Bleuel, Jens; Stewen, Marcus

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Jens Bleuel*and Marcus Stewen**

Value Added Taxes on Electronic Commerce: Obstacles to the EU Commission's Approach

While e-commerce is developing tremendously fast, domestic politics and legislation labour to keep up with the dynamics of the new technology. Among other things, fiscal law is a particularly explosive area. Here, the current proposal of the EU Commission is to apply the already existing value added tax to e-commerce. By doing so, the Commission hopes to prevent the massive threatened shortfall in tax revenue. How is this approach of the Commission to be judged? Are there any alternatives?

Currently, how to tax e-commerce is a very controversial issue. The starting-point for most recent discussions is the insufficient taxation of e-commerce by existing legislation.[1] The extensive opportunities for tax avoidance and the de facto exemption from tax of numerous transactions on the Internet create great interest among fiscal authorities and ministries of finance. While the European employers' association Unice predicts a growth in e-commerce turnover from euro 6.8 billion in 1998 to euro 55.2 billion in 2001,[2] a similar dramatic development is also to be assumed when it comes to the shortfall in tax revenue from turnover tax. The German Ministry of Finance, for example, sees the danger of "significant tax loss" and "legitimation losses for the whole tax system".[3] In the hope of avoiding those shortfalls in tax revenue, the EU Commission recently introduced a proposal which suggests including Internet transactions in the existing legislation on turnover tax. In the following, the background to this proposal will be explained, analyzed and evaluated.

The act of purchasing online is comparable to "normal" trade in that the sellers offer their products on the Internet and the customers choose according to their preferences. Then, by making a selection on the monitor, the customer expresses his wish to purchase the selected item. As part of the process, consumers choose a method of payment from those offered. Credit card, electronic cash (increasingly so in the future), cash on delivery of the item by mail, and other comparable methods are the varieties generally offered. Yet, a differentiation needs to be made between items that are directly deliverable through the net (online-turnover) and those that are not (offline-turnover). The former are all immaterial goods that can be put into digital form. Besides the important offers of postal and communication services (phone calls for example), pictures, films and music are also some of the goods that can be made digital and online tradable. For example, digital music made available through the Internet is expected by some parties to be capable of taking the place of the CD as a sound-carrier. Also, software, magazines, books and games, among other things, can be purchased on the Internet, just as many other kinds of services (translations, personal service agencies, etc.) or the possibility of visiting virtual casinos or cookery courses. On the other hand, material goods which cannot be put into digital form are not deliverable through the Internet (offline turnover) but can be ordered online (as in the mail order business).

Principally, tax distortions are observed with digital goods. If these items are bought in stores, value added tax is applied. However, if they are downloaded directly from a server, they can be purchased more cheaply because the value added tax does not have to be paid. Up until now, a value added tax is not added on electronic items like software or music purchased on the Internet: for example, in March of this year, the latest novel by best-selling author

* Economist and software developer, Mainz, Germany.
** Johannes Gutenberg University, Mainz, Germany.

[1] For a general criticism of taxation of turnover on the Internet see Jens Bleuel, Marcus Stewen: Grundlegende Probleme einer Besteuerung von Internet-Transaktionen, in: Wirtschaftsdienst, No. 2, 1998, pp. 104-110.

[2] Stefan Afhueppe, Konrad Handschuh, Thomas Kuhn: Big Brother. Die Europäische Kommission will künftig den Handel im Internet kontrollieren, in: Wirtschaftswoche, No. 24, 8. 6. 2000, p. 20.

[3] "Eichel gegen steuerliche Bevorzugung des E-Commerce", in: Handelsblatt, 15. 6. 2000, p. 6.

Stephen King was downloaded 400,000 times from American web pages within the first 24 hours. This method of text transmission left fiscal authorities and traditional booksellers without any income at all. Hence, in view of the predictions of considerable growth for e-commerce, the base of the value added tax is threatened with erosion in the future.

Value added tax can also be legally avoided in purely domestic transactions. Nowadays, it is possible for a German software producer to circumvent payment of German value added tax on domestic deliveries by not sending the items directly to German costumers but delivering them to partner businesses in America and re-importing them: the export and re-import of goods are tax-free.

