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STATE AND PROVINCIAL CORPORATION INCOME TAXATION

Current Practice and Policy Issues for the US and Canada

by

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1 Introduction

Both in the US and Canada, subnational governments derive significant amounts of revenue from corporation income taxes. In the US, state governments collected approximately US$31.1 bn from this source in 1998, amounting to 6.5% of the tax revenue of state governments. In Canada, provincial governments collect taxes on corporation income as well; revenues from the taxation of corporate income (and, secondarily, from taxation of capital) in 1997–1998 were CA$14.7bn, 10.9% of provincial government own-source revenue and 9.3% of total revenue.

While corporation income taxes are thus important revenue sources for subnational governments in both the US and Canadian federations, reliance on these taxes varies substantially among states and provinces. For example, several states – Nevada, Washington, Wyoming – have no corporation income tax at all, and the corporation income tax contributes less than 4% of total revenues for several other states. By contrast, four states – Alaska, Delaware, Michigan, and New Hampshire – derived more than 10% of total revenues from this source in 1998. Many states have a single corporation income tax rate, but others apply different rates depending on the level of corporate income. Tax rates in the range of 6–8% are common, but tax rates of 5% or less prevail in a dozen states while as many have rates in excess of 9%. There is also substantial variation among the Canadian provinces in the use of corporation income taxes. Provincial corporation income tax rates vary by type of corporation; for large Canadian corporations, they range from a low of 5% for manufacturing firms in Newfoundland[2] up to 17% for both manufacturing and non-manufacturing firms in Saskatchewan, Manitoba, and New Brunswick.

The implementation of a corporation income tax at the subnational level raises a number of interesting and interconnected issues for economic policy, tax administration, and political economy. These issues are of growing importance in an economic environment characterized by increased inter-regional economic in-

[2]There is an even lower 2.5% rate for manufacturing firms in the Yukon territory.

tegration, innovative business organizational structure, and the prospect of more information-based and electronic commerce.

Section 2 of this paper discusses some of the fundamental issues that arise in corporation income tax policy at the subnational level. It also reviews recent experience in the US and Canada, a comparison that is quite instructive because these two federations, which have many similar economic, social, political, and legal institutions, nevertheless have taken quite different approaches to the implementation of subnational corporation income taxes. In particular, US practice exhibits considerable state-to-state variation, whereas policies in Canada are far more uniform. Of particular interest is the divergence between Canadian and US practice regarding the "nexus" issue, that is, the determination of the conditions under which a given corporation is taxable by a province or state. Under current Canadian practice, provinces can only tax corporations with "permanent establishments" within their jurisdiction. In the US, by contrast, the nexus issue is presently the subject of a legal and policy controversy, revolving particularly around the question of whether states may tax corporations that are not "physically present" within their boundaries. Section 3 discusses in greater detail the economic consequences of alternative approaches to this "nexus" issue, that is, to the determination of which corporations may or may not be taxed by state or provincial governments. Section 4 presents a brief summary.

2 Fundamental Issues for State/Provincial Corporation Income Taxation

Corporations differ from natural persons in at least two respects that are particularly important for subnational income tax policy. First, the *location* of a corporation is often not easily defined. The spatial location of an individual, at any moment in time, is definite and, for most practical purposes, verifiable. A corporation, by contrast, can simultaneously undertake economic activities in several or many places; moreover, although it may as a legal matter have a place of incorporation, its location, like its very existence, is a matter of judicial construction and interpretation, not an obviously verifiable matter of fact. Second, again unlike natural persons, corporations can merge, subdivide, or be acquired, dissolved, and restructured in many ways and to varying degrees. When legally

distinguishable business entities are affiliated in some fashion, the question arises as to whether tax liabilities should be determined for each entity in isolation or for several in combination. These two issues – the location and identification of the taxpaying entity – are often intertwined because legal forms of business organization frequently reflect the spatial organization of corporate functions. For example, a parent corporation may own or acquire, in whole or in part, a corporation with operations in one state or province in which components are fabricated and then shipped to the parent (or another subsidiary's) plant in another state or province; the final product may be marketed through a corporation that manages a network of franchisees or dealers in many states or provinces, with customer purchases financed by a separate corporate entity that engages in other general consumer credit operations. If an expansive definition of the taxpaying unit is utilized, then many or all of these potentially separable business activities will be viewed as part of a unified whole, and that whole or aggregate will then be viewed as "present" in a large number of locations. If, however, these units are not aggregated, then each may be considered to be located in only one or a few jurisdictions.

