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Book Review

[Book Review of] Taylor, Lester D. : Telecommunication demand in theory and practice : Dordrecht, Kluwer, 1994

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tation; they show a high concentration of capital gains among taxpayers in the highest income groups. "More than half of all capital gains are realized by the richest 1 percent of the population" (p. 300).

Next, *Steven Sheffrin* reviews a broad variety of studies carried out by academics of different disciplines on the influence that the voters' perception of tax fairness might have on tax policy. With regard to the experts' views, incomplete information or knowledge as well as inadequate conceptual frameworks appear to be present in public opinion. Sheffrin, like many others (especially economic psychologists), observes a status-quo bias which mainly determines the preferences for progressivity. Another important observation is that the majority of taxpayers has a tendency to underestimate the tax burden (especially the marginal rates). Additionally, the visibility of taxes is of utmost importance especially when a dislike for more visible taxes exists. Despite some older publications, more recent surveys indicate only a moderate desire for progression. Even the flat rate tax seems to gain increasing acceptance in the public. But one fact is totally clear: "The public does find it unfair when profitable entities pay little or no tax" (p. 332). In addition, the public is not able to determine the effective incidence resulting from the tax and transfer (including subsidies) system as well as from the expenditure side of the budget (public, merit, and private goods). However, tax, transfer, and fiscal illusions are strongly influencing tax policy, not to mention the distorting effects of public debt.

In the final paper, *Richard Musgrave* gives a short and excellent overview on the history of economic thought stressing the benefit rule, ability to pay, and least total sacrifice. In his interpretation of public perception of fair taxation two main points should be mentioned here: (a) "the principle that there should be no discrimination in the treatment of equals is a basic part of our tax mores" (p. 349); (b) "... the public perception ... includes a modest (much short of Rawlsian) correction of poverty at the lower end of the scale" (ibid.).

This conference volume predominantly assembles very convincing research papers, mostly dealing with important empirical questions of tax incidence. The preliminary character of some approaches and answers leaves room for future research and stimulates further comparative studies. I would like to end this review using Steuerle's praise of the Slemrod contribution (p. 211) and extending it to the total volume: "I would like to applaud the effort as being refreshingly honest."

Hans-Georg Petersen

Taylor, Lester D., *Telecommunications Demand in Theory and Practice*. Dordrecht, Boston, London 1994. Kluwer Academic Publishers. XVIII, 406 pp.

This book does a good job at surveying the state of the art in the econometrics of telecommunications demand, both with respect to methodology and with respect to current knowledge about price and income elasticities. It should soon become a standard reference for regulators, analysts and consulting economists within the telecommunications industry, not least because of its extensive bibliography and index. Yet, this specialized book may even be of interest to a wider group of economists, namely to all those who do empirical research on the economics of communication and the exchange of information in general.

People's demand for communication is a challenging subject for economists primarily because of the *dynamics* of communication which are driven by various kinds of external effects. Using consumption externality as the generic term, Taylor distinguishes between network externalities and call externalities. Network externalities arise whenever a new subscriber connects to an existing telephone system. In principle, all existing subscribers then benefit from having a (slightly) wider choice of telephones to reach; the network may hence be considered as a public good – the larger, the better for everyone. Call externalities, by contrast, arise from individual phone calls within an existing network. Obviously, every completed call involves two parties both of whose utility will be affected. Although the utility payoff may be negative in some cases, the expected utility of making and receiving calls remains positive, as is evidenced by the many people who continue to make calls and to answer the phone.

Most empirical studies of telecommunications demand have in the past attempted to quantify network externalities and ignored call externalities. The reason, Taylor suspects, was the prevalent assumption that call externalities are essentially reciprocal, between people who regularly call each other, and that they are internalized by implicit contracts which define whose turn it is to call and how the bill is shared over time. However, recent empirical research of point-to-point toll demand, allowing for bi-directional traffic to be determined simultaneously, suggests that each call in one direction may give rise to two-thirds of a call in return, that phone calls may in fact be self-stimulating to a large extent. Taylor argues that this finding points to two serious identification problems in empirical studies: First, network externalities, which for the purpose of empirical implementation are associated with communities of interest rather than with the size of the entire network, cannot be distinguished from call externalities because both are measured by reverse-traffic. Second, call externalities cannot empirically be distinguished from what Taylor describes as the dynamics of information exchange, the need for further exchange of information created by a previous exchange of information, e.g., the rearrangement of appointments.

