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Taxing State-Owned Enterprises: Understanding a Basic Institution of State Capitalism

Wei Cui

The University of British Columbia, cui@allard.ubc.ca

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Abstract

State-owned enterprises (“SOEs”) have become active investors in global markets in the last decade, challenging policymakers in Canada and other Organisation for Economic Co-operation and Development countries to confront the logic of “state capitalism.” This article develops a novel theory of the income taxation of SOEs. Many countries subject their SOEs to the income tax, but economists tend to dismiss SOE taxation as superfluous. A contrary, popular belief holds that SOE taxation is necessary to ensure fair competition. This article shows that both views are mistaken and explains SOE taxation in terms of the agency problem for dividend policy. Because typical devices to give private firm managers incentives to distribute profits may not be available for SOEs, taxing SOEs becomes a mechanism to force distributions. This “forced distribution” view implies that SOEs may be highly tax-sensitive. This article analyzes the factors affecting SOE tax sensitivity and demonstrates its consequences for international tax policy.

Keywords

Government business enterprises--Taxation; Canada

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Taxing State-Owned Enterprises: Understanding a Basic Institution of State Capitalism

WEI CUI*

State-owned enterprises ("SOEs") have become active investors in global markets in the last decade, challenging policymakers in Canada and other Organisation for Economic Co-operation and Development countries to confront the logic of "state capitalism." This article develops a novel theory of the income taxation of SOEs. Many countries subject their SOEs to the income tax, but economists tend to dismiss SOE taxation as superfluous. A contrary, popular belief holds that SOE taxation is necessary to ensure fair competition. This article shows that both views are mistaken and explains SOE taxation in terms of the agency problem for dividend policy. Because typical devices to give private firm managers incentives to distribute profits may not be available for SOEs, taxing SOEs becomes a mechanism to force distributions. This "forced distribution" view implies that SOEs may be highly tax-sensitive. This article analyzes the factors affecting SOE tax sensitivity and demonstrates its consequences for international tax policy.

* I am grateful to two anonymous referees; Professors Donald Clarke, Michael Knoll, and Yan Liu; and audiences at the Harvard-Stanford International Junior Faculty Forum (2009), the Sino-German Tax Law Forum at Peking University Law School (2011), and the Columbia Law School State Capitalism Workshop (2014) for comments on earlier versions of this article. For an earlier, substantially different version of this article, see Wei Cui, "The Policy of Taxing State-Owned Enterprises: Theory and Chinese Evidence" (2011) Governance and Globalization - Sciences Po in China Working Paper No 26, online: <www.sciencespo-globalgovernance.net/webfm_send/100>. The earlier working paper discusses certain empirical evidence regarding state-owned enterprises' responses to income taxation. For a fuller review of such evidence, see Wei Cui, "Taxation of State-Owned Enterprises: A Review of Empirical Evidence from China" in Benjamin L Liebman & Curtis J Milhaupt, eds, *Regulating the Visible Hand: The Institutional Implications of Chinese State Capitalism* (New York: Oxford University Press, 2015) 109. The present article also discusses earlier literature supporting the forced distribution theory of state-owned enterprise taxation as well as the theory's implications for international taxation.

Depuis une décennie, les sociétés d'État investissent activement dans les marchés mondiaux et mettent, au Canada et dans les autres pays de l'OCDE, les décideurs au défi de confronter la logique qui sous-tend le « capitalisme étatique ». Cet article élabore une théorie novatrice relative à l'imposition des bénéfices de ces sociétés. Dans plusieurs pays, les sociétés d'État sont assujetties à l'impôt sur le bénéfice, mais certains économistes considèrent superflu ce genre d'imposition. A contrario, l'opinion publique prétend que l'imposition des sociétés d'État est une mesure essentielle au maintien de la juste concurrence. Cet article démontre que ces deux points de vue sont fautifs et explique l'imposition des sociétés d'État en termes du problème que représente pour elles une politique sur les dividendes. En raison du fait que certaines mesures conçues dans le but d'inciter les administrateurs des sociétés privées à mieux partager leurs bénéfices ne sont pas disponibles aux sociétés d'État, leur imposition devient un mécanisme destiné à forcer ce partage. Ce point de vue d'un partage « forcé » implique une possible sensibilité élevée des sociétés d'État à l'impôt. Cet article analyse les facteurs qui affectent la sensibilité des sociétés d'État à l'impôt et démontre ses répercussions sur les politiques mondiales d'imposition.

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IN CANADA, THE UNITED STATES, EUROPE, and other Organisation for Economic Co-operation and Development (“OECD”) jurisdictions, recent social scientific and legal scholarship has largely ignored issues of institutional design arising from the state ownership of enterprises. Even though the global financial crisis of 2008 and the Eurozone crisis of 2011 have led to the partial (re-)nationalization of failing financial institutions in a number of economies, public discussions of these policy measures tend to assume that they are temporary in nature and do not reverse the general trend towards privatization and liberalization that started

in the 1980s.¹ However, advanced market economies have recently had to deal more frequently with state-owned enterprises (“SOEs”) of other countries. This is because, despite decades of privatization, substantial state ownership persists in developing, transitional, and developed economies,² and some SOEs are now important global economic players, competing with private multinationals and investors in making global investments.³ These facts have triggered extensive discussions in the international community⁴ as well as domestic policy debates in Canada and other OECD countries.⁵ The significance of SOEs from countries that purportedly practice “state capitalism” has even inspired a bestselling book, *The End of the Free Market*.⁶ As the provocative title of the book suggests, understanding how SOEs work has become a timely subject even for countries that

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1. See e.g. David E Sanger, “Nationalization Gets a New, Serious Look,” *The New York Times* (25 January 2009), online: <www.nytimes.com/2009/01/26/business/economy/26banks.html?pagewanted=all&r=1&_r=1&_r=1&_r=1>; Ian Bremmer, *The End of the Free Market: Who Wins the War Between States and Corporations?* (New York: Portfolio, 2010) ch 5, 6.
 2. See e.g. OECD, *State-Owned Enterprises in the Development Process* (Paris: OECD, 2015); OECD, *The Size and Sectoral Distribution of SOEs in OECD and Partner Countries* (Paris: OECD, 2014); Aldo Musacchio & Sergio G Lazzarini, *Reinventing State Capitalism: Leviathan in Business, Brazil and Beyond* (Cambridge, Mass: Harvard University Press, 2014); International Bank for Reconstruction and Development, *Bureaucrats in Business: The Economics and Politics of Government Ownership* (Oxford: Oxford University Press, 1995).
 3. Bremmer, *supra* note 1, ch 3, 4.
 4. See e.g. International Working Group of Sovereign Wealth Funds, *Sovereign Wealth Funds: Generally Accepted Principles and Practices “Santiago Principles,”* (October 2008), online: <www.iwg-swf.org/pubs/eng/santiagoprinciples.pdf>; OECD, *State-Owned Enterprises: Trade Effects and Policy Implications*, OECD Trade Policy Paper No 147 (2013); OECD, *State-Invested Enterprises in the Global Marketplace: Implications for a Level Playing Field*, OECD Corporate Governance Working Papers No 14 (2014). For the activities of the OECD’s Working Party on State Ownership and Privatisation Practices, see OECD, “Working Party on State Ownership and Privatisation Practices,” online: <www.oecd.org/daf/ca/soeworkingparty.htm> (see, in particular, the current discussion surrounding the 2014–15 Revision of the OECD Guidelines on Corporate Governance of State-Owned Enterprises).
 5. See e.g. Daniel Schwanen, “Speed Dating or Serious Courtship? Canada and Foreign State-Owned Enterprises” (26 November 2012) online: CD Howe Institute <cdhowe.org/sites/default/files/attachments/research_papers/mixed/e-brief_142_0.pdf>; Duanjie Chen, “China’s State-Owned Enterprises: How Much Do We Know? From CNOOC to Its Siblings” (2013) University of Calgary - The School of Public Policy Research Paper No 6-19, online: <www.policyschool.ucalgary.ca/sites/default/files/research/chinas-soes-chen.pdf>; Michael Podolny, “The Limits of Sovereign Immunity: A Study and Analysis of the Canadian Income Taxation of Sovereign Wealth Funds” (2012) 70:2 UT Fac L Rev 90.
 6. Bremmer, *supra* note 1. Bremmer defines “state capitalism” as a system of state dominance that allows governments “to minimize the political risks they face by maximizing their control over activities that generate substantial amounts of wealth” (*ibid* at 153).

practice “private capitalism” so that they can better cope with the consequences of other countries’ choices of institutional design.