Complex structures of business organization present fewer difficulties for tax policy at the national level, provided that all of the activities of a group of affiliated or related corporations occur within a single country and provided that the corporation income tax is applied at a single rate to all income, calculated on a uniform basis and with full offsets for losses. In this case, different groupings of corporations for tax purposes will affect the tax liabilities of individual entities, but not the total amount of taxable income in the corporate sector of the economy or the total amount of tax revenue collected.[3] At the subnational level, however, the identification of taxable entities and groups and the apportionment of income among them, especially in the presence of interstate/interprovincial tax rate differentials, becomes of critical importance. The resolution of these issues affects the economic incentives created by subnational corporation income taxes and thus their impact on business organization and resource allocation, the amounts of revenue accruing to taxing jurisdictions, and the incentives that subnational governments themselves face in setting their tax policies.

[3]It is a substantial oversimplification to characterize either the US or Canadian corporation income taxes as strictly proportional taxes with full loss offsets. Moreover, intra- and inter-corporate multinational business activity is important for both the US and Canada, raising issues that are substantially similar to those that are the focus of the following discussion. As a matter of degree, however, these issues are more acute at the subnational than at the national level.

As suggested by the foregoing remarks, there are three basic issues that must be resolved in the implementation of corporation income tax policy at the subnational level: (i) Where is the taxpaying unit located for tax purposes, *i.e.*, in which jurisdiction(s) will the taxpayer be taxed? (ii) What is the identity of the taxpaying unit; in particular, if there are several corporate entities, are they treated as distinct and separate units for tax purposes or are they combined? (iii) If the taxpayer is taxable in more than one jurisdiction, how is the taxpayer's income to be apportioned (or "allocated") among them? While these issues can be distinguished from one another, they are highly interconnected. The issue of apportionment has, perhaps, attracted the most attention from economists, mainly, however, with an eye to understanding the economic incentives that different apportionment rules create for business activity.[4]

The following discussion describes how these fundamental issues are managed within the current Canadian and US fiscal systems. It focuses especially on the "where" question, a point of significant divergence in US and Canadian practice.

2.1 What Is a Taxpaying Unit and How Is Its Income Apportioned?

Many aspects of the taxation of the income of corporations by subnational governments differ as between the US and Canada. Before turning to the "where" question, this subsection briefly summarizes some of the other main features of current US and Canadian practice.

2.1.1 Identifying the Taxpaying Unit: The "Who"

The economic and legal linkages among corporations take a wide variety of forms. Sometimes, one corporation completely owns and controls one or more other corporations. Sometimes, corporations have no direct commercial connection whatsoever with one another. But in many cases, the degree of connection between two or more corporations falls somewhere between these two extremes. Mergers, acquisitions, explicit and implicit long-term contracts, consortia, and innumerable

[4]See, for example, Gordon and Wilson (1986), Edmiston (1998, 1999), Mintz (1998), Goolsbee and Maydew (1999), and references therein for discussion of apportionment issues.

other business and contractual forms give rise, in practice, to almost any conceivable degree of integration between different businesses. For the purposes of state and provincial income taxation, it is critically important to determine where one corporation begins and another ends in order to determine a corporation's taxable income and to determine which corporations are taxable at all by a given state or province. At a conceptual level, it is not obvious how this issue is best resolved for tax purposes, and it deserves more attention from economists than it has so far received. For present purposes, however, a concise description of existing policy will have to suffice.

First, in Canada, individual corporations are taxed separately; each is liable for corporation income taxation on its own income.[5] Corporations and their income cannot be combined for provincial corporation income tax purposes. If related corporations engage in transactions with one another, these transactions must be valued at arm's length prices in order to determine the income of each individual corporation. Whatever other possible economic merits or demerits it may have, the Canadian approach is quite simple and transparent.

In the US, by contrast, the definition of the taxpaying unit varies considerably by state, subject to constitutional restraints.[6] Some states insist on treating affiliated corporations as a single entity, so that (for example) the income of a parent corporation and its subsidiaries must be aggregated for tax purposes. Other states allow or require separate accounting for distinct corporations, analogously to Canadian practice. Of course, from the viewpoint of the system as a whole, it is problematic for different states to apply different rules to individual corporations or corporate groups.

2.1.2 Income Apportionment/Allocation: The "How Much"

Whenever a corporate entity is taxable in more than one state or province, the question arises as to how much of its income is taxable in each jurisdiction. In both Canada and the US, corporations must apportion their income among the

[5]For information about business taxation in Canada generally, and for some discussion of provincial corporation income taxation in particular, see Finance Canada (1998) (the Mintz Report).

[6]For a discussion of many aspects of state corporation income taxation, see McLure (1984). Frequently-updated information about policies in specific states can be found in RAI (1994).

taxing jurisdictions.