The EU Commission's Proposal

These distortions of competition have aroused the attention of the EU Commission. Turnover tax represents a mainstay of the state's finances in the EU, in contrast to the situation in many industrial nations. In June 2000, in view of the impending losses of turnover tax, EU commissioner Frits Bolkestein, responsible for the completion of the internal market, introduced a proposal by the EU Commission to tax online transactions extensively. The proposal is based on groundwork for guidelines done by the OECD and with the consent of all the major industrial nations. Those suggestions put into concrete terms what has come to be known as the "taxation framework" which was adopted at the OECD Conference in Ottawa in October 1998. In this "taxation framework", the OECD members come to an understanding that they will treat e-commerce in a neutral way with regard to taxation, i.e. they will neither discriminate against e-commerce by placing additional taxes ("bit taxes") on it, nor will they favour it compared to conventional transactions by installing tax-free zones.

While in the USA, taxation of Internet transactions has been suspended at least until 2001, and Japan has considered a standardized rate of taxation of 5%,[4] the EU Commission wishes essentially to transfer the current, but rather controversial, system of value added taxation to e-commerce. In this process, all online turnover will be regarded, in accordance with the OECD agreement, as "services" (including digitalized books and music, as well as computer software and pay-TV). The fundamental elements of the EU Commission's proposal are the following:

☐ If private individuals within the European Union purchase items online from a business located in the EU (so-called Business-to-Customer [B2C]), value added tax will be levied at the seat of the EU company (origin principle).

☐ However, if the goods are sold from any company to an EU company (so-called Business-to-Business [B2B]), the customer pays value added tax in the country in which his business is located (destination principle).

☐ Deliveries to customers in countries outside the European Union are free of value added tax.

☐ If a business outside the EU delivers to private individuals, the business needs to be registered in a country that is a member of the EU. This regulation would only be directed at enterprises that have annual turnovers within the EU exceeding € 100,000. All other businesses would be exempted.

These proposals have been received positively by the majority of European politicians. With regard to the imposition of taxes, European countries welcome the exemption of exports as well as the equal treatment of imports from within the European Union to those from non-EU countries. The greatest hopes, of course, are on the side of fiscal policy ("to close loopholes in tax policies"). The German Minister of Economics and Technology, Mueller, also hopes "for more legal certainty and transparency" if legislation targets the new regulations. It may well be that fiscal authorities and businesses still need to engage in "technical preparatory work", but "this would not put a greater bureaucratic burden on the enterprises than they already carry in the present system of turnover taxation".[5]

However, considerable reservations are appropriate about whether or not those hopes will be realized. Indeed, the system of regulations which is presently in effect does not guarantee that value added tax is levied on all deliveries to the European Union. Yet it needs to be questioned whether those suggestions presented by the EU Commission will actually close this gap in tax law. At first glance, collecting taxes on electronic products does not seem to be a problem from a technical point of view, because e-commerce enterprises already pay tax to the inland revenue office. The tax is added to the prices of the products and therefore increases the prices of the goods accordingly. However, when one looks at the Commission's proposal again, considerable control expen-

[4] Joachim Hoenig: Streit um Besteuerung von E-Commerce, in: Handelsblatt, 1. 3. 2000, p. 3.

[5] German Federal Ministry of Economics and Technology, in: Tagesnachrichten, No. 11007, 14. 6. 2000, Berlin, p. 1.

ses arise as well as bureaucratic problems, the responsibility for which is almost exclusively shifted onto private businesses.

Fundamental Problems of Taxation of Turnover

Attempts to levy turnover tax on online transactions encounters crucial methodological complications. First of all, we must distinguish between material goods and immaterial, digital goods. The current regulations on turnover tax are applicable without problem with regard to e-commerce trading of material items (offline-turnover), e.g. in the mail order business. There are hardly any opportunities for tax avoidance here either in domestic trade or in foreign trade. The application of monetary compensatory amounts does not cause any problems because the goods either materially cross the border or can be detected in their "storehouse in the hinterland".

In comparison, imposing turnover tax on immaterial, digital goods (online-turnover) proves to be very problematic: furnishing proof of transactions of digital items liable to tax is extremely difficult. This basic problem has extensive consequences for

- ☐ the exemption of exports from taxation
- ☐ the imposition of turnover taxes on imports
- ☐ the control of transactions within domestic economies.

Because of the regulations currently in force, goods would have to be exempted from domestic turnover tax when exported. However, on the other hand, if imported, goods are liable to domestic turnover tax on imports. In both cases the identity of the customer would need to be known. The exporter would need to prove that he delivered to a foreign country, and tax authorities would have to identify the location of consumption to carry through the taxation of imports. In addition, controlling taxation on transactions within the domestic economy is made more difficult for the fiscal authorities, because they have to prove that companies made taxable deliveries to the home market. If the identification of the nationality of the customer appears difficult, businesses can feign exports.