But even in countries that have many SOEs, how they operate is far from being well understood. One prominent example is the long-standing lack of consensus on the nature of income taxation of SOEs.⁷ Taxing SOEs has remained a widespread, even if not universal, practice over the past two decades,⁸ consistent with the findings of earlier surveys of the subject.⁹ Countries spanning the spectrum from high to low percentages of public ownership in their respective economies have subjected their SOEs to the income tax: the Nordic countries, Germany, France, Austria, New Zealand, India, South Korea, Singapore, and China, to name just a few.¹⁰ Especially in countries where SOEs are important to the economy, income tax collected from SOEs often also constitutes a vital source of government revenue.¹¹ In recognition of this empirical pattern, scholars have

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7. SOEs may be subject to a variety of other taxes (*e.g.*, consumption-type taxes such as the value-added tax, selective commodity taxes, and environmental taxes). The framework developed in this article has implications for analyzing SOEs’ responses to these other taxes as well, but they are beyond the scope of this article.
 8. See OECD, *Competitive Neutrality: Maintaining a Level Playing Field Between Public and Private Business* (Paris: OECD, 2012) ch 5. According to the OECD, “In practice, a majority of SOEs operating in OECD economies are subject to the same or similar tax treatment as private enterprises” (*ibid* at 76).
 9. See *e.g.* Robert H Floyd, “Some Aspects of Income Taxation of Public Enterprises” (1978) 25:2 IMF Staff Papers 310 at 317. Floyd finds that “[p]erhaps the most common, but far from universal, practice is simply to make no distinction between public and private ownership” in the imposition of income tax on enterprises (*ibid*). See also Glenn P Jenkins, “Taxation and State-Owned Enterprises” (1986) Harvard Institute for International Development Discussion Paper No 225, online: <www.queensjdiexec.org/publications/qed_dp_69.pdf> (citing and confirming Floyd’s survey).
 10. This list was compiled by examining recent publicly available financial statements of select SOEs from these countries. The list of select SOEs was taken from the World Bank. See Louis Kuijs, William Mako & Chunlin Zhang, “SOE Dividends: How Much and to Whom?” (2005) World Bank Working Paper No 56651 at 18-20, online: <www-wds.worldbank.org/external/default/WDSPContentServer/WDSP/IB/2010/09/17/000334955_20100917050418/Rendered/PDF/566510WP0SOE1E10Box353729B01PUBLIC1.pdf>. The actual list of countries that tax their own SOEs is much longer.
 11. See *e.g.* “State-owned enterprises pay most corporate taxes,” *Viet Nam News* (3 December 2014), online: <vietnamnews.vn/economy/263547/state-owned-enterprises-pay-most-corporate-taxes.html> [*Viet Nam News*] (SOEs accounted for 65.5% of total corporate income tax payments in the country); Wei Cui, “Taxation of State-Owned Enterprises: A Review of Empirical Evidence from China” in Benjamin L Liebman & Curtis J Milhaupt, eds, *Regulating the Visible Hand? The Institutional Implications of Chinese State Capitalism* (New York: Oxford University Press, 2015) 109 at 118 [Cui, “Taxation”]. (SOEs contributed well over 10% of total enterprise income tax collected in China in recent years).

investigated the determinants of the effective tax burden on SOEs,¹² the varieties of SOE responses to taxation,¹³ and the effect of SOE taxation on enterprise productivity.¹⁴ Yet the fundamental questions of why SOEs are taxed on their income, and how the tax can be expected to affect SOE behavior, have never been adequately answered.

In particular, two mutually inconsistent perspectives on SOE taxation have long coexisted in public and academic discourses. The first perspective is found mainly in the theoretical economic literature. According to this perspective, public ownership of assets provides a source of public revenue separate from taxation and government debt. As argued by the Nobel Laureate James Meade,¹⁵ and more recently by others,¹⁶ there is no need to tax income from publicly-owned assets because that income already belongs to the government. Therefore, the taxation of SOEs is fundamentally different from taxing private enterprises. In particular, many of the behavioural distortions associated with income taxation of private investments should not arise in connection with taxing SOEs. In fact, one beneficial effect of public ownership is thought to be a reduction in the need to raise revenue through taxes, thereby reducing tax-induced distortions in an economy.¹⁷ Insofar as SOE taxation lacks behavioural consequences that characterize 'normal' taxation, it can be said to be a superfluous institution.

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12. See *e.g.* Ajay Adhikari, Chek Derashid & Hao Zhang, "Public Policy, political connections, and effective tax rates: Longitudinal evidence from Malaysia" (2006) 25:5 *J Accounting & Pub Pol'y* 574; Cui, "Taxation," *supra* note 11.
 13. See *e.g.* Clemens Fuest & Li Liu, "Does Ownership Affect the Impact of Taxes on Firm Behavior? Evidence from China" (2015) ZEW – Centre for European Economic Research Discussion Paper No 15-023, online: <ftp.zew.de/pub/zew-docs/dp/dp15023.pdf>; Terry Shevlin, Tanya YH Tang & Ryan J Wilson, "Domestic Income Shifting by Chinese Listed Firms" (2012) 34:1 *J Am Tax'n Ass* 1.
 14. See John Whalley & Li Wang, "The Unified Enterprise Tax and SOEs in China" in John Whalley, ed, *China's Integration Into the World Economy* (Singapore: World Scientific, 2011) 179.
 15. See JE Meade, *Liberty, Equality, and Efficiency: Apologia pro Agathotopia Mea* (New York: New York University Press, 1993).
 16. For further discussion and general references, see Roger H Gordon, "Taxes and Privatization" in Sijbren Cossen & Hans-Werner Sinn, eds, *Public Finance and Public Policy in the New Century* (Cambridge, Mass: The MIT Press, 2003) 185; Harry Huizinga & Søren Bo Nielsen, "Privatization, public investment, and capital income taxation" (2001) 82:3 *J Pub Econ* 399; OECD, *Corporate Governance of State-Owned Enterprises: A Survey of OECD Countries* (Paris: OECD, 2005) [OECD, *Corporate Governance*].
 17. For further discussion, see Gordon, *supra* note 16; Huizinga & Nielsen, *supra* note 16; OECD, *Corporate Governance*, *supra* note 16.

While coherent, this view of SOE taxation as superfluous is contradicted by both the prevalence of and the importance generally attached to SOE taxation in real-world practice. Such real-world practice has given credence to a second traditional perspective, which flatly contradicts the first. It holds that SOE taxation, far from being superfluous, is necessary for putting SOEs on an equal footing with private firms. This second view of SOE taxation, which one may label the “condition of neutrality” view, has considerable influence in Europe, where the taxation of enterprises regardless of ownership is constitutionally codified in some countries.¹⁸ Moreover, the powerful “state aid” doctrine¹⁹ laid out in the Treaty on the Functioning of the European Union and the Treaty on European Union has been interpreted to preclude governments from offering tax subsidies to publicly-owned enterprises.²⁰ To the author’s knowledge, the “condition of neutrality” view also has currency in many developing countries, where income taxation of SOEs is incontrovertibly important. It possesses an easy rhetorical appeal and dominates over the “superfluity view” in terms of winning followers.” However, it is vulnerable to fairly straightforward repudiation by public finance theory.²¹

In short, SOE taxation is a topic in respect of which facts and theory do not meet: Those who are familiar with theory make claims and predictions contradicted by actual facts, while those who are acquainted with the facts offer erroneous theory. This article aims to close this gap by offering a new theoretical framework for analyzing the income taxation of SOEs.