Under Canadian practice, a corporation must allocate its income among the provinces using a two-factor formula.[7] The corporation first determines what portions of its revenues and payrolls are attributable to each province where it is taxable. These two factors are then used, in an equally-weighted fashion, to allocate the corporation's income among the provinces. Although individual provinces could in principle depart from this two-factor approach, in fact their policies are harmonized; harmonization is facilitated by the federal government, which assists the provinces in the administration and collection of their corporation income taxes.

US practice is, again, determined by the individual states subject to overall constitutional constraints. As revealed in past Supreme Court decisions, these constraints dictate that states use "fair" apportionment rules, but do not mandate the use of specific formulae.

About half of the states are members of the Multistate Tax Compact which recommends, as a model, that all states should apportion income on the basis of a three-factor formula in which a corporation's share of revenues, payroll, and assets within each state are equally weighted. The MTC's model legislation, however (the Uniform Division of Income for Tax Purposes Act, or UDITPA), is not binding on MTC members.

In part because of the influence of the MTC and in part because of historical practice, this simple three-factor apportionment rule is often viewed as the customary practice in the US. However, states need not, and most now do not, follow the equally-weighted three-factor formula for income apportionment. Increasingly, states have come to rely on the sales factor as a primary determinant of the allocation of income. For example, about 20 states now double-weight the sales factor; some attach a weight of one-half to the sales factor, others a weight of between one-third and one-half. Several states even use sales as the *sole* factor for income apportionment, and a number of states are in the midst of a phased increase in the reliance on the sales factor. Thus, although the "traditional" three-factor formula is sometimes used by states, it is would be more accurate to describe the situation in the US as one where sales is generally used as an apportionment factor, often

[7]Different allocation rules may apply to corporations in certain sectors, such as finance or transportation. See Finance Canada (1998) for additional details.

supplemented by other factors. An interesting question for economic analysis, discussed briefly further below, is to consider why the states may wish to alter their apportionment rules over time.

2.2 Nexus: The "Where"

If it is difficult to determine what a taxpaying unit is for subnational corporation income tax purposes, and if it is difficult to decide how to divide the income of multi-jurisdictional entities among states or provinces for tax purposes, one might have thought, at least, that it is relatively easy to determine whether a particular corporation is or is not taxable by a given state or province. Indeed, as Canadian experience shows, straightforward solutions to this problem are possible; as US experience shows, however, complex solutions are also possible.

2.2.1 Canadian Practice

In Canada, a corporation is liable for income taxation within a province if it has a "permanent establishment" there. This policy is uniform throughout the country. The precise interpretation of "permanent establishment" could perhaps be the subject of some dispute, but the concept is fundamentally quite clear: as described in Revenue Canada's *Corporation Income Tax Guide* (T4012(E) Rev. 98),

"A permanent establishment in a province or territory is usually a fixed place of business of the corporation, which includes an office, branch, mine, oil well, farm, timberland, factory, workshop, or warehouse. If the corporation does not have a fixed place of business, the corporation's permanent establishment is the principal place in which the corporation's business is conducted."

In particular, it is clear from this definition that a corporation that has no assets, employees, or other tangible presence in a province is not subject to income taxation there.

2.2.2 US Practice

US states, acting independently, have implemented corporation income taxes with varying definitions of the types of business activities that are subject to taxation. These may include activities that produce income from property within the state, those "doing business" in the state, those that are legally incorporated within the state, and so forth. Broadly speaking, the federal government (Congress and the President) have not intervened heavily in state corporation income tax policy. Because the ability of states to tax corporation income is not, for the most part, spelled out in federal statutes, state taxing powers are limited mainly by the US Constitution, as interpreted by the courts, especially the US Supreme Court. The courts have proceeded cautiously in elaborating the meaning of the Constitution in this area, leaving many questions open for future decisions. Thus, the story of US state corporation income tax policy is inevitably a story of legal decisions and interpretations – treacherous ground for economists, perhaps, but ground that must be covered if the current state of policy and policy controversy, especially regarding the nexus issue, is to be understood.[8]

Under now well-established interpretations of the Constitution, state fiscal policies cannot interfere unduly with interstate commerce (this would violate the "commerce clause"),[9] nor can the states arbitrarily collect taxes on persons (individuals and businesses) located beyond their boundaries (this would violate the "due process" clause).[10] In particular, the due process clause has been held to imply that a state can only tax businesses or people with a "sufficiently strong" physical or other relevant connection to it.[11] Without some such requirement, a state could

[8]See Pomp and Oldman (1998) for a thorough treatment of the constitutional issues involved in state and local taxation and for the text of important court opinions in this area.