These technical difficulties, however, are ignored to a large extent by the EU Commission. Instead, the Commission demands that the enterprises

- ☐ specifically distinguish between business purchaser and private purchaser
- ☐ obtain information as to the location of the headquarters of their customers.

The EU Commission plans to hold private businesses liable to recourse if they make false statements regarding the home country of the purchaser.[6] This liability leads to incalculable risks in the affected branches because with transactions made on the Internet it is often impossible to detect either the home country of purchasers or even whether they were businesses or private purchasers.

To be able to give an opinion on whether the technological problems can be solved after all, one needs to take a closer look at what exactly causes the present problems of identifying customers on the Internet and what possibilities are available to find out

[6] Nina Bovensiepen: Finanzminister knabbern am Internet-Kuchen, in: Süddeutsche Zeitung, 7. 6. 2000, p. 2.

their nationality. To answer these questions a brief technological digression is necessary.[7]

Identification of the Purchaser

There are two possibilities for identifying the buyer on the Internet. First of all, the delivery path of the goods could be traced. Secondly, the payment path would reveal the origin of the money that was used to pay for the commodities.

A digital commodity is always transmitted between two computers on the Internet. However, tracing the path of delivery of a commodity may result in problems. It is true that the final destination of the delivery is determined by an unambiguous computer address. This address can be indicated by either 4 numbers (each between 0 and 255) or a corresponding sequence of signs (for example, www.uni-mainz.de), which is easier to memorize. This sequence generally has an international code (for example, ".de") at the end, but it does not necessarily have to have this specific code, as is generally the case for commercial suppliers (www.ibm.com). Even if the address ends with ".de", German origin cannot always be assumed, because ".de"- addresses can also exist on servers located abroad. The country of final destination can therefore not always be identified unambiguously simply by paying attention to the sequence of characters of the computer address. Technologically speaking, the address always provides information on the partial network within the Internet. Provided that this partial network only exists in one country, the country could be detected by the domain name registration service.[8] The destination computer is connected to this partial network. If this target computer is connected to a large online-service operating on an international level (Internet service provider), such as Compuserve or AOL, which technically speaking represent a partial network in the Internet, the network address is assigned dynamically. That way, some of the limited network addresses can be shared by several online-service customers. It is highly unlikely that all these customers will want to access the network at the same time. This means that the same target computer has different computer addresses at different points in time, and also, that a computer in the United States and one in Germany can have the same computer address at different times.[9]

Moreover, it is possible to obscure the identity of the purchaser deliberately. Some services provide an e-mail address anonymously through the WWW (which is comparable to a mailbox company). It is quite easy to acquire several Internet addresses, even in countries that do not impose any turnover tax at all.[10] Furthermore, the so-called onion technique has been developed,[11] which connects several intermediate computers between the address of the sender and the destination computer. In this way the sender remains unknown. In conclusion, the delivery path cannot always be traced by means of a computer or e-mail address.

Identifying the buyer via the payment path is also difficult.[12] The Internet provides various methods of payment, which in future will mainly be based on credit cards and electronic cash. In order to protect the customer from analyses of consumer behaviour, all accounting systems strive for anonymous procedures. At the moment, a certain percentage of payments are still directly deducted from credit cards. Because of the international country code included in the credit card number, the home country of the buyer could be determined. In future, however, credit card payments will be completed under the SET (secure electronic transaction) protocol, which will hide the buyer's identity and his or her credit card number from the seller. This standard is already used by the larger credit card organizations.[13] The German Deutsche Bank, on the other hand, is planning, together with DigiCash, a pilot project that will employ electronic

[7] For the following paragraph see Jens Bleuel, Marcus Stewen, op. cit, p. 107 ff.

[8] Names of domains are currently assigned by such services as InterNIC, see: Internet URL: http://www.rs.internic.net/ (29. 6. 2000) (Note for the reader: in the following bibliograpical sources which were only accessible to the authors by Internet are cited by the correct access information. Not only is the Internet address mentioned, but also the specific time when the information was requested (which is the international standard for citing Internet resources). "URL" is short for "Uniform Resource Locator," which takes responsibility for the unambiguous designation of resources worldwide. See: Jens Bleuel: Citing of Internet-Sources. Short Version. 2000. Internet: PURL: http://purl.oclc.org/NET/Bleuel/Zitieren, URL: http://www.bleuel.com/ip-zit.htm.