The theory developed here starts with the fact that for SOEs and private firms alike, there are divergent interests between managers and shareholders. Therefore, dividend or payout policy that is optimal from the shareholders’ perspective is by no means assured. This is the “agency problem” with respect to

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18. See *e.g.* Germany, *Basic Law for the Federal Republic of Germany*, translated by Chritian Tomuschat & David P Currie (Berlin: German Bundestag, 2010), art 3, 104(a)-115; Rainer Hüttemann, *Die Besteuerung Der Öffentlichen Hand* (Cologne, Germany: Otto-Schmidt, 2002) at 8-18. I am grateful to Professor Klaus-Dieter Drüen of the Heinrich Heine University Düsseldorf for translating and summarizing these sources in German and for discussions of the German legal view of SOE taxation.
 19. See EC, *Consolidated Version of the Treaty on the Functioning of the European Union*, [2012] OJ, C 326/47, art 107.
 20. See *e.g.* Wolfgang Schön, “Taxation and State Aid Law in the European Union” (1999) 36:5 CML Rev 911; OECD, *Competitive Neutrality and State-Owned Enterprises: Challenges and Policy Options*, Corporate Governance Working Papers No 1 (2011).
 21. See discussion in Part II, below.

dividend payouts.²² For private firms, typical solutions to this problem include monitoring by substantial shareholders and giving managers partial ownership. These solutions, however, historically have not been, and to some extent institutionally cannot be, adequately implemented for SOEs. Consequently, the taxation of SOEs can be a mechanism for forcing distributions. The idea that SOE taxation in fact plays this role may be called the “forced distribution” view. Under this view, SOE taxation may have partially compensated for weak corporate governance of SOEs in many countries.

The forced distribution theory seizes on a basic conceptual weakness of the superfluity view. The latter view relies on drawing an inference from the equivalence of tax and dividends to the equivalence of tax and retained earnings. The latter equivalence is needed for the conclusion that SOE taxation has no behavioural consequences (and therefore is ultimately superfluous). Yet if securing dividend payouts from SOE earnings is a significant institutional issue, that equivalence does not hold, and SOE taxation can have significant consequences just like the taxation of private firms.

This possibility, however, raises a further question: How sensitive are SOEs to income taxation? Contrary to prevalent assumptions, I will argue that this is an empirical question and cannot be answered *a priori*. On the one hand, managers should be presumed to be averse to taxes, as they are to all distributions, and the government can be presumed to prefer them. On the other hand, this configuration of preferences could lead to bargaining between SOE managers and the government, which could result in managers being given credit for taxes paid, in addition to credit for making the SOEs profitable. In some outcomes of this bargaining process, SOE managers may indeed display insensitivity to taxes, but this need not be the case. Available empirical evidence is mixed: While a robust group of studies finds that SOEs are tax-sensitive and engage in the whole range of tax planning and tax avoidance, the issue is far from settled.²³ The forced distribution theory of SOE taxation developed here provides a framework for further empirical investigation.

22. The literature on payout policy for private firms is expansive. For overviews, see *e.g.* Rafael La Porta et al, “Agency Problems and Dividend Policies around the World” (2000) 55:1 J Fin 1; Franklin Allen & Roni Michaely, “Payout Policy” in George M Constantinides, Milton Harris & René M Stulz, eds, *Handbook of the Economics of Finance: Corporate Finance*, vol 1A (Amsterdam: Elsevier, 2003) 337.

23. See Part III, below, for further discussion.

Although some of the prior literature on SOE taxation has hinted at the forced distribution theory,²⁴ this theory is far less well known than the two traditional views sketched above. In this article, I substantially elaborate and advance the forced distribution view in three ways. First, I make several novel arguments against the two traditional views, highlighting their respective weaknesses as well as mutual inconsistencies, which so far have been insufficiently noted. For example, I demonstrate the inadequacies of certain ad hoc explanations of SOE taxation offered by those who subscribe to the superfluity view. I also argue that the condition of neutrality view implies an untenable position with respect to the incidence of the corporate tax.

Second, I ground the forced distribution view explicitly in the recent scholarship on corporate governance. I offer an analysis of SOE tax sensitivity by borrowing from Raj Chetty and Emanuel Saez's formal model of the agency problem in dividend policy.²⁵ The analysis captures the ideas both that SOE managers appropriate funds for projects that do not benefit shareholders (in similar fashion to private firm managers) and that the government negotiates with SOE managers to induce tax payment (which it does not do with private firms). I also examine another model for the interaction between taxation and corporate governance proposed by Desai, Dyck, and Zingales ("DDZ")²⁶ and explain why the model in this article is more suitable for understanding SOE taxation.

Third and finally, I demonstrate the policy significance of the forced distribution theory by applying it to the area of international taxation, showing how the theory enables a better understanding of both the international behaviour of SOEs and the likely effect of traditional tax policies on such behaviour. In particular, I argue that because the degree of SOE tax sensitivity is contingent on the bargaining between SOE managers and the government owner, it is likely that SOEs are at a comparative tax disadvantage relative to private firms when investing overseas. This opens the intriguing possibility that host countries like Canada may offer tax incentives specifically targeted at SOEs without thereby disadvantaging private investors. Some countries (such as the United States and Australia) already offer such incentives, and the theory of SOE tax sensitivity

24. Notably, some Canadian public economists have advocated what can be best read as the forced distribution view. See Jenkins, *supra* note 9; Whalley, *supra* note 14. This work is discussed further in Part III, below.

25. See Raj Chetty & Emmanuel Saez, "An Agency Theory of Dividend Taxation" (2007) National Bureau of Economic Research Working Paper 13538, online: <www.nber.org/papers/w13538.pdf>.

26. See Mihir A Desai, Alexander Dyck & Luigi Zingales, "Theft and Taxes" (2007) 84:3 J Fin Econ 591.

given here suggests a defence of such practices against the blind application of the neutrality benchmark.

The article proceeds as follows. Parts I and II outline the superfluity and condition of neutrality views introduced above and demonstrate how these two traditional perspectives on SOE taxation have failed to rationalize the practice. Part I shows that explanations of SOE taxation in terms of mixed public and private ownership and the presence of multiple tiers of government are ad hoc and cannot play a primary explanatory role. Part II argues that because public and private financings of SOEs are generally not substitutable, and because the public supply of capital is likely inelastic, the non-taxation of SOE profits need not distort competition, contrary to the condition of neutrality view. Part III then outlines a solution to the puzzle of SOE taxation in terms of the difficulty in conceiving and implementing dividend policy for SOEs. It explains why mechanisms for ensuring optimal payout for private firms may not work for SOEs and contrasts public pension funds with the types of SOEs that are the focus of this article. Part IV explores one of the implications of the forced distribution theory, namely that SOE managers may be tax averse. It sets out a conceptual analysis and briefly summarizes empirical evidence. Part V then discusses the theory's implications for international tax policy, both in countries with substantial SOE presence and in countries hosting SOE investments. The conclusion discusses the implications of the article's analysis for broader areas of tax and non-tax policies as well as directions for further research.

I. IS SOE TAXATION SUPERFLUOUS?

For anyone thinking about the issue for the first time, income taxation of SOEs should appear puzzling. The corporate income tax is collected from corporate profits, but if an SOE is wholly government owned, its profit in theory already belongs to the state, and the state could gain access to such profit simply by requiring dividend distributions. A tax on corporate profits merely reduces the amount of profits otherwise distributable. At the least, this imposes administrative costs. Corporate income tax rules tend to be complex; having the SOE compute its taxable income according to such rules, and having tax agencies audit such computations, seems a wasteful exercise. In countries with many SOEs or SOEs that are large in size, the scale of this administrative ritual can be spectacular in terms of revenue collected and human resources expended. How should lawmakers in these countries design the corporate income tax if they know that a major portion of the revenue could be collected more efficiently some other way?

