⁹ For more details on feasibility issues of determining sales at origin in the United States without a VAT system as a basis, see footnote 902.

⁹³⁰ See also *Commission of the European Communities*, 2004a, p. 9.

⁹³¹ See *Commission of the European Communities*, 2001, p. 414; *Lodin*, 2004, p. 5. For issues of income shifting under an origin-based sales factor, see footnote 905. As with other consolidation approaches, elements of profit shifting through financing of subsidiaries either with debt or equity do not emerge.

incentive to manipulation, i.e. either the incentive to factor shifting or profit shifting.⁹³²

In general, the value added apportionment approach may be based on the existing European VAT system that is familiar to both tax authorities and companies, whereas the introduction of formula apportionment based on various factors constitutes a new tax scheme for Europe. A further advantage of the value added approach in light of *feasibility* is that the issues of locating and valuating intangibles inherent in the formula apportionment approach do not occur. However, under the value added approach, the main drawback consists in the re-emergence of transfer pricing issues. This drawback is severe, since the prevention of transfer pricing issues is one of the main reasons for implementing a consolidation and apportionment approach. As regards the cost-effectiveness of the approaches, compliance costs due to transfer pricing are opposed to data collection for measuring and valuating the factors.⁹³³ Finally, the feasibility of the two approaches depends on the political acceptance by the Member States affected.

To summarise, the main drawbacks inherent in the two approaches are particularly relevant in the age of ICT: The issues of transfer pricing and of the high tax burden on labour inherent in the value added approach are opposed to the issues related to intangibles and, as the case may be, to sales at destination inherent in the formula apportionment approach. However, with the suggested implementation of formula apportionment mentioned above, the issue of the treatment of intangibles is deemed to be not that severe. In addition, since the elimination of transfer pricing issues was the main purpose of a consolidation and apportionment approach, it is paradoxical to reintroduce these issues by the approach for measuring the factors in the formula.⁹³⁴ Moreover, a central point for examination of the value added approach is that it may sound awkward that an approach aimed at sourcing profits is partly based on profits. If it is known where the profits occur, they can be allocated directly. Therefore, the formula apportionment approach is to be preferred over the value added approach. However, at the end of the day, the political acceptability of the two approaches is the decisive criterion in shaping the apportionment system.⁹³⁵

7.3.3. Comparison Between the Formula Apportionment Approach and the Arm's Length Principle

Subsequently, the application of formula apportionment – on the basis of the aforementioned

⁹³² Other sides of the efficiency properties of a formula could be measured by its effects on government's tax competition behaviour or international fiscal spillover effects. See among others *Wellisch*, 2004a on tax competition under formula apportionment; *Nielsen / Raimonds-Møller / Schjelderup*, 2001; *Sørensen*, 2004, pp. 98-112 on tax spillovers under separate accounting and formula apportionment.

⁹³³ It is difficult to state which one of the two approaches is more cost-effective. For a discussion of the cost effectiveness of both approaches, see *Commission of the European Communities*, 2004, pp. 35-36.

⁹³⁴ See also *Sørensen*, 2004, p. 97.

⁹³⁵ See *Commission of the European Communities*, 2004a, p. 3.

recommendations – is compared to the arm’s length principle in respect of several aspects.

With regard to the *underlying theoretic rationale*, the two approaches differ insofar as the arm’s length principle does not consider the basic essentials of economic entities such as affiliated groups. In contrast, the consolidation and apportionment approach takes into account the fact that several legal entities form an economic entity. Thus, since the theoretic rationale of formula apportionment is in line with the economic reality, this approach is preferable to the arm’s length principle. As regards the criterion of *inter-nation equity*, it has turned out that the arm’s length principle cannot allocate the firm-specific profits according to their source. The consolidation and apportionment approach is conform to the underlying concept of an economic entity and, therefore, in theory has the potential to allocate profits according to their source. However, even if the factors of the formula should represent the source of the profits, the exact profit allocation can only be approximated in practice, since the real source of income is unknown.⁹³⁶