[9] The principle of dynamically assigning addresses is currently increasingly used in larger networks with limited computing capacity, for example also at some German universities. This principle is grounded primarily on the tendency to use limited capacities efficiently. If the same address is assigned to different computers at different times, identifying the buyer by means of his or her computer address clearly becomes more difficult.

[10] See for example NetAddress: Internet URL: http://netaddress.usa.net (29. 6. 2000).

[11] See D. M. Goldschlag, M. G. Reed, P. F. Syverson: Privacy on the Internet, Naval Research Laboratory, Washington, D.C., Internet URL: http://www.itd.nrl.navy.mil/ITD/5540/projects/onion-routing/inet97/index.htm (29.06.2000).

[12] Similarly also Harmen Lehment: Eine Online-Mehrwertsteuer ist der falsche Weg, in: Handelsblatt, 3. 4. 2000, p. 2.

[13] See: Internet URL: http://www.visa.com/nt/ecomm/security/set.html (29. 6. 2000).

cash. This procedure makes use of the so-called "blind signature", which leaves the purchaser completely anonymous.[14]

All in all, it is hardly possible to determine the identity or the country of destination of the buyer, whether via the delivery path or via the payment path. Therefore it is extremely difficult to see whether the transaction was a domestic one or one with a foreign country. Monetary compensation for exports and imports at the border, which is indispensable to the destination principle, is consequently difficult to achieve. The German Ministry of Finance also admits that identification and control of seller and buyer would cause "considerable difficulties" because of the peculiarities of the Internet.[15] If at all, the bureaucratic costs imposed on businesses could only be met by large-scale enterprises. Translating the suggestions of the Commission into action would consequently mean considerable disadvantages for medium and small-scale enterprises and would therefore result in significant difficulties for such enterprises to compete.

Registration of Non-European Businesses

How to handle suppliers from countries outside the European Union is also highly controversial. Some EU members (especially those that have high value added tax rates such as the Scandinavian countries) fear new impulses for tax competition within the European Union. And indeed, the relevant enterprises will settle where the value added tax is lowest (which is presently Luxembourg). Consequently, it is very likely that the complete tax revenue from the Internet will be channelled into a few countries. This means that the exceptions to the destination principle which until now were only applied to direct on-the-spot purchases by private individuals, will be extended to include digital goods that are imported into the European Union.

However, the problems associated with translating the obligation to register into action may be insurmountable. In particular, it is unclear if and how a US company, for example, can be forced to be registered in a country that holds EU membership. As long as a company does not know about whether the customer is located within the EU – due to the information problems mentioned above – the point of registering remains doubtful.[16] In the end, registration can only be imagined on a voluntary basis; broad-based registration is therefore inconceivable.

Since it is foreseeable that the obligation to register cannot be implemented, the idea should be abandoned. Governments would consequently have to accept the shortfall in tax revenue. However, this shortfall would not be too serious because the business-to-customer transactions only constitute a small part of e-commerce (in 1998 about 20% of worldwide e-commerce turnover). This percentage will probably decrease further in future.[17]

Are There Any Acceptable Alternatives?

We shall discuss the following alternatives to the EU Commission's approach:[18]

- ☐ the extension of the possibilities of controlling e-commerce
- ☐ the establishment of a clearing-house
- ☐ tax liability for end-consumers
- ☐ complete exemption from tax for all Internet transactions
- ☐ taxation according to the origin principle.

Especially within the EU Commission and the ministries of finance, the extension of the possibilities for controlling e-commerce is being considered. On the one hand, it is being discussed whether deliveries should be allowed only to customers who are willing to give details of their address. In the case of payment by credit card, the companies would be obliged to check if the permanent residence of the customer corresponds to the address to which the invoice is sent. Such endeavors would not only contradict the trends discussed above towards the increasing anonymity of customer information on the Internet, but would also come into severe conflict with the principles of data protection. Companies would be forced to violate the private sphere of the consumer, which up until now has been well protected. Furthermore, the EU guidelines would not carry any weight for companies outside the European Union.[19]

On the other hand, the regulatory agency could determine whether the veil of the purchaser's anonymity could be lifted to the extent of revealing the

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[14] See: Internet URL; http://www.digicash.com/ (29.6.2000); for general information on systems of payment on the Internet compare A. Dahl, L. Lesnick: Internet Commerce, New Riders, Indianapolis (Indiana), 1996, pp. 85-122; and J. Bleuel, op.cit, pp. 56-61.