A standard response from public finance theorists to the above puzzle seems to be simply to ignore it. Under one strong version of their view, since SOE profits belong to the state, there is really no point to taxing such profits. Both the government and SOE managers are necessarily indifferent between taxes paid by SOEs, on one hand, and profits retained by them, on the other. The SOE taxation we observe in the real world has no real significance and must just be the result of administrative and legal formalities.²⁷

To appreciate how strongly many public economists subscribe to this view, it may be noted that some of them have used the premise that SOE taxation does not matter to explain the very existence of the public ownership of production. That is, the very existence of SOEs is explained, in part, by their insensitivity to taxation. Roger Gordon²⁸ and Harry Huizinga and Søren Bo Nielsen²⁹ have attempted to explain state ownership of productive assets as a second-best efficient arrangement: SOEs themselves may be inefficient for various reasons, but when a country adopts tax rates so high as to seriously distort investment decisions, private ownership can be even more inefficient. What is special about SOEs, in this theory, is that the efficiency of their operations “should not directly depend on the tax structure.”³⁰ This is because either SOEs are not subject to the income tax, or, even if they are, it does not matter.³¹ The influence of this view on policymakers can be detected, for example, in the OECD’s report on corporate governance of SOEs.³²

In light of the prevalence of SOE taxation around the world, the position that SOE taxation is superfluous seems dogmatic. SOE taxation looks anything but accidental. As a result, weaker versions of the view that SOE taxation does not ultimately matter may be offered. According to some such weaker versions, two circumstances may explain SOE taxation: first, SOEs may have mixed public and private ownership; and second, the government that owns an SOE may not

27. They are, therefore, also not worth theorizing about.

28. See *supra* note 16.

29. See *supra* note 16.

30. Gordon, *supra* note 16 at 187.

31. *Ibid* at 190 (“taxes and dividends are functionally equivalent for a state-owned firm, so that all that matters is the sum, not the composition, of these payments, and dividends can adjust to offset any changes in tax rates”).

32. See OECD, *Corporate Governance*, *supra* note 16. The OECD finds that “state ownership might be desirable where the state cannot credibly promise not to confiscate or excessively tax enterprises. Where the state cannot guarantee such conditions, state ownership is needed, albeit as a second best solution, otherwise investment will not take place” (*ibid* at 21).

be the government that taxes it (even if both are within the same country).³³ Where such circumstances are absent, taxing SOEs is superfluous.

While these explanations of SOE taxation have intuitive appeal, the following subsections argue that they cannot bear their expected theoretical weight.

A. MIXED PUBLIC AND PRIVATE OWNERSHIP

The basic premise behind the mixed ownership theory is that if a partially state-owned enterprise is not subject to the income tax, then private investment in the firm will enjoy a tax advantage relative to private investments in purely private firms because the latter investments bear some of the burden of the corporate income tax. From the perspective of competitive neutrality, therefore, SOE taxation may be justified for mixed owner firms.

The first objection to this explanation is that although mixed ownership may require an SOE to be taxed, the SOE need not be taxed in the same way as a purely private firm. It should be possible to exempt the government's portion of a firm's profits from the income tax while at the same time maintaining the tax on private investors' share of firm profits. If one does this, there will still be a difference between the before- and after-tax profits for the portion of the firm's earnings that belong to private investors, and such investors will not enjoy any tax advantage on investment in mixed owner firms relative to other investments. Nonetheless, there will be no difference between the before- and after-tax profits belonging to the government shareholder.

To illustrate, suppose that a firm is owned 50% by the state and 50% by private investors. Suppose that the state investor demands a 6% annual return from the firm, while the private investors demand a 9% return (the reason why the state's required rate of return might be lower than that of the private investor is discussed in Part II, below).³⁴ If the firm is subject to a 25% corporate tax on all of its income, it must receive a 10% before-tax return to meet investors'

33. Some authors who view SOE taxation as possibly a pragmatically superior form of profit distribution than negotiated dividends, without recognizing the systematic significance of the payout problem for SOEs or the issue of SOE tax sensitivity, may also be counted as holding a weaker version of the orthodox view. See Part III, below, especially notes 68-69 and accompanying text.

34. The numerical example in the rest of the paragraph would lead to the same conclusion—that not taxing the state portion of the firm's capital would lead to a smaller tax wedge—even if the return on the state's portion of the capital is assumed to be the same as, or higher than, the private investors' required rates of return.

expectations.³⁵ There is therefore a “tax wedge”³⁶ of 2.5%, preventing some productive investments (*i.e.*, those yielding returns between 7.5% and 10%) from being made. Suppose, instead, that the government’s portion of investment return is exempt from tax. Then investments generating pre-tax returns greater than 9% would be sufficient to meet investor expectations. The tax wedge (1.5%) is smaller.³⁷ This is clearly more desirable in efficiency terms, and the accounting that would accomplish this may not be too difficult. In fact, it is reported that Brazilian tax law contained mechanisms for exempting the public portion of the profits of mixed ownership firms from taxation.³⁸ One complication is that if profits attributable to different owners are taxed at different rates, then distributions to the different shareholders must be specially arranged to avoid shifting tax benefits and burdens among shareholders.³⁹ It appears, however, that some countries have embraced such complication.⁴⁰ This gives rise to the question: Why are such mechanisms for differentially taxing private and public capital in mixed ownership firms not more commonly observed?

Furthermore, if one believes that a pure SOE would be indifferent to taxation because both the SOE manager and the government shareholder are indifferent between \$1 of tax paid and \$1 of retained earnings, then he or she must believe, with respect to the above example of a mixed ownership firm, that the firm should *already* be using the 9% benchmark rate for making investment decisions. Whether the government’s portion of corporate income is formally exempt or not should make no difference. This hypothesis may be tested empirically by examining whether, everything else being equal, firms with greater

35. A 10% pre-tax return equals a 7.5% after-tax return, which is just enough to satisfy the demand of a 6% return for the state-invested half of the capital and 9% for the other, privately invested half.

36. The difference between the producer price and the consumer price created by taxation or generally between the prices faced by two sides of a transaction subject to tax. See *e.g.* Harvey Rosen, *Public Finance*, 7th ed (New York: McGraw-Hill, 2005) at 282.

37. 9% is the sum of a 6% tax-free return for 50% of the capital that is state-owned and a 12% pre-tax (9% after-tax) return for the remainder that is privately owned. The after-tax rate of return for the firm is still 7.5%, hence a 1.5% tax wedge.

38. See Floyd, *supra* note 9 at 315, n 25 (the proportion of profits attributable to the share participations of federal, state, and municipal governments in any enterprise is excluded from the determination of profits for tax purposes).

39. *Ibid* at 328.

40. *Ibid* at 316. Besides the example of Brazil, another mechanism for taxing profits attributable to different owners at different rates is reported by Floyd. Iran imposed *higher* tax rates on state-owned companies, and “[f]or companies with mixed government and private ownership, the profits are apportioned in the same manner as the ownership and are taxed according to the relevant schedule for type of owner.”

state ownership use lower rates of discount in investment decisions as a result of the government shareholder's indifference between the before- and after-tax rates of return. If such a phenomenon exists, it is not known.

This last point underscores an important methodological issue. In theorizing about SOE taxation, the primary question is how a purely state-owned firm would respond to taxation. People may completely disagree on this question—holding that taxing a pure SOE is pointless, that it is necessary to ensure fair competition with private firms, or that it is necessary only because of special features of SOE corporate governance—while all agreeing that mixed-ownership firms should be taxed. Moreover, different beliefs about the effect of taxation on a purely state-owned firm may lead to different predictions about how mixed-ownership firms behave. Focusing immediately on mixed ownership to explain SOE taxation the more fundamental question. For this reason, this article takes the taxation of the purely state-owned firm as its primary explanandum.

Indeed, the case of the purely state-owned firm is not only conceptually, but also factually, important. Information about wholly state-owned firms can be hard to come by. Many SOEs that publish financial statements do so because they are listed on stock exchanges (*i.e.*, they are partially privately owned). This should not, however, lead us to conclude that mixed-ownership firms are more common or important. According to the OECD, only 40% of SOEs in the OECD countries have mixed ownership, and only 10% of this latter group of firms is publicly listed.⁴¹ Since fully state-owned enterprises are generally also subject to the income tax, mixed ownership can at best be part of the explanation of SOE taxation.

B. GOVERNMENT CLAIMANTS OTHER THAN OWNERS

Let us turn now to the view that explains SOE taxation by virtue of the fact that the level of government benefiting from the corporate tax revenue may not be the level of government that owns the SOE.⁴² This is certainly the case in many countries, where different levels of government may have their own SOEs and impose their own income taxes. Moreover, many countries allow different

41. OECD, *Corporate Governance*, *supra* note 16 at 70. Some scholars have argued that understanding wholly-owned SOEs is much more important than understanding the relatively fewer listed subsidiaries within SOE groups. See Li-Wen Lin & Curtis J Milhaupt, "We are the (National) Champions: Understanding the Mechanisms of State Capitalism in China" (2013) 65:4 Stan L Rev 697.