[9]According to Article I, Sec. 8 of the Constitution, "The Congress shall have Power ... [t]o regulate Commerce with foreign Nations, and among the several States ... .

[10]The Fifth Amendment, in addition to providing well-known protections against self-incrimination, provides that "No person shall ... be deprived of life, liberty, or property, without due process of law ... ."

[11]This basic principle was enunciated in the Supreme Court's 1954 decision in *Miller Brothers Co. v. Maryland* (347 U.S 340, a case dealing with sales and use taxes rather than corporation income taxation but no less relevant in this context. As to whether a state could tax a corporation, the Court wrote: "Despite the increasing frequency with which the question arises, little constructive discussion can be found in responsible commentary as to the grounds on which to rest a state's power to reach extra-territorial transactions or non-residents with tax liabilities. Our [the Court's previous] decisions are not always clear as to the grounds on which a tax is supported, especially where more than one exists; nor are all of our pronouncements ... consistent

conceivably attempt to tax the income of all individuals and businesses located anywhere in the nation. The term "nexus" is used to describe the connection between a state and a taxpayer. The challenge for jurists and policymakers has been to decide what should constitute nexus.[12]

The determination of nexus becomes complicated when dealing with corporations whose activities, in some direct or indirect fashion, extend beyond the boundaries of a single state. As a broad generalization, it is accurate to say that a corporation's exposure to state income taxation is at least as great, under current US practice, as it would be in Canada. That is, a corporation that has an "establishment" in a state would have nexus in that state. It is probably also true that the activities of employees or agents of firms in a state may establish nexus more readily than would be the case for provincial corporation income taxation in Canada. For example, the regular presence of employees carrying out the firm's business activities within a state – which would often but not necessarily be associated with a physical place of business (an "establishment") – would also typically create nexus. But there are grey areas where matters are more debatable. For example, if a firm's employees attend a trade show in a state where the firm has no other activities, or if vehicles owned by the firm pass through a state in which the firm has no other presence, a state might claim the right to tax the firm but a court might view such a connection with the state as insufficient to establish

or reconcilable. A few have been specifically overruled, while others no longer fully represent the present state of the law. But the course of decisions does reflect at least consistent adherence to one time-honored concept: that due process requires some definite link, some minimum connection, between a state and the person, property or transaction it seeks to tax." The entire quotation is of interest because it illustrates the sense of ambiguity that pervades US discussions of this and similar issues.

[12]It should be noted that, at least from the perspective of economic policy, "nexus" could conceivably be defined differently for different types of taxes. Thus, for instance, a business might be declared to have a sufficient link with a state for it to be subject to the state's sales tax but simultaneously not to have a sufficient link for the state to subject it to income taxation. In the following discussion, the term "nexus" should be taken to mean "nexus for corporation income tax purposes." McLure (1999) offers a recent discussion of the taxation of electronic commerce, including the nexus issue, emphasizing the taxation of retail sales.

nexus.[13]

Can states tax the income of corporations by virtue of the fact that they derive revenues from the sale of goods or services within a state? One might have thought that the commerce clause, the due process clause, or both would protect corporations income taxation on this basis; otherwise, it would seem that states would be impeding interstate commerce by exposing corporations to income taxation merely for the act of engaging in such commerce. In fact, however, the Supreme Court (in its 1959 decision in *Northwestern States Portland Cement Co. v. Minnesota*) rejected arguments to this effect. The Court's decisions in this and related cases led Congress to become directly involved in the nexus issue in 1959 when it passed Public Law 86-272, the major statutory feature of current US practice. This law prevents a state from imposing a tax on the income of a corporation whose only connection with the state is its "solicitation of orders" for *tangible* goods. Thus, for example, a company might send its representatives into a state to facilitate sales without establishing nexus – subject to certain provisos, for example, that orders from such customers "are filled by shipment or delivery from a point outside the [s]tate". Under this statute, mail-order businesses, and presumably businesses engaged in e-commerce transactions involving *tangible* goods as well, can protect themselves from income tax liabilities that would otherwise arise solely because of their participation in interstate commerce. Note that US practice is, in this respect, similar to that in Canada, where businesses that sell goods and services in a province but have no establishments there are exempt from that province's corporation income tax.