With regard to *feasibility* in practice, the arm’s length principle turned out to be less workable in today’s economic structure which is characterised by a strong increase in intragroup cross-border transactions, a growing importance of intangible assets and a high mobility. The formula apportionment approach prevents issues of identifying and finding comparable transactions. With the aforementioned proposal of implementing formula apportionment, a feasible solution can be reached, even if some issues of valuating and localising the apportionment factors still exist. In addition, the feasibility of a consolidation and apportionment approach depends on the fact whether it is politically realisable. Here, it is debatable whether the required high degree of co-operation between the participating jurisdictions in the European Union can be achieved.⁹³⁷ At least, once the system of formula apportionment is implemented, it seems to be more feasible than the arm’s length principle.⁹³⁸

As outlined above, the arm’s length principle gives the *incentive to shift profits* to low tax countries by use of transfer pricing. Whilst also the formula apportionment approach based on intangible property and sales entails the incentive to manipulation, these issues are deemed to occur to a minor degree, since it is not that easily possible to centralise profits in one jurisdiction. Thus, even if incentives to shift profits also occur under the consolidation and apportionment approach, it is in the

⁹³⁶ In theory, under a competitive equilibrium, both approaches lead to the same allocation. See *Oestreicher*, 2000, p. 181. For more details on determining the source of income, see chapter 5.1.2.

⁹³⁷ The various concepts proposed by the European Commission differ with regard to the feasibility of a political consensus: A mutual recognition may be easier to achieve than a harmonisation of the different tax codes. Particularly for the EUCIT and the CHTB, a political consensus is hard to achieve, as individual Member States are not supposed to give up their fiscal sovereignty easily. See also *McLure Jr. / Weiner*, 2000, p. 271; *Schön*, 2002, pp. 283-284. In particular, the need to reach unanimity in tax matters represents an obstacle for implementing formula apportionment in the EU.

⁹³⁸ The question is: “Are we after a perfect system, or one that works?”, *Miller*, 1995, p. 1030.

end considered to be more stable in this regard.

In addition, the arm's length principle turned out to be very *cost-intensive* with the ICT-induced economic changes. Under formula apportionment, the inefficiencies resulting from the high quantity of separate transactions do not occur.⁹³⁹ Thus, although also the method of formula apportionment may be cost-intensive, e.g. with regard to the valuation and localisation of intangible property,⁹⁴⁰ in the end, it seems to be more cost-effective than the arm's length principle.⁹⁴¹ Furthermore, a *double taxation* of profits occurs under the arm's length principle if transfer prices are adjusted by only one jurisdiction and if there is no obligation for the other jurisdiction to adjust the transfer price accordingly. Under formula apportionment, with the application of one uniform formula as proposed here, a double taxation of profits does not occur. Consequently, in the end, it depends on the respective conditions under which approach the risk of double taxation is higher, but the risk of double taxation may be reduced by introducing formula apportionment.

To summarise, formula apportionment is not a cure for all the problems inherent in the arm's length approach. The issues are in a way displaced from finding transfer prices to the determination of the factors in the formula.⁹⁴² It seems that the main drawback of both concepts consists in the same issue: Whilst the arm's length principle is criticised with regard to its inability to cope with intangibles, also under formula apportionment, intangible assets raise some of the main issues.⁹⁴³ However, if the aforementioned recommendations for implementing formula apportionment are taken into account, the formula apportionment approach is supposed to be more suitable for the economic structures changed by ICT and, therefore, should be preferred. To conclude, formula apportionment is considered to constitute a suitable alternative for profit allocation, in particular for the European Union. This new approach of apportioning profits within affiliated groups and between a permanent establishment and its head office would have to be implemented in the respective Double Tax Conventions and replace the current arm's length approach.⁹⁴⁴

⁹³⁹ Moreover, the consolidation and apportionment approach entails further substantial advantages resulting from the consolidation of income, such as the cross-border loss offset and lower compliance costs. For more details, see *Commission of the European Communities*, 2001, pp. 383-387. In addition, differences between permanent establishments and subsidiaries cease to matter for tax purposes. See *McLure Jr.*, 2002, p. 18; *Schreiber*, 2004, pp. 223-224, and *Miller*, 1984, p. 137, who argues that the unequal treatment of foreign permanent establishments and subsidiaries gave rise to introduce formula apportionment in California.