42. See *e.g.* Hüttemann, *supra* note 18.

levels of government to share corporate income tax revenue according to fixed percentages.⁴³ Thus, for example, the income tax collected from a firm owned by the central government may be shared between central and local governments (just like revenue collected from private firms). When the owner and the tax collector are not the same, it may be suggested that neither party should be indifferent between retained earnings and tax paid.

The response to this explanation is again twofold. First, as already emphasized above, the question of why a government would tax its own SOE has conceptual priority and must be independently answered. How it is answered will affect our understanding of the effect of the presence of multiple layers of government. Consider, for example, municipally owned SOEs that are subject to a nationally imposed income tax, the revenue of which is then shared among national, state, and municipal governments. In this not uncommon situation, the question could be raised: Why not simply subject the SOEs to a lower rate of taxation that reflects only the tax revenue that would be received by government entities other than the SOEs' municipal owners? Moreover, if the SOEs might be indifferent to paying tax that accrues to the benefit of their local government shareholders, do they already behave as though they are subject to a lower tax rate? Without addressing these questions, we cannot conclude that SOEs are taxed in these cases *only* because multiple levels of government are involved.

Conversely, suppose that in many cases (call them "Type A cases"), the government owner of an SOE is the only claimant to the tax revenue collected from the SOE. The presence of multiple layers of government would not explain SOE taxation in Type A cases. But if SOE taxation is found in Type A cases, then in cases where some claimants to tax revenue are not the SOE's owner (call these "Type B cases"), SOE taxation would not be surprising: If a government would be disposed to tax its own SOE, it might continue to be so disposed even if it has to share the revenue with other government entities. Type A cases can explain Type B cases, but Type B cases cannot explain Type A cases.

Second, to argue that SOE taxation performs a distributive function in the context of multiple layers of government simply pushes the puzzle of SOE taxation to a different level. If allowing one government entity to tax (or share the tax revenue from) a firm wholly owned by another government entity merely accomplishes a transfer from the former to the latter government entity, the question inevitably arises: Why not adopt explicit transfer mechanisms in lieu of taxation?

43. For the country surveys, see Gianluigi Bizioli & Claudio Sacchetto, eds, *Tax Aspects of Fiscal Federalism: A Comparative Analysis* (Amsterdam: IBFD, 2011).

It may be suggested that the goal is to allow the taxing government entity to share the undistributed profits of the firm. That is, transfers from one government entity to another assume that the SOE has made a distribution to the former. If the government entity that would receive the transfer is concerned about the transferring entity having incentives to limit distributions, it may want to require distributions from the SOE. Why not, though, make the entity directly a shareholder?⁴⁴ Recent instances of temporary nationalization during the global financial crisis and the Eurozone crisis also offer plenty of illustrations of how the government can be an investor without significantly affecting management decisions. In light of these alternative mechanisms, characterizing SOE taxation as primarily serving the purpose of allocating profits among different government entities seems unwarranted.

The foregoing arguments lead to the conclusion that neither (i) mixed public and private ownership nor (ii) non-identity of government claimants to SOE tax revenue and government owners of SOEs can be the primary explanation of SOE taxation.⁴⁵ The gap between the reality that SOE taxation is ubiquitous and the theory that it is superfluous is not satisfactorily bridged by these two explanations.

II. IS SOE TAXATION NECESSARY SO AS NOT TO DISADVANTAGE PRIVATE FIRMS?

According to the condition of neutrality view, the taxation of SOEs is explained and justified by the need to put SOEs on an equal footing with private firms.⁴⁶ To evaluate this view, let us first make a definitional clarification. It is well known

44. The advantages of such arrangements as opposed to taxation include the flexibility of varying the rate of distribution for specific SOEs without varying the general tax rate as well as saving the SOEs from complex tax computation and compliance efforts. While one may believe it is necessary to make one government entity (say the local government) the controlling shareholder to whom the firm's managers are primarily accountable (as would be the case, for example, if the firm is a local public utility or waste collection business), the other government entity (the central government) can share profits without exercising control. For example, it may be given non-voting stock.

45. At best, one could offer some other fundamental reason for taxing SOEs and cite these two special circumstances as representing secondary explanations.

46. Note that this is different from the view that firms with mixed public and private ownership should be taxed: The idea is that taxation even of a purely state-owned entity is necessary.

that governments themselves may be major investors in equity markets.⁴⁷ If a company is partially owned (either directly or indirectly) by the government simply for financial gain or diversification, it is not an SOE in the typical sense. SOEs in the typical sense represent commitments of public resources made for special reasons: for example, to allow government control of crucial natural resources or infrastructure (*e.g.*, telecom, airlines, postal service, or banking).⁴⁸ Not all firms owned (directly or indirectly) by the government are of this kind. Thus, a sovereign wealth fund may be an SOE in the typical sense because it is thought desirable to commit public capital to an investment pool that enhances the return on a government's foreign exchange reserves or accomplishes saving for future generations. Most portfolio companies of sovereign wealth funds, however, will not be SOEs in the typical sense.

I will call firms whose ownership is acquired by government investors for financial gain or diversification "incidentally" state-owned. Such firms may seek funding from either government or private investors, and they compete for private funding with purely private firms. By contrast, the investment of public funds in SOEs in the typical sense is a matter of public policy. Typical SOEs cannot freely seek private investment because that would amount to privatization. Conversely, most private firms cannot obtain government funding because the government may not generally seek public control of production. In other words, typical SOEs and private firms look to different places for equity financing:⁴⁹ the former to the public budget and the latter to the financial markets.

It follows that typical SOEs do not compete with private firms for equity capital: A lower tax rate on the state's portion of SOEs' profits would not attract more private capital to them nor should a higher tax rate on such portion send private capital away.⁵⁰ There is accordingly no question of different income tax treatments of the two types of firms distorting the competition for capital. Therefore, any distortion of competition would have to be found in the markets

47. See IJ Alexander Dyck & Adair Morse, "Sovereign Wealth Fund Portfolios" (2011) Chicago Booth Research Paper No 11-15, MFI Working Paper No 2011-003 & Rotman School of Management Working Paper No 1792850, online: <www-2.rotman.utoronto.ca/facbios/file/SWF_DyckMorse.pdf>.

48. See OECD, *The Size and Composition of the SOE Sector in OECD Countries*, OECD Corporate Governance Working Papers No 5 (2011).

49. The implications for taxation for the non-equity financing of SOEs are discussed in text accompanying notes 62-64, *infra*.

50. As discussed in Part I, above, for mixed-ownership firms it is possible to design mechanisms to ensure that private investors in such firms do not inadvertently benefit from any special tax treatment for the state-owned portion of the firms' capital.

either for other factor inputs or for the firms' products. Consider product markets first, and suppose that such markets are generally competitive. If SOEs enjoy lower costs of capital as a result of being exempt from taxation, would this result in the SOEs being able to offer lower prices in the product market?

The answer is no, insofar as state capital is fixed in supply. Even if the SOEs' cost of equity capital is lower, as long as they cannot utilize more of such capital to expand production, the lower cost of production would not translate into lower market prices.⁵¹ The idea that state capital is limited in supply simply follows from the assumption that the amount the state is willing to invest in SOEs is a budgetary decision determined not primarily by the rate of financial return but by other policy considerations. To put it another way, at any point above the public rate of discount,⁵² the government's supply of capital to SOEs is inelastic. This means that the incidence of the corporate income tax should fall entirely upon it. The tax rate applicable to state-owned capital should not affect the prices of products.

A similar argument can be made for competition in markets for other factor inputs or for situations where SOEs hold monopolistic or monopsonistic positions.⁵³ As long as the quantity of public capital provided to typical SOEs does not vary with the after-tax rates of return on such capital, the fear that tax-induced lower cost of capital would create competitive biases seems baseless.⁵⁴

51. Such prices are determined by the marginal cost of production—the cost of producing additional units with additional factor inputs. The lower cost of production of SOEs would merely result in greater producer surplus (*i.e.*, firm profit).

52. If the rate of return for an investment in an SOE is below the public rate of discount, the government should not make that investment.

53. For an analysis, see Floyd, *supra* note 9 at 329ff. Note that if product or factor markets are imperfectly competitive, so that SOEs enjoy monopolistic or monopsonic positions in them, private firms will not be on an equal footing with the SOEs to begin with.