The presence of these different kinds of externalities poses problems for pricing the access to and the usage of telecommunications networks. Taylor derives the optimal (Ramsey) prices for access and usage in a regulated service. As expected, network externalities imply smaller departures from marginal costs than does Ramsey's inverse-elasticity rule, but – except for extreme constraints of distributional equity – access, demand for which is less elastic than demand for usage, would never be priced below the marginal costs of access.

Economists have long known that services which cannot at reasonable costs be resold among consumers offer ample scope for price discrimination. Telecommunications is a prime example and Taylor spells out some of the implications of multi-part pricing in his theoretical section. An immediate implication of multi-part pricing are non-linear budget sets which may make both the theoretical and the empirical analysis more complicated. Demand functions may become multi-valued and discontinuous and often cannot be represented by analytical functions for individual subscribers. However, Taylor argues that empirical demand studies which are based on aggregate data can safely ignore these complications. Yet, the degree of complication rises with the heterogeneity of telecommunications users.

The most heterogeneous group of users are businesses and aggregation of data for different units is no longer helpful for many questions. Taylor in fact points out that the study of residential and business demand involve so different sets of issues that consideration in distinct chapters is warranted. He proposes a general model of business demand in which businesses are classified into four distinct stages of development. In stage 1, the firm has just one location and only external telecommunications. In stage 2, the firm has multiple locations in the same locality, so that internal communication between locations becomes an issue. In stage 3, the firm has multiple locations in more than one locality, so that internal communication requires toll as well as local services. In stage 4, the firm is a multinational corporation so that international telephone services will be required for internal as well as external communication. Taylor discusses a number of specific models employing standard regression and quantal choice techniques to study the demand for usage, type of access and customer-premise equipment in each of the four stages.

Taylor's account reflects the fact that research on business telephone demand is still at an exploratory stage. But, at least a beginning has been made, while many other issues are still waiting to be explored. These include the option value of telephone access, demand functions specific to individual telephone companies in a competitive market, and the demand for access to and usage of online services and the internet. Empirical demand studies, along the lines taught in Taylor's inspiring book, could provide valuable clues for introducing efficient pricing schemes for the internet once usage reaches the limits of the net's capacity.

Michael Stolpe

United Nations Conference on Trade and Development, *World Investment Report 1995, Transnational Corporations and Competitiveness.* New York, Geneva 1995. UN Publication. LI, 440 p.

This is the fifth of the annual World Investment Report (WIR) published by the UNCTAD's Division on Transnational Corporations and Investment, formerly UN Center on Transnational Corporations in New York. Before the initiation of annual reports, CTC published quite a few surveys of transnational corporations in world development covering different time periods. Both the surveys and the annual reports have contributed a great deal to the understanding of the role of multinational enterprises in international economic activities and development. Research on foreign direct investment has for long been handicapped by the lack of data. UNCTAD's Division on Transnational Corporations and Investment has been making relentless efforts to fill up this gap. Annual WIRs together with World Investment Directory published by the same institution portray the success of these efforts. Of course, there is a long way to go before systematic and detailed data for all countries comparable to those on domestic investment become available. UNCTAD's efforts are expected to persuade the countries to collect and publish FDI data systematically and regularly as they do for other variables of national and international importance.

Besides a discussion of current developments, every WIR undertakes an in-depth investigation of some selected issues of foreign direct investment. The WIR 1994 examined, for example, the contribution of transnational corporations to employment and human capital development. The WIR 1995 focuses on repercussions of transnational corporations' FDI on their own competitiveness and the economic performance of home and host countries. It has seven chapters. In chapters 1 and 2 recent global and regional trends of FDI flows are analysed following the tradition of its predecessor volumes. By the end of 1993, FDI outflows had largely recovered from FDI recession of the preceding two years. In 1994 and 1995 this recovery was further consolidated. The report points out that the European firms considered as a group continue to neglect South, East and South-East Asia as targets of their direct investments in spite of the fact that this region has proved to be most dynamic in the world. Furthermore, the WIR 1995 lays emphasis on the emergence of transnational corporations (TNC) from developing countries and on changing forms of international transactions.

The special theme related with firm competitiveness and country performance is examined in chapters 3 to 5. The report discusses a whole range of complementarities between increased competitiveness of investing TNCs and performing capabilities of host countries. FDI allows investors to secure markets for goods and services in host countries that are difficult to reach without proximity to customers. Furthermore, FDI