⁹⁴⁰ See also *OECD*, 2001, sections 3.69-3.70.

⁹⁴¹ Compliance costs can also be decreased under formula apportionment since companies have to deal with only one tax code. However, differences exist among the concepts proposed by the European Commission. Under HST, no additional tax system has to be introduced, whereas under the other concepts, the costs for the tax administration may even increase due to the operation of two tax codes. See *Commission of the European Communities*, 2001, p. 398. Moreover, since the formula apportionment approach is limited to the EU, companies doing business in countries outside the EU would need to apply two set of rules. See *McLure Jr. / Weiner*, 2000, p. 259.

⁹⁴² See also *Jacobs* (Ed.), 2002, p. 282.

⁹⁴³ See also *Coffill / Willson Jr.*, 1993, p. 1108.

⁹⁴⁴ Thus, Article 7 and Article 9 of the OECD Model would have to be adjusted. In this context, the long-term idea of

7.4. Source Principle Versus Residence Principle

7.4.1. Remedies for Issues Discussed Under the Arm's Length Principle

As analysed above, the residence principle is under theoretical aspects preferable, whereas the source principle is considered to be the more feasible approach in the international context.⁹⁴⁵ The issue of manipulating the relevant tax attributes inherent in both approaches can be mitigated with the reform approaches for the tax attributes outlined in chapter 7.1. and chapter 7.2. Thus, to prevent the opportunities of manipulating the country of residence under the residence principle, the reforms with regard to the place of effective management are helpful. The issues of identifying the source of income and calculating the correct amount, which are relevant to the source principle and also for the residence principle, can be mitigated by the amendments to the tax attributes in the source country.⁹⁴⁶

7.4.2. Source-Based Taxation Under a Consolidation and Apportionment Approach

Under the consolidation and apportionment approach, in a first step, the income of the whole affiliated group is consolidated, meaning that the profits and losses of the entities belonging to the affiliated group are set off. As a consequence, all kinds of inter-corporate transactions do no longer constitute a taxable event, since they are netted out.⁹⁴⁷ Also a transfer of profits is not taxed. The consolidated income apportioned by the formula is then finally taxed in the respective jurisdiction. This approach is applied among the federal states in the United States.⁹⁴⁸ Also for implementing a consolidation and apportionment approach in the EU, the European Commission assumes that the income attributed by the formula to a jurisdiction is finally taxed in this jurisdiction.⁹⁴⁹ This approach is then applied consistently to both permanent establishments and subsidiaries.

When analysing whether the source principle or the residence principle is realised with a consolidation and apportionment approach implemented in this way, it turns out that this approach constitutes a mixture between the residence principle and the source principle. The difference compared to the source principle is that the generation of profits and the tax payments in a jurisdiction are less closely connected.⁹⁵⁰ This is due to the fact that, for example, with the consolidation of profits and losses within the group, losses arising in one jurisdiction lower the tax

an European Model for a Double Tax Convention might become relevant.

⁹⁴⁵ See chapter 6.4. for a more detailed discussion.

⁹⁴⁶ In the end, clear-cut and feasible definitions of nexus in the source and in the residence country are more important than the question whether source-based or residence-based taxation is applied.

⁹⁴⁷ See also *Musgrave*, 1984, pp. 235-236; *Schön*, 2002, pp. 281-282.

⁹⁴⁸ For more details, see *Musgrave*, 1984, pp. 230-232.

⁹⁴⁹ See *Commission of the European Communities*, 2004, pp. 10-11, and also *Devereux*, 2004, p. 83; *Hellerstein / McLure Jr.*, 2004, p. 207.

⁹⁵⁰ See *Fuest*, 2005, p. 25.

payments of another jurisdiction. As a consequence, due to the differences in the taxable base, under the consolidation and apportionment approach, no pure source principle is implemented. Furthermore, the difference compared to the residence principle consists in the fact that the income attributed to the respective parts of the affiliated groups are not taxed according to the tax level in the residence country but according to the tax level in the source country.⁹⁵¹ This approach is considered to be in line with the underlying idea of a consolidation and apportionment approach.