54. This argument was recognized by the International Monetary Fund economist Robert Floyd in the 1980s, who wrote:

The effects of differential taxation of public enterprises' profits in this context [of full competition] depends crucially on the assumption that is made concerning the mobility of capital invested in public enterprises, or, more importantly, the responsiveness to the rate of return that the assumption represents. So long as the government's investment decision is based on any considerations other than those affected by tax changes, capital invested in public enterprises in each industry may be assumed to be fixed exogenously. For example, the government may establish, solely for national prestige, an automobile plant. In such circumstances, regardless of whether there is direct or indirect competition in product markets, the imposition of a profits tax on the earnings of public enterprises affects only those earnings. ... Since the tax is imposed only on the return to an essentially "captive" factor of production that is not capable of shifting the tax by moving to untaxed uses, only that factor bears the tax.

This argument can be supported by the following theoretical reflection. If SOEs are able to offer lower product prices because they have a lower cost of capital, this should be observed even in the absence of any differential tax treatment. Consider what discount rate the government ought to use in deciding whether to invest in an SOE. When private investors evaluate investment alternatives, the discount rate is generally the market return to capital. By contrast, when the government evaluates investment options, it should use the *public rate of discount*.⁵⁵ There are different views about how this rate should be determined.⁵⁶ One is to make the determination by reference to returns in the private sector. If the public investment is financed by a tax on private investment, then the rate should be the before-tax return to private investment. This is because if the government were to take away \$1 from private investors that would have generated $x\%$ of before-tax return in private hands, the government's rate of return should not be less than $x\%$, if the decision to tax were to be socially optimal. If, instead, the public investment is financed by a tax on private consumption, then the public discount rate should be the after-tax return to private investment. This is because if an individual would have received $y\%$ of after-tax return if he or she decided to postpone spending \$1 today and defer consumption to the future, the individual's opportunity cost of spending the \$1 today is $1+y\%$. That should also be the government's opportunity cost if it were to take the \$1 away from the individual. Because public funds are obtained through a mix of taxes on investments and consumption, the public rate of discount should lie between the before- and after-tax rates of return received by private investors.

Alternatively, one may argue that the government should adopt a social rate of discount, reflecting a greater concern for future generations.⁵⁷ This implies a lower rate of discount than private rates of discount. Thus, on either view of how the public rate of discount is determined, SOEs' cost of equity capital should be lower than a private firm's cost (*i.e.*, the before-tax rate of market return). Therefore, if the cost of equity capital mattered to the product prices charged by SOEs and private firms, SOEs would be at an advantage even if they were taxed

See *ibid* at 337-38 [citations omitted].

55. When the topic of SOE taxation was discussed in the 1970s and 1980s, public economists may have been less clear about how to think about the public rate of discount. See *e.g.* Jenkins, *supra* note 9 (making the assumption that the pre-tax returns of the public and private sectors should be the same).

56. See *e.g.* Richard W Tresch, *Public Finance: A Normative Theory*, 2nd ed (San Diego: Academic Press, 2002) ch 24; Arnold C Harberger & Glenn P Jenkins, "Musings on the Social Discount Rate" (2015) 6:1 J Benefit Cost Analysis 6.

57. See Rosen, *supra* note 36 at 247-50.

in the same way as private firms.⁵⁸ Why might such a difference in the cost of equity capital not have manifested itself in product prices charged by SOEs?⁵⁹ A plausible general answer is that the supply of public capital to SOEs is relatively fixed: Public capital does not flow in and out of SOEs in response to price signals.

These conceptual arguments are further supported by the fact that in a number of countries, SOEs have indeed been subject to different tax regimes from firms—with either lower or higher statutory rates.⁶⁰ Nonetheless, the suspicion that treating SOEs differently by applying lower income tax rates or exemptions to them would give them an unfair advantage (or a disadvantage if higher tax rates were applied) may continue to linger. This suspicion may be fueled by considerations that are orthogonal to the issue of how SOEs should be taxed. For example, both SOEs and private firms also seek other forms of financing (*e.g.*, through loans and financial leases). Many SOEs enjoy implicit government guarantees and therefore have lower borrowing costs.⁶¹ If debt financing is more elastic in supply than public equity capital, then the borrowing advantage of SOEs may indeed manifest itself in lower product prices and result in unfair competition. At the same time, SOEs that borrow extensively will also have greater interest expense deductions, and their effective corporate income tax rates may consequently be lower.⁶² It should be clear, however, that such lower effective tax rates are a consequence, not a cause, of SOEs' borrowing advantage, which is not itself tax-induced.

Another concern may be that if SOEs are subject to more favourable tax treatments than private firms, opportunities for tax arbitrage may emerge: Arrangements may be made (typically through various leasing agreements) to have higher-taxed private firms recognize deductions while lower-taxed SOEs recognize income.⁶³ The profits from the arbitrage may then be shared with the SOEs in the form of lower financing costs. Tax arbitrage opportunities can, however, arise in

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58. This is analogous to the argument that even if non-profit organizations did not receive income tax exemptions, they would not be on an equal footing with for-profit firms because they would still have a different (*i.e.*, typically lower) cost of capital. See Henry Hansmann, *The Ownership of Enterprise* (Cambridge, Mass: Harvard University Press, 1996) ch 12.
59. The answer is of course obvious if an SOE operates in a monopoly or a market with regulated prices (which is often the case). In such cases, the argument for taxing SOEs in terms of ensuring fair competition also loses traction.
60. See Floyd, *supra* note 9 at 312ff.
61. See *e.g.* Jenkins, *supra* note 9 at 5.
62. *Ibid* at 6.
63. *Ibid* at 13-14. Jenkins specifically objected to Canadian publicly-owned corporations entering such arrangements to obtain additional financing and “circumvent” restrictions imposed by the public budget.

the presence of tax-exempt investors, foreign investors, and investors facing low effective tax rates. These opportunities need to be managed through appropriate legal rules independent of the issue of SOE taxation. Therefore, the risk of tax arbitrage does not itself justify taxing SOEs like private firms.

It may also be suggested that lower income taxation of SOEs would leave more after-tax profits for SOE managers to invest and that this would be another form of advantageous financing for SOEs.⁶⁴ But such an advantage is conditional on the dividend policy for SOEs—an issue that requires examination on its own, as will become clear in Part III, below.

Overall, then, the concern that differential income tax treatments of SOEs and private firms would result in unfair competition seems to rest on an incoherent conception of how public capital is deployed. There appears to be little substance behind the slogan of fairness. As we will see in Parts III and V, below, the forced distribution view implies that it may be a desirable policy in some circumstances to subject SOEs to higher tax rates. The foregoing analysis suggests that this would not have undesirable consequences in terms of distorting competition with private firms.

What about the treatment of incidentally owned SOEs for which public capital (deployed specifically to seek financial gain or diversification) and private capital are substitutable? In the case of mixed-ownership firms, as argued in Part I, above, corporate income accruing to government shareholders can be taxed differently than such income accruing to private shareholders without creating any undue advantage over purely private firms as long as the two types of income can be distinguished. Thus, even when there is a type of state capital that freely flows into and away from firms depending on the firms' investment returns, as long as the tax treatment of the return to such capital depends on the ultimate owner of the capital, not on the firm that employs it, there should be no distortion of competition. In any case, the tax treatment of portfolio companies that are the targets of state investment authorities is again of secondary importance to the subject of how to tax traditional SOEs.