While PL86-272 clarifies the nexus issue, though it has nevertheless been subject to significant litigation, in part because of the difficulty of separating "solicitation of orders" from other business activities not protected by the statute. For example, sales representatives of the Wrigley Company working in Wisconsin would stock display racks with chewing gum and, if they encountered stale gum at retail outlets, would replace it with fresh product. In *Wisconsin Department of Revenue v. Wrigley Co.*, the Supreme Court found that these activities were not "ancillary" to "solicitation of orders" and that the state could therefore tax

[13] Some states have established "safe harbor" rules that assure corporations that they can undertake certain activities without risking taxation: for example, California has declared that it will not attempt to tax the income of corporations merely because they send employees to participate in trade shows within the state. Under the Canadian "permanent establishment" criterion, it seems clear that provinces could not elect to tax corporations in such circumstances in any case.

Wrigley's income; a minority, however, felt that these activities were part and parcel of solicitation of orders and that Wrigley therefore could not be taxed on these grounds.

If courts are divided on such issues as the definition of "solicitation of orders", it will come as no surprise to learn that PL86-272 – which makes specific reference to *tangible* goods – does not appear to be of much help in settling another rather closely related issue, that is, whether the fact that a corporation derives revenues from the sale or licensing of *intangible* goods and services. If a corporation has no establishments in a state, if it has no employees in a state, and if it sells no tangible products in a state, can it possibly have nexus there for corporation income tax purposes?

This issue has attracted renewed attention since the decision by the Supreme Court of South Carolina in *Geoffrey, Inc. v. South Carolina Tax Commission* (1993). In this case, an out-of-state corporation (Geoffrey) licensed trademarks to retailers in South Carolina in exchange for royalties. The Court held that the corporation's income (properly apportioned) was indeed taxable within the state. This issue has not yet risen to the US Supreme Court, but seems likely to do so. Fundamentally the same questions would arise in connection with the sales or licensing of any intangible products or assets, such as income arising from financial transactions, patents, and other intellectual property. The delivery of goods or services by electronic means – and thus a large fraction of e-commerce – would presumably also be viewed as sales of intangibles. For example, a corporation that allows customers in other states to download software from its web site would be engaged in interstate commerce in intangibles. Whereas these sorts of transactions would not in themselves establish nexus if they involved *tangible* goods and services, it is an open question whether federal courts would uphold state courts, such as those in South Carolina, in cases involving intangibles, or whether instead they would see valid commerce clause or due process clause arguments for protecting corporation income from state taxation in these cases. Some of the economic pros and cons of alternative decisions are discussed below.

3 Intangibles and Nexus in Integrated Economies

The foregoing discussion has identified several important differences between the US and Canadian approaches to subnational corporate income taxation. It also reveals an interesting contrast in the fundamental institutional approaches to policymaking. In part due to the influence of the federal government, Canada's policies are far more uniform than is the case in the US. As compared to Canadian provinces, US states have exercised much more latitude in determining basic elements of their corporation income tax policies. Allocation formulas, the treatment of affiliated corporations, and even, to some extent, the fundamental issue of nexus have been left largely under the control of the states, subject, however, to overall constitutional constraints. Since these constraints are quite general in nature, the US experience is characterized by heavy reliance on the courts to determine, in an evolutionary process with gradual accretion of precedent, the framework within which states may set their policies. The greater transparency, simplicity, and uniformity of the Canadian system, on the one hand, and the greater flexibility of the US system, with more latitude for policy experimentation and for variability of policy in accordance with local priorities and economic circumstances, on the other, are no doubt attributable to basic institutional differences in the ways that policy is formulated.

As indicated, the issue of nexus is presently the subject of legal dispute and controversy in the US. The *Geoffrey* case raises the prospect that corporations may become subject to income taxation in states where they have no physical presence. Ultimately, the US Supreme Court will likely be called upon to resolve this issue in the light of constitutional principles, but, however the issue is resolved in the judicial process, it raises quite intriguing and important questions for economic policy. Indeed, precisely because of the legal uncertainties, this may be an unusually opportune time to review the economic policy implications of the nexus issue.

To appreciate the context of the current debate, it should be noted that states vary widely in their treatment of corporations that derive income from intangibles. In particular, the income from intangibles is not taxed in some states, namely, those that have no corporation income tax at all (*e.g.*, Nevada) or in a state such as Delaware, which explicitly exempts from taxation corporations that derive income only from trademarks and similar intangible assets. In accordance with standard models of fiscal competition, it is easy to see why some states might

not wish to impose a tax on the income of companies with few or no tangible assets: these companies use few if any state-provided services and thus impose few costs on them. In order not to discourage the commercial activity associated with trademark protection companies, a state might well provide preferential tax treatment of these corporations.