Thus, particularly under a profit allocation based on a consolidation and apportionment approach, a mixture between the source and the residence principle as shown above is considered to be the most suitable and feasible approach. In addition, it is supposed that this mixed approach is more likely to be accepted politically and is, therefore, easier to implement. The incentives to factor shifting under the arm's length approach and the source principle are mitigated now, since it is supposed to be more difficult to shift profits under formula apportionment than it is under the arm's length principle.⁹⁵² Moreover, the issues of manipulation within the European Union can be mitigated by establishing a minimum threshold for corporate tax rates.⁹⁵³ To conclude, even if on the basis of some theoretical arguments the residence principle is favoured, under a consolidation and apportionment approach, the implementation of a mixed approach seems to be the only feasible and politically realisable solution. With regard to income from third countries which is not included in the consolidation and apportionment scheme and income from companies that have not opted for the consolidation and apportionment approach, the results of the analysis conducted above are again valid. Thus, it is from a theoretical point of view favourable to apply the residence principle to income from third countries, but it is debatable whether this approach can be implemented in practice.⁹⁵⁴

⁹⁵¹ In contrast, a taxation according to the residence principle would raise more feasibility issues under formula apportionment than under separate accounting. To provide for a final taxation according to the tax level in the residence country, at the moment of allocation, a subsequent taxation would be necessary if the tax levels differ. Moreover, a taxation of transfers of profits within the group is not reasonable, since they are not assumed to be taxable events under the consolidation concept.

⁹⁵² For more details, see chapter 7.3.3.

⁹⁵³ For a more detailed discussion and further quotations, see footnote 909.

⁹⁵⁴ With regard to the treatment of income from third countries, see also *Commission of the European Communities*, 2004, pp. 10-11; *ibid.*, 2004a, p. 10.

8. Summary

The aim of this thesis was to compile the principal effects and issues of international company taxation resulting from the increased use of ICT and to develop suitable reforms if required.

In the analysis with regard to the implications of *ICT* on the organisational structures of the economy, it has turned out that the increased use of *ICT* within the economy entails the creation of digital markets with new business models mainly based on services and intangible assets, such as digital products. In addition, a regional and organisational decentralisation takes place within the internal organisation of companies leading to a rising number of intragroup cross-border transactions. The importance of human capital and intangible assets as factors of production increases. Moreover, different hybrid forms of co-operation between companies emerge, such as virtual organisations. Since these developments are relevant to the whole economy, each company is affected to a greater or lesser extent.

Subsequently to the analysis of the changed economic structures, the implications of the economic changes on possibilities of *international tax planning* of companies have been analysed in order to figure out the tax fields that are relevant in the age of *ICT*. In general, with the increased mobility of business activities and factors of production as well as the possibility of bridging geographic distances, companies can nowadays reach their tax planning strategies to a greater extent. Thus, the possibilities of making use of the international tax differential to lower the overall effective tax rate are extended. However, also the tax risks have increased in some respects. As a result of the analysis on international tax planning of companies in the era of *ICT*, it has turned out that the main fields which have to be analysed in more detail are the definition of the permanent establishment as the relevant tax attribute in the source country, the tax attributes in the residence country defined by a company's residence according to the place of management, and the profit allocation between economic entities, such as affiliated groups or a permanent establishment and a head office. Moreover, it has to be decided on a taxation according to the residence principle or to the source principle. Subsequently, the impact of international tax planning of companies in the age of *ICT* on the allocation of the international tax base among jurisdictions has been examined. It can be concluded from this analysis that a shift in the taxable base from source countries to residence countries is not supposed to appear, whereas a shift to jurisdictions disposing of favourable investment conditions, in particular low-tax jurisdictions, is likely due to the increased mobility of business activities.

To analyse each of these tax fields in more detail, normative criteria for optimal taxation which serve as *evaluation criteria* have been stipulated subsequently. These criteria are used to evaluate the current tax regulations and to recommend possible reforms. In addition to taxpayer equity and

inter-nation equity, the evaluation criteria include the requirement of a neutral tax system and feasibility of a tax system.