III. DIVIDEND POLICY, THE AGENCY PROBLEM, AND SOE TAXATION

Parts I and II, above, offered critiques of two prominent traditional views of SOE taxation: the superfluity view and the condition of neutrality view. It is in fact

64. See *e.g.* Floyd, *supra* note 9 at 340.

possible to distill a third view regarding SOE taxation from the prior literature. In this view, SOE income taxation plays the role of forcing distributions from state-owned firms. For example, in a paper written for the Economic Council of Canada in the 1980s, Glenn P. Jenkins argued:

When properly structured, the taxation system tends to be more effective as a way for the government to extract revenues from its investments [*i.e.*, SOEs] than are systems of target rates of dividends The taxation system has the advantage in that it is . . . backed up by a legal system: When it is the same individuals who administer the taxation of both private and state-owned enterprises, the administrative structure is usually not as sympathetic to deviant actions by state-owned enterprises as would a government department that only deals with public enterprises.⁶⁵

Interestingly, Jenkins went on in the paper to document how Canadian SOEs (*e.g.*, Petro-Canada and the Canadian Development Corporation, both of which have since been privatized or dismantled) obtained greater tax benefits (*i.e.*, paid less tax) than their private firm counterparts.⁶⁶ Writing even earlier, but without stressing SOEs' tendencies to "deviate" from distribution plans, International Monetary Fund economist Robert Floyd highlighted certain advantages of income taxation over dividends as a way of extracting revenue from SOEs.⁶⁷

At first blush, the proposition that collecting income tax from SOEs forces distribution of profits to the government shareholder in a way that perhaps enjoys certain practical advantages over dividends may seem little different from the view that taxing SOEs simply moves funds to which the government is entitled from one "pocket" to another. The difference is in fact crucial. Even if the income tax paid by an SOE is functionally similar (for the government) to dividends paid by the SOE, this does not mean that taxes are equivalent to retained earnings. As long as dividends are not equivalent to retained earnings, taxes and retained earnings are not equivalent. The significance of SOE taxation lies in the challenges of securing dividend payouts from SOE earnings.

65. *Supra* note 9 at 4.

66. *Ibid* at 13.

67. *Supra* note 9 at 326-27:

[Taxation] has the advantage of providing both managers of enterprises and the government with a greater degree of certainty as to the distribution of profits. In contrast, dividends that are arbitrarily determined and subject to changing political considerations may easily impede efficient managerial practices. The certainty of control over a portion of profits guaranteed by the use of a profits tax is likely to impart an incentive to managers of public enterprises to improve the efficiency and profitability of their operations and, at the same time, to provide them with increased flexibility in their investment planning and operations.

Consider how an SOE makes decisions to distribute profits. One possibility is that a for-profit SOE's dividend payout policy is analogous to that of a private firm: In both cases, it should ultimately depend on the investment policy. For a private firm, retained earnings should be paid out to shareholders if the return from the marginal corporate investment that could be financed by such earnings is lower than the market rate of return that shareholders could receive (which is also the corporation's cost of raising new equity). That is, retained earnings should be distributed if shareholders have better use for them than does the corporation. For the shareholder of an SOE (*i.e.*, the government), the opportunity cost of funds is the public rate of discount. At least the range within which the magnitude of this rate lies can be determined, and if an SOE's marginal investment opportunity generates a rate of return lower than the government's required rate, it should distribute the retained earnings instead of making the marginal investment.⁶⁸

It has long been recognized, however, that SOEs face corporate governance problems, just like private enterprises.⁶⁹ The managers of both types of firm often have preferences different from the firm's shareholders, including preferences respecting dividend payout. Managers may favour investments generating low returns because they expand the managers' scope of power, allowing them to build empires. Low-return investments could also take the form of pet projects. These potentially low-return investments allow managers to derive benefits in addition to their compensation, as determined by shareholders. While managers have better access to information regarding the expected return from potential investments than do shareholders, they are typically motivated by objectives other than ensuring that investment returns are at least equal to shareholders' opportunity cost.⁷⁰

For private firms, two typical ways of alleviating this agency problem are (i) to increase monitoring by shareholders and (ii) to grant equity compensation

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68. Setting payout policy may be easier for SOEs than for private firms in certain respects. One such respect is the absence of any shareholder-level tax. The tax on dividends received by individual shareholders within the classical corporate income tax has traditionally been thought to have a substantial impact on private firms' payout policy. For a discussion of the "old view" of dividend taxation, see Chetty & Saez, *supra* note 25. Clearly, any dividend distribution to the government itself would not be subject to tax.
69. See *e.g.* John E Roemer, *A Future for Socialism* (Cambridge, Mass: Harvard University Press, 1994); Joseph Stiglitz, "The Economic Role of the State: Efficiency and Effectiveness" in TP Hardiman & Michael Mulreany, eds, *Efficiency and Effectiveness in the Public Domain* (Dublin: Institute of Public Administration, 1991) 37.
70. See Allen & Michaely, *supra* note 22 at 383-86.

to managers so that they too benefit from payouts.⁷¹ Method (i) is feasible only for large shareholders. Small shareholders face a free-rider problem because the marginal cost of monitoring exceeds the marginal benefit of doing so. Empirical studies have shown that it is indeed the firms that have more concentrated ownership and greater ownership by managers that pay dividends in larger amounts.⁷² There is certainly no free-rider problem when the government is either the sole or a very substantial shareholder. However, the failure of government owners to monitor SOE performance adequately is one of the fundamental reasons for the push towards privatization in many countries.⁷³ This failure has been attributed to various causes, such as the presence of multiple principals, ill-defined stakeholders, and government appointed monitors who “do not have their wealth at stake when executing their monitoring duties.”⁷⁴

Method (ii), granting equity compensation, is relatively straightforward. If an SOE is already partially privatized (and perhaps listed on a stock market), equity compensation could be used to induce the appropriate level of payout, similar to the case of private firms. In such a case, private investor monitoring or investor protection law requiring distributions may already increase the likelihood of distribution.⁷⁵ However, for a wholly-owned SOE, making managers partial owners of the enterprise would involve partial privatization, which is rarely carried out just to create incentives for SOE managers to make profit distributions. Alternatively, one could design incentive contracts whereby managers are compensated not just for the level of profits but also for making distributions. The issue is whether such contracts can be effective. An extensive empirical literature has generally cast doubt on the effectiveness of incentive contracts in enhancing SOE performance. At least in the past, experiments with

71. See Aldo Musacchio & Sergio G Lazzarini, “Leviathan in Business: Varieties of State Capitalism and their Implications for Economic Performance” (2012) Harvard Business School Working Paper 12-108 at 37, online: <www.hbs.edu/faculty/Publication%20Files/12-108.pdf>.

72. See generally Chetty & Saez, *supra* note 25.

73. See *e.g.* Kuijs, Mako & Zhang, *supra* note 10; William L Megginson & Jeffrey M Netter, “From State to Market: A Survey of Empirical Studies on Privatization” (2001) 39:2 J Econ Lit 321; Musacchio & Lazzarini, *supra* note 71.

74. *Ibid* at 38. See also Stephen Green & He Ming, “China’s Privatization Ministry? The State-owned Assets Supervision and Administration Commission” in Stephen Green & Guy S Liu, eds, *Exit the Dragon? Privatization and State Control in China* (London: Chatham House, 2005) 169.

75. In other words, there may be *less* need for taxation of mixed-ownership firms in order to solve the payout problem, which is in contrast to the view discussed in Part I, above, that mixed ownership is what explains the taxation of SOEs.

such contracts have been unable to incorporate terms that reduce the information asymmetry between managers and government owners.⁷⁶ Consequently, productivity gains have not been observed. One may therefore also be skeptical about whether such contracts can increase payouts.⁷⁷

Further aggravating the difficulties of implementing managerial incentives and adequate monitoring is a fundamental institutional challenge to formulating SOE dividend policy. Unlike private firms, SOEs must go to the government for new equity capital. If a country has only a few SOEs, the government can conceivably approve new funding for them as part of the budgetary process. But when a government holds stakes in tens or hundreds of SOEs, it is harder to imagine that each individual SOE's fundraising proposal can be meaningfully examined through the budgetary process. More likely, funding proposals will be aggregated and approved on that basis. In such an arrangement, it is possible for SOE managers to feel that they do not have the same flexibility and opportunity to compete for funding as private firms do. They might therefore take a conservative stance towards profit distributions. In other words, it could be difficult to tell whether the SOEs are withholding information from the government shareholder or are not offering information because they expect the information to be lost anyway.

To be sure, the last word has yet to be said about whether it is possible to incentivize SOE managers to distribute profits and whether better monitoring of SOEs by the government can ensure that retained earnings are not reinvested in unpromising projects. Nonetheless, these options for ensuring optimal payout policies have been far from successful, at least where a country's public sector is very large.⁷⁸ Where SOE dividend policies are difficult to formulate due to both the lack of market mechanisms and the size of the SOE sector, the divergence of interests between managers and shareholders can be expected to lead to suboptimal low payouts. In such circumstances, taxing SOEs' income may be a way of ensuring that at least a portion of the firms' profits are periodically

76. See *e.g.* Mary M Shirley & Lixin Colin Xu, "Information, Incentives, and Commitment: An Empirical Analysis of Contracts between Government and State Enterprises" (1998) 14:2 *JL Econ & Org* 358; Mary M Shirley & Lixin Colin Xu, "Empirical Effects of Performance Contracts: Evidence From China" (2001) 17:1 *JL Econ & Org* 168; Chun Chang, Brian P McCall & Yijiang Wang, "Incentive contracting versus ownership reforms: evidence from China's township and village enterprises" (2003) 31:3 *J Comp Econ* 414.