But consider the implications of such a policy on the part of one or a few states for the corporation income tax in other states. Suppose, as an example, that a corporation in Georgia derives profits from the sale of a product with a well-known trademark. The firm may have invested heavily in the promotion of the trademark and this may result in a high level of corporate profitability. These profits could result in substantial income tax liabilities in Georgia, with its 6% corporation income tax rate. Suppose, however, that the trademark of the Georgia corporation is transferred to a corporation in Nevada, Delaware, or some other state where trademark royalties and other returns to intangibles face zero or very small tax burdens. If Georgia is unable to tax the income accruing to the out-of-state trademark owner, then income that otherwise would have produced tax revenue for Georgia would no longer do so.[14] Of course, Georgia loses tax revenue in this case irrespective of whether the corporation receiving revenues from the licensing of its trademark is situated in Delaware, Nevada, or some other state, including possibly a state with a high tax burden on the returns to intangibles; it is obvious, however, that tax considerations, in themselves, would favor the transfer of intangible assets to low-tax jurisdictions.

Against this backdrop, the attempt by states to extend their taxing powers beyond their borders is quite understandable. So is their increasing reliance on the sales factor in apportioning income: corporations that are not physically present in a state have no payroll or capital assets, so using these factors in an apportionment formula does not help states in taxing the income of out-of-state corporations.[15] In an economy in which information-based goods and services figure prominently and in which the need for physical contact between buyers and sellers is diminished by the advent of new technologies, it is easy to see that the nexus issues in the

[14]The transfer of the trademark to an out-of-state owner could however be a taxable event. If the trademark is correctly valued, and ignoring other complicating factors, Georgia could gain tax revenue from taxation of the transfer of the trademark equal, in present value, to the revenue that would be obtained from taxation of the stream of income accruing to the trademark owner.

[15]Other considerations of course come into play in determining the apportionment formula that any one state might prefer; for example, "consumer" states, generally, might have an incentive to rely on the sales factor more heavily than "producer" states.

Geoffrey case have potentially far-reaching implications.

Nexus: Economic Policy Implications

The nexus issue, and specifically the issue of nexus for corporations without physical presence in a jurisdictions, raises several economic policy questions. A full and formal analysis of this issue cannot be undertaken here.[16] In outline, however, there are three main economic dimensions to the nexus issue.

First, from an efficiency viewpoint, subnational governments must have revenue instruments at their disposal that enable them to finance needed public goods and services; constraints on their taxing powers should not make it excessively difficult for them to collect revenues.

Second, they should also be constrained from imposing taxes that are borne mainly by non-residents, since tax exporting distorts the incentives for efficient public-sector decisionmaking. In the extreme case, if tax burdens could, at the margin, be shifted entirely to non-residents, the self-interest of a given jurisdiction would dictate unlimited public expenditures. To make this point by means of an extreme example, suppose that the government of Quebec or New York were able to impose taxes on all residents of Canada or of the US. Quebec and New York would have powerful incentives to expand public service provision for their residents, given that the costs of these services could be shifted to outsiders. If other provinces or state could likewise tax non-residents, their public expenditures would presumably expand dramatically as well. Excessive public expenditures in all jurisdictions – expenditures for which the benefits, at the margin, fall short of costs – would result.

Third, the taxes used by subnational governments should not impose high efficiency costs on the functioning of the national economy, for example by distorting the internal flow of trade in goods and services.

Consider the issues in the *Geoffrey* case from this viewpoint. Note, to begin with, that intangible assets such as patents, copyrights, and trademarks represent the ownership of property rights in innovations, creative works and concepts, brand names, and intellectual property generally. Their creation, development, and marketing often require intensive utilization of human capital, much of it self-directed – skilled researchers, scientists, engineers, technical staff, artists, au-

[16] See Wildasin (1999) for a more detailed analysis.

thors, performers, and the like – and the financial return to these assets is one of the principal economic rewards to entrepreneurship, innovation, and creative activity. Electronic commerce is of course one form of intangibles-intensive activity that appears likely to play a role in these economies, but e-commerce is just one application of information technology more generally, a sphere of activity in which intangibles – including software – are of central importance. In advanced economies with high levels of education and training, like those of the US and Canada, these activities play an increasingly prominent role in overall economic performance.

Much of the financial return to intangibles takes the form of quasi-rents. Once created, an intangible asset can often be utilized at low marginal cost; for example, the cost of photocopying a book, of duplicating an audio tape or brand-name label, or of copying computer software is often very small in relation to the cost of creating the valuable intangibles embodied in these items. Protection of the quasi-rents that accrue to intangible assets is therefore very important in preserving the incentives to create these assets in the first place, a principle that is well-recognized in the traditional treatment of copyrights and patents. A substantial part of the profits of corporations, such as profits attributable to product and process innovations, takes the form of these quasi-rents.