In the context of the analysis of the first tax field, the definition of the *place of management*, it has turned out that it is in certain cases difficult to identify one permanent physical location which indicates the place of management. This is due to the changed organisational management structures in combination with the possibility of communicating via ICT without meeting physically. For example, a company's place of management may be mobile, there can be several places of management and the place of management may be situated in a location differing from the one of the company's main activities. Consequently, the residence jurisdiction of a particular corporation may be ambiguous. Thus, the place of management according to national laws and as a tie-breaker rule under the OECD Model does in certain cases not provide clear-cut results. It therefore has to be analysed how to revise the definition of a company's residence to ensure reasonable results also for the changed organisational structures. Beyond, the requirement of ascertaining a place of residence for each legal entity within a group can in principle be questioned.

With regard to the examination of the suitability of the *permanent establishment definition* in the age of ICT, firstly, the exemption rule for preparatory and auxiliary activities has to be reformed, since with the decentralised internal business structure, it is not guaranteed that this rule provides an exemption of preparatory and auxiliary activities as intended. Therefore, the current tax law might no longer be neutral and does in certain cases not provide inter-nation equity. Secondly, new working structures such as employees working distantly from the company's premises are not considered adequately under current tax law. Even if in certain cases employees work permanently in the source country and generate a certain amount of profits there, they might not establish a permanent establishment of the company. Since this result does not provide a neutral taxation and is not consistent with inter-nation equity, a reform of the current tax law is necessary. Thirdly, as regards the organisation of markets, it is assumed to be consistent with the evaluation criteria that the remote selling of goods or provision of services does not entail the creation of a permanent establishment under current tax law. In addition, also the fact that a server can under certain circumstances constitute a permanent establishment is considered to be in line with the evaluation criteria.

The currently prevailing approach to allocate profits among different parts of an economic entity, such as groups of companies or permanent establishments and their head office, is the *separate entity approach* along with the *arm's length principle*. In the age of ICT, mainly the separate treatment of each transaction and each legal entity and the comparability requirement are challenged. Thus, the arm's length principle tends to be no longer conform to today's organisational

structures of affiliated entities, since the theoretic rationale underlying the arm's length principle is not consistent with the economic reality of affiliated entities. In addition, the arm's length principle encounters various feasibility issues such as difficulties of finding comparables and identifying separate transactions which result in a tax system that is not cost-effective and may entail a double taxation of profits. To summarise, the issues inherent in the arm's length principle which already existed before the advent of ICT are now accumulated to a great extent and raised in a new dimension. As a consequence, the arm's length principle is further questioned in the age of ICT.

As regards the decision between a taxation according to the *residence principle and the source principle*, from a theoretical point of view, the residence principle providing capital export neutrality is favourable in light of allocation efficiency and taxpayer equity. In addition, the suitability of some assumptions underlying the source principle that provides capital import neutrality is restricted today. Moreover, the ICT-induced feasibility issues of determining the source and amount of income in the source country have a stronger impact on the source principle than on the residence principle. In addition, the residence principle is less susceptible to tax planning. However, it is debatable whether the residence principle can be implemented in practice, whereas the implementation of the source principle is easier to administer.

Based on the outcome of analysing the tax fields in light of the evaluation criteria, suitable *reform measures* have been developed. With regard to the identification of a company's residence according to the *place of management*, also in the age of ICT, the place of management is still a suitable criterion to define a company's residence for national laws and the OECD Model since the management function as such still exists and still constitutes a suitable basis for identifying a company's residence. However, a refinement of this criterion is required. To identify the persons relevant to the management, a substance-over-form approach is recommended. Based thereon, to determine the place of management, further facts and circumstances should be considered beyond the mere decision-making, such as the place of the headquarter or even the residence of the key managers. To avoid that this place is located in a jurisdiction where the company exerts no activities at all, the inclusion of the requirement that the company has to exert economic activities at the place of management is helpful. As regards alternative criteria for the determination of residence, none of these criteria turned out to be advantageous compared to the place of management. Thus, for those rare cases in which the criterion of the place of management does not lead to a clear-cut solution, further criteria are necessary which should be considered in a hierarchy of tests. For both domestic law and the OECD Model, the introduction of a hierarchy of tests consisting of the place of management, the economic nexus, the place of incorporation and the final settlement by mutual agreement is assumed to provide a clear-cut solution in the end.