[15] "Eichel gegen steuerliche Bevorzugung des E-Commerce", op.cit.

[16] See also Harmen Lehment, op.cit.

[17] Nina Bovensiepen, op.cit.

[18] At this point we do not discuss the suggestion of a "bit tax"; see: Hanno Beck and Aloys Prinz: Should All the World be taxed? Taxation on the Internet, in: INTERECONOMICS, Vol. 32, No. 2, 1997, pp. 87-92.

[19] See also Harmen Lehment, op.cit.

country of permanent residence. This could be accomplished by including a country code in the form of payment, for example in digital signatures involved in electronic cash transactions. Both the OECD and the EU Commission are working on the idea of identifying the names and addresses of the parties involved in Internet transactions. With the help of "The Internet Corporation for Assigned Names and Numbers" (ICANN), the central institution where all Internet names and addresses are registered, this identification could work by analyzing electronic signatures. Up until now it has only occasionally been discussed whether such monitoring practices are compatible with the fundamental liberal values of democracy.[20]

Another approach being pursued by the EU Commission is making all taxpayers' reference numbers (which each enterprise needs to have) accessible to the public. Then, the companies would have to request and check the reference numbers of all customers in all transactions completed. If a customer does not have such a taxpayer's reference number, it can be assumed that the customer is not an enterprise based within the European Union. However, since the identification of the customer is still limited, it would not be clear whether the transaction was completed with a business customer outside the EU (in which case exports are tax-free) or a private individual (in which case VAT has to be paid). Additionally, this solution would lead companies to spend an enormous amount of time and energy dealing with bureaucratic matters. They would also be held responsible for customers' missing or false information. Furthermore, this solution would pave the way for criminal abuse of the publicly available taxpayer's reference numbers.

The establishment of a clearing house is being discussed as a possible solution to the technical problems. Harald Summa, manager of "Electronic Commerce Forum" (eco), a union of several German e-commerce businesses, suggests providing a third, independent institution between buyer and seller. This particular institution would then also be responsible for the correct payment of value added tax in addition to controlling delivery and money transactions.[21] But it is not clear how many of these institutions would be necessary and also whether the option should be given either to make the use of them compulsory or voluntary. Since a clearing house would also need to solve the problems of identification discussed above, it presently remains unclear how much time and energy would be needed to deal with all the technological and administrative matters involved in establishing such an institution.

An alternative worth thinking about in this respect is the option of making each individual customer – here the end-consumer – instead of the businesses liable to pay value added tax. Following an analysis of the current Internet taxes in the United States, the US Interactive Services Association notes "that the only type of tax that can be applied effectively to Internet and online transactions will be a transaction tax that is imposed upon the purchaser, not upon the industry".[22] If the consumer is liable to pay the tax, this implies the direct taxation of consumption at least in the area of online purchasing. However, the problems of controlling the expenditure of consumers would probably be considerable.[23] Moreover, from the point of view of the tax system, it would surely be difficult to justify that only transactions completed on the Internet and no others should be affected by this "personal expenditure tax".[24]

Complete Exemption from Tax or Origin Principle?

Further proposals, especially those stemming from US government circles, suggest declaring the Internet as a general tax-free zone. According to plans by the US government the Internet should serve as a tax haven and free trade area, without any customs duties or barriers to international trade. The reasons named by Clinton for the planned support of e-commerce are the possible role of the Internet as a growth engine, the creation of new jobs and the possible stimulation of exports.[25] The advocates of the tax exemption point out that a tax rate of zero appears to be the only way to discourage businesses from

[20] For example Stefan Afhueppe, Konrad Handschuh, Thomas Kuhn, op.cit., p. 21.

[21] Martin Erdner: Steuern im Internet: Technisch kein Problem, in: Süddeutsche Zeitung, 7. 6. 2000, p. 2. In addition, establishing a clearing house would limit the risks involved in passing on credit card numbers.

[22] ISA State Taxation Task Force: Logging On to Cyberspace Tax Policy – Executive Summary, Internet URL: http://ww.isa.net/about/releases/taxexsum.html (21. 7. 2000), p. 5.

[23] Harmen Lehment, op.cit. calls such a proposal "illusionary": "...the time and energy put into the administrative matters would be immense, a control hardly possible..."