In highly-integrated economies with free internal markets such as those of Canada and the US, the return to intangible assets reflects the fact that they can be directly and indirectly utilized by many firms and individuals in many locations. For example, the discovery or creation of a new substance (e.g., for the making of semi-conductors) may facilitate the development of new devices or processes (e.g., computer chips) that are widely employed in several different industries (e.g., computer manufacturing) whose goods or services, in turn, are utilized by many different types of consumers in different locations (e.g., in the distribution or analysis of information). The contractual arrangements by which the creation of a new substance is rewarded can take a wide variety of forms, depending in particular on the degree of vertical integration. They may, for example, take the form of patent royalties accruing to an individual inventor who is many stages removed from the consumers who ultimately pay for the information services that could now be delivered thanks to the original inventive act. Alternatively, an inventor might establish a business that incorporates every stage of production intermediate between the original invention and the ultimate consumer.

Households and firms in any one US state or Canadian province purchase goods and services that directly or indirectly utilize intangible assets that are owned by non-residents. As an empirical generalization, it would be safe to say, in particular, that the returns to intangible assets owned by corporations located outside of the jurisdiction are especially likely to accrue to non-residents.[17] Thus, a state or province that is able to tax the income of non-resident corporations will be taxing income that accrues disproportionately to non-resident individuals. To the extent that this income represents economic rents or quasi-rents, subnational jurisdictions have an incentive to tax that income, since the burden of the tax would then fall on their non-resident owners, that is, the burden of the tax would be exported. From a tax-exporting perspective, in other words, a state has a powerful incentive to tax the income accruing to corporations that have no physical presence within the state.

Of course, it is important for a state to incorporate a sales factor for income apportionment if it seeks to capture the rents accruing to non-resident owners of intangibles, since these non-resident corporations might well have no employees or establishments within the state. Indeed, as is clear from the literature on fiscal competition (see, e.g., Wildasin (1986), Wilson (1999), and references therein), a jurisdiction operating in an open and competitive economic environment may have strong incentives to ease the burden of taxation of the returns to capital or labor since these may discourage investment and employment, with consequent adverse effects on wage rates and real estate markets. Thus, states that compete for labor and capital while attempting to capture rents from non-residents would benefit from reduced reliance on the payroll and capital factors in formula apportionment; in the extreme, a state might shift to sole reliance on the sales factor, consistent with trends now observed within the US, as described in Section 2.

Since tax exporting may be conducive to inefficient public expenditure, there is a good case to be made, on this score, for limiting the taxing powers of states so that they cannot tax the incomes of corporations that are not physically present within their jurisdiction.

[17] Equities markets of course make it possible for residents in any one state or province to receive a share of the income accruing to intangible assets utilized by corporations located in other states or provinces (or countries, for that matter). Cross-ownership of such assets is nonetheless limited, as has been discussed most extensively in the literature on integration of international capital markets. Cross-ownership of assets and the incentives for jurisdictions to devise tax policies that capture the rents accruing to them are discussed in Wildasin and Wilson (1998).

While states have an incentive to try to tax out-of-state corporations in order to capture economic rents accruing to non-residents, their ability to do so varies among industries. Specifically, because the degree of vertical integration differs from one industry to the next and because the optimal contract structure for the exploitation of intangible assets may vary, state corporation income taxes create differential effective tax rates on different types of intangibles. For example, authors often are rewarded by royalties paid to them, as individuals, by publishers. Publishers, in turn, market copyrighted works to distributors and, ultimately, to consumers. The reader who buys a novel at a local bookstore implicitly raises the income of the novel's author, but there is considerable contractual and organizational "distance" between a reader and an author. In particular, the state in which the reader resides may impose a tax on the income of out-of-state corporations that derive income from intangibles, as in the *Geoffrey* case, but this tax would not fall on the income accruing to the out-of-state author: too many transactions and business entities separate the original creator of the intangible asset from the state's corporation income tax. In general, the effective implicit rates of taxation on the returns to intangibles created by a state's corporation income

the costs of public services provided on their behalf. Indeed, subnational governments often collect revenues from businesses (both corporate and non-corporate) through various sorts of licenses, fees, and charges; in addition, taxes other than the corporation income tax, such as local property taxes, provide other means by which businesses can be made to compensate governments for the costs of public service provision. To the extent that subnational governments provide impurely public (or congestible) goods and services to businesses, the presence of these businesses necessitates additional expenditures on the part of these governments, and "locational efficiency" requires that businesses (and, for that matter, households) pay for the incremental costs that their presence generates. Of course, it is difficult to measure with precision the costs that businesses or individuals impose on a jurisdiction; for example, the deterioration of highways utilized by a business will depend on the types of vehicles used by the business, the cargo that they carry, the frequency and length of trips, and other characteristics that differ from one business to another but that are not easily observed by revenue authorities. With a variety of revenue and regulatory instruments at their disposal, subnational governments can to some extent assess different tax-prices to different types of businesses depending on the extent to which they congest local public goods and services, but a precise match between congestion costs and revenue contributions is normally infeasible.