As regards the reform of the *permanent establishment definition*, also in the era of ICT, the permanent establishment concept should remain the appropriate standard upon which taxation of foreign companies is based. However, several adjustments are necessary due to the various ICT-induced economic changes. Firstly, the auxiliary and preparatory condition has to be refined. To guarantee that really only preparatory and auxiliary activities are exempted, the exceptions referring to specific activities should be abolished. Secondly, employees working distantly from the company's premises in the source country should constitute a permanent establishment if they work permanently in the source country and perform more than auxiliary and preparatory activities. The implementation of such a nexus rule for core activities performed by employees working distantly from the company's premises but under the authority of the company is a reasonable and necessary modification of the nexus in the source country in the era of ICT. By introducing this rule, international tax law is more in line with the evaluation criteria. The overall administrative burden is assumed not to be too high, as the cases in which this rule applies are restricted by the minimum time period of 12 months and by the condition that more than auxiliary and preparatory activities have to be performed. Thirdly, the permanent establishment definition should not be extended to those cases in which the company has no presence at all in the source country. Therefore, as regards organisational changes in market structures, approaches of an enlargement of the permanent establishment concept and the source country's jurisdiction to tax, such as the proposals of a virtual permanent establishment and of introducing a withholding tax, are not supported. This is due to the fact that the underlying assumption of a shift in tax revenues from source countries to residence countries is not assumed to take place and that feasibility issues are supposed to occur with these approaches.

To cope with the aforementioned issues inherent in the separate entity approach along with the arm's length principle to allocate profits among different affiliated entities, a *consolidation and apportionment approach* is suggested for the European Union to be applied to affiliated groups and permanent establishments. To define an affiliated group, although a definition based on economic criteria is preferable from a theoretical point of view and is more in line with the idea of affiliated entities, it seems that the only workable solution is a definition based on legal criteria. Here, an ownership threshold of 75% might be a suitable limitation. A country's jurisdiction to tax should be based on the existence of a permanent establishment definition as outlined above. A formula based on property including intangible property valued at costs and payroll is suggested. From a theoretical point of view, a sales factor should not be included, but it might be considered in order to base the formula on various factors or to count in certain cases for the difference between the valuation of tangible and intangible property at costs and at their actual fair market value. The factors should be weighted equally. An apportionment approach based on value added is considered

to be less favourable, since it reintroduces transfer pricing issues and imposes a high tax burden on payroll. When comparing formula apportionment to the arm's length principle, the formula apportionment approach is more in line with the economic reality of today's organisational structures. In addition, it is supposed to be more feasible, as it is not based on separate transactions and does not require comparability of transactions. However, formula apportionment is not a cure for all problems inherent in the arm's length approach, since the issues are in a way displaced from finding transfer prices to the determination of the factors in the formula. It seems that the main drawback of both concepts consists in the same issue that is particularly relevant in the age of ICT: Whilst the arm's length principle is criticised with regard to its inability to cope with intangibles, also under formula apportionment, the valuation and localisation of intangible assets and sales at destination constitute the main issues. However, if the above-mentioned recommendations for implementing formula apportionment are taken into account, the formula apportionment approach is supposed to be more suitable for the economic structures changed by ICT and, therefore, should be preferred.

As regards the decision on a taxation based on the *residence principle or the source principle*, the issues with regard to the tax attributes in the era of ICT can be mitigated for both principles with the aforementioned reforms of the tax attributes. Under a consolidation and apportionment approach in the EU, it seems that the only feasible and politically realisable solution is a taxation according to a mixed approach, i.e. a combination of the residence and the source principle. This means that the profits are consolidated and then allocated to the respective source jurisdictions where they are finally taxed at the tax rate applicable in the source country.

To conclude, the analysis has shown that the system of international company taxation is in principle still applicable in the era of ICT. Thus, there is no need for new types of taxes or for a complete reform of the current company tax system. However, the advent of ICT has reinforced pre-existing taxation issues that are nowadays raised to a new extent and are relevant to the whole economy, such as the definition of a permanent establishment or transfer pricing issues under the arm's length principle. With the reforms proposed in this thesis, the current company tax system can be enhanced to guarantee a taxation that is in line with normative criteria for optimal taxation and that is feasible in practice.

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