[24] The discussion on the complete reconstruction of the present system of taxation away from income tax toward a general expenditure tax has lately been boosted, due, among other things, to the implementation of an expenditure tax system in Croatia. See for example M. Rose: Ein einfaches Steuersystem für Deutschland, in: Wirtschaftsdienst, No. 8, 1994, pp. 423-432; as well as M. Rose: Argumente zu einer "konsumorientierten Neuordnung des Steuersystems", in: Steuer und Wirtschaft, 1989, p. 191-193.

[25] See: "Steuerfreie Geschäfte im Internet – Bill Clinton will das globale Netz zur Freihandelszone machen", in: Süddeutsche Zeitung 4. 7. 1997, p. 22.

leaving the European Union. Additionally, they doubt that waiving value added tax would indeed erode the tax base. Even if no value added tax is imposed on e-commerce, there would be an increase in turnover tax and income tax, due to increased use of telecommunications and the effects of growth.[26] Those who are opposed to the tax exemption argue that the Internet, as a booming growth industry, does not need to rely on support in the form of subsidies. Furthermore, an exemption from value added tax would mean a break in the system of taxation. The only goods that are currently exempted from value added tax in some countries are essential goods. Nevertheless, the proposal to exempt Internet transactions from taxation could regain topicality when taxation is increasingly shifted away from a general turnover tax and income tax toward a heavier taxation of the use of natural resources, since different experts estimate that immaterial online transactions could be ecologically favourable.[27]

If it is desired to prevent the shortfall in tax revenue which would be caused by tax exemption of Internet transactions, the general taxation of Internet transactions according to the origin principle represents an alternative.[28] The taxpayers in this case would be domestic companies, and their entire transactions on the Internet would be the object of taxation. Here, two varieties are possible. On one hand, it is possible to impose a tax according to the location where the service is created; on the other hand, the tax could be imposed at the firm's head office. Turnover at the place where the service is created, i.e. the turnover of a domestic server, could be determined very easily by controlling the invoices, especially when electronic cash is used. However, such a regulation would provide incentives to shift the company's Internet offers to countries outside the European Union (where they find tax exemption or a comparably lower rate of tax). Similarly, it remains difficult to define "domestic servers" because the computer does not necessarily need to correspond to the address seen on the web, a fact that was explained in detail above. The second possibility – imposing taxes at the firm's head office – does not involve such problems of identification, but it still encourages companies to avoid taxation by relocating the headquarters to countries that have a lower tax rate.

Conclusion

All in all, the suggestions by the EU Commission for taxing Internet transactions require considerable revision. Presently, it is unclear how enterprises from a third country could be forced to register in a European Union country. Nor is there a solution to the considerable technical problems involved. The identification of the customer, which is necessary for the implementation of the Commission's proposal, remains an unsolved problem. Even the various approaches involving tighter control of the customer do not solve the problems of identification, which are due to the technical peculiarities of the Internet. Furthermore, these approaches are in conflict with the prevailing trends towards increasing the anonymity of customer data on the Internet, and thus involve considerable problems with regard to data protection. When it comes to the heart of the matter, all the ideas proposed by the EU Commission on the taxation of e-commerce amount to the shifting of responsibility for all the unsolved technological problems, including the considerable administrative burdens, onto the shoulders of private enterprises. Not only this, but private enterprises are also forced to assume liability if they fail to get grip on the technological problems, which are presently insoluble.

If the exemption from tax of Internet transactions is not acceptable for political reasons, the only alternative is the origin principle. This would mean that non-European businesses would not be obliged to register. The Internet could then act as an engine to (finally) start the reform of the turnover tax system in Europe with regard to all other goods. Such a reform would lead to the replacement of the destination principle by the origin principle; it has already been targeted for some time and hope that it would in fact be realised has already almost been given up. Yet, even if e-commerce is taxed according to the origin principle, significant shortfalls in tax revenue will be experienced if the rates of turnover tax in other countries differ distinctly from the domestic rate. This difference in tax rate will naturally lead to a relocation of many headquarters abroad. In the end, tax evasion can only be prevented by international cooperation. However, not only globally standardized mechanisms of control would be needed. The major industrial nations would also need to agree upon a uniform tax rate for online transactions. Presently, however, this appears to be a rather utopian idea.

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[26] Harmen Lehment, op. cit.

[27] See for example S. Marvin: Dematerializing The City: Telematics And The Urban Environment, Paper prepared for the Conference "Challenges of Sustainable Development", Amsterdam, Aug. 22-25, 1996.

[28] See also Hanno Beck's and Aloys Prinz's proposal: Ökonomie des Internets, Frankfurt/New York: Campus, 1999, pp. 107 f.