Despite the general difficulty of determining the public-service provision costs that a corporation or other business may impose on a jurisdiction, it is clear on *a priori* grounds that corporations with no physical presence within a jurisdiction cannot impose meaningful congestion costs on it. For example, although it may be difficult to determine exactly how much wear and tear a corporation's trucks cause to local highways, it is obvious that there is no wear and tear at all if the corporation has no physical assets, including trucks, located within the jurisdiction. The same is true for other public infrastructure and, indeed, for all other goods and services provided by a subnational government. Consequently, it cannot be argued that a state government must be able to tax the income of out-of-state corporations with no physical presence within the state in order to be able to internalize the congestion costs that these corporations might generate.

In brief summary, basic economic principles can help to shed light on how the nexus issue for state corporation income taxation should be resolved, at least from the perspective of economic efficiency. Corporations that have no connection with a state other than the fact that they derive revenues from the sale or licensing

of intangible assets there are not suitable targets for state corporation income taxes. States may indeed seek to tax such corporations, in the interest of their residents, but their attempt to do so distorts their incentives to choose appropriate levels of public expenditure. Such taxes can also distort private-sector resource allocation because they bear unevenly on different types of goods and services and the intangible assets embedded within them, as well as on organizational and contractual forms. Finally, because corporations that have only an intangible connection with a subnational government cannot congest local public services, there is no need for such a government to impose explicit or implicit tolls on the corporation in order to recover the incremental costs of public goods.

4 Conclusion

Subnational governments in both the US and Canada impose taxes on the incomes of corporations. In both countries, this requires that fundamental policy and administrative problems be addressed. Which corporations or corporate entities can a state or province tax? Must the taxpaying unit, however defined, have some "presence" within the taxing jurisdiction, and if so, must it be physically present? How is income to be divided, for tax purposes, among taxing jurisdictions? And, a deeper institutional level, how are the answers to these questions to be decided: by central government authorities, by courts, or by some combination of the two? The US and Canada have answered these questions in rather different ways. The Canadian system is characterized by fairly simple and harmonized policies, achieved partly by coordination and cooperation among the provincial and federal governments. The US approach is much less precisely-specified, with states exercising substantial policy independence within broad constitutional constraints requiring frequent judicial interpretation and clarification.

One of the important issues now facing policymakers and courts in the US is the question of nexus, especially with reference to corporations that do not have any physical presence within states that attempt to tax them. This issue has been resolved by statute in Canada: a corporation with no "permanent establishment" within a province cannot be subject to corporation income taxation there. The courts in the US will ultimately decide this issue in accordance with their interpretation of the meaning of the Constitution. But however the problems of judicial interpretation are ultimately resolved, one can inquire, from the viewpoint

of economic analysis, what the implications of alternative decisions might be.

A complete analysis of all aspects of this question goes beyond the scope of this paper. However, established principles of public finance in a federal system suggest the desirability of limiting the taxing powers of subnational jurisdictions so that they cannot impose taxes on the incomes of corporations beyond their boundaries. Indeed, these principles suggest that states would have incentives to impose such taxes in order to export the burden of taxation to non-residents. While such tax exporting (or rent capture) serves the interest of each state acting independently in the interests of its residents, it does not promote efficiency in the functioning of the national economic system as a whole.

An interesting issue for investigation concerns the implementation of corporation income taxes in an international setting.[18] From an analytical viewpoint, the taxation of multinational corporations by national governments is quite analogous to the taxation of corporations within a country by subnational governments, and it is clear that somewhat analogous principles should guide policy in these two contexts. There are, however, some significant differences between the two. In particular, it is quite reasonable (and certainly commonplace in the literature) to evaluate institutional and policy regimes in a federation like that of Canada or the US from the perspective of economic welfare within the nation as a whole. In the international context, one could by analogy evaluate alternative policies and institutions from the perspective of world economic welfare. While such an approach is certainly of interest, it is more customary to think of the nation rather than the world as the natural unit for policy evaluation. The development of multinational institutions such as the EU suggests that still other lines of analysis – starting from the perspective, say, of a regional trading bloc or an emerging economic union – would be fruitful. These and other issues must await further study.

[18]McLure (1997) discusses the international dimensions of corporate income taxation, drawing numerous parallels with the experience of the states in the US.

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