77. See Jenkins, *supra* note 9 at 3-4 (claiming that rules for SOEs that set target dividend or rates of return "are almost always ineffective," citing UK and French examples).

78. Many countries identified as where SOEs demonstrate sound dividend policies are countries with a relatively small presence of SOEs (*e.g.*, the Nordic countries). See Kuijs, Mako & Zhang, *supra* note 10.

distributed to the fisc. It has been argued that forced distributions in other types of firms (*e.g.*, partnerships), real estate investment trusts, and regulated investment companies reduce the need for corporate governance mechanisms for such business entities.⁷⁹ From this perspective, the taxation of SOEs may play a rather important role in improving social efficiency in contexts where corporate governance of SOEs malfunctions (or is nearly non-existent).

It may be useful to compare traditional SOEs, characterized by the agency problem in payout policy described above, with public sector pension funds, which (in Canada and elsewhere) are often government owned or government controlled.⁸⁰ The predominant tax treatment for public pension funds is exemption, in sharp contrast to the taxation of traditional SOEs.⁸¹ This contrast may reflect the following differences between government-controlled pension funds and other SOEs. First, pension funds have liabilities (*i.e.*, pension obligations to retirees) with which investments should be matched.⁸² They therefore face inherent distribution requirements, which reduce the need to use taxation to force distribution. Second, pension funds also receive ongoing contributions independently of the government budgetary process. Managers of public pensions may therefore be more immune to the difficulties of raising funds for desirable projects and therefore have fewer incentives to refrain from making distributions. There are, of course, other important policy reasons for exempting pension funds from taxation (whether they are government controlled or not), such as implementing consumption tax treatment of earnings saved for retirement. But what is worth noting is that the agency problem for payout policy is also less significant in the context of public pension funds, making tax exemption a natural choice.

In summary, the foregoing discussion suggests that the problem of securing adequate payout from SOEs may be of fundamental institutional significance:

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79. See Larry E Ribstein, "Uncorporating the Large Firm" (2008) Illinois Law and Economics Research Papers Series Research Paper No LE08-016, online: <law.bepress.com/cgi/viewcontent.cgi?article=1098&context=uiuclwps>.
80. See OECD, *Annual Survey of Large Pension Funds and Public Pension Reserve Funds: Report on Pension Funds' Long-Term Investments* (2014).
81. This is recognized in the framework of tax treaties. See OECD, *Commentaries on the Articles of the Model Tax Convention* (2010) at 58, para 6.37; 85, para 8.6; 188, para 13.1; 210, para 7.10; 246, para 28.8; 293, para 69 (pension funds are generally tax exempt in the home country, and to ensure neutrality between domestic and foreign investments, treaty partners may negotiate reciprocal exemptions for pension funds from source country tax on passive income).
82. See Olivia S Mitchell, John Piggott & Cagri Kumru, "Managing public investment funds: best practices and new challenges" (2008) 7:3 J Pension Econ & Fin 321.

It is not a problem that one could simplify away, as the superfluity view of SOE taxation does in failing to distinguish between dividends and retained earnings. Whether this suggestion is plausible—whether SOE managers' aversion to dividend payouts is more than just a subject of occasional, anecdotal interest—may be the core point of disagreement between the superfluity view and the forced distribution view.⁸³ Yet this difference in opinion is capable of being adjudicated empirically because the forced distribution view implies that SOEs—or, more precisely, their managers—are sensitive to taxes, contrary to the superfluity view.⁸⁴ It implies that taxes and after-tax profits have different values both for the state owner of the firm and for the firm's managers. Taxes are corporate profits taken away from the managers' control. On one hand, taxes thus insulate such profits from the risk of being invested in low-return projects (a good outcome from the government's point of view); on the other, they reduce the private benefits of corporate profits (a bad outcome from the managers' perspective).⁸⁵ Thus, if proper means can be identified to measure the sensitivity of firms to the income tax, a finding of a significant level of SOE tax sensitivity would vindicate the forced distribution view.

At a time when SOEs are highly active in many countries,⁸⁶ it should not be surprising that such empirical evidence is in fact available. Before citing such evidence, however, Part IV, below, will first lay out a conceptual analysis of SOEs' responses to taxation. It will show that the degree of SOE sensitivity is a contingent matter and depends on numerous aspects of the principal-agent relationship between SOE managers and government shareholders. This is important for two reasons. First, as a matter of intellectual history, although some scholars sympathetic to the forced distribution view have strong intuitions about the significance of agency problems in SOEs,⁸⁷ the vast body of research on corporate governance in general and on the agency problem in payout policy

83. Some of the past commentators on SOE taxation were unclear about how significant they believed the problem of securing SOE dividends to be. See *e.g.* Floyd, *supra* note 9.

84. See Gordon, *supra* note 28; Huizinga & Nielsen, *supra* note 29; OECD, *Corporate Governance*, *supra* note 16.

85. Moreover, to the extent that taxes are mandatory but dividends are not, taxes and dividends are also not equivalent for an SOE. Alternatively, the government's tax stake may be compared to preferred stock with mandatory and frequent distributions.

86. See *supra* notes 2, 4.

87. Whalley & Wang, *supra* note 14 at 181. Professor John Whalley, a leading Canadian public economist, postulates outright (in a co-authored essay on Chinese tax reform in 2007) that SOE "managers act so as to maximize their own political and business connections and maximize the size of enterprises rather than profit" (*ibid.*). This striking formulation may be viewed as a rough approximation in stating the problems of corporate governance in SOEs.

in particular emerged during and after the 1980s, when privatization of previous SOEs had already begun to sweep through Europe, Canada, and elsewhere. Thus, while the forced distribution view is crucially based on the identification of a corporate governance problem, it has not so far made use of the research on corporate governance to articulate the basic intuitions. The analysis in Part IV, below, takes a first step towards remedying this situation. Second, while the emerging empirical literature on SOE tax sensitivity exhibits a range of findings, it lacks a theory that would allow one to compare and reconcile those findings. This article suggests that a detailed conceptual analysis, taking seriously the idea that SOE managers are no more likely to be perfect agents of their principals than are private managers, may be precisely what is needed to understand a wide range of real-world phenomena.

IV. HOW SENSITIVE ARE SOES TO THE INCOME TAX?: AN ANALYTIC MODEL

Previous authors have suggested that since the government controls the compensation packages of SOE managers, it can link their compensation to before-tax rather than after-tax profits since (on the traditional view of SOEs) retained earnings and taxes are equally valuable to the government shareholder.⁸⁸ Given that managers of private firms are generally compensated for after-tax profits, if the compensation formulae used for the two types of firms are comparable, lesser SOE tax sensitivity seems logically to follow. Even if there is no direct documentation of the compensation of SOE managers on the basis of pre-tax profits, any reduced tax sensitivity on the part of SOEs may be taken as indirect evidence. Moreover, SOEs sometimes publicly tout their tax payments as contributions,⁸⁹ suggesting that they are interested in getting social credit for such payments. This is distinct from SOE managers receiving political or economic rewards for SOE tax payments but lends the latter plausibility.

Indeed, additional factors may also be at play, relating to the effect of tax on shareholder value and on the amount of corporate earnings at the managers' disposal. Consider a stylized model of the choices faced by a private firm's manager regarding dividend payouts. The manager must allocate corporate retained earnings between (i) paying dividends; (ii) investments generating future returns that benefit shareholders; and (iii) uses that benefit only the manager,

88. See Gordon, *supra* note 28 at 190.

89. See *Viet Nam News*, *supra* note 11; Cui, "Taxation," *supra* note 11 at 118.

not shareholders.⁹⁰ The third category encompasses all ways in which managers' objectives may diverge from shareholders and may consist in "allocation of funds to perks, tunneling, a taste for empire building, or a preference for projects that lead to a 'quiet life.'"⁹¹ All items in this category will be labelled "pet projects" below. Consistent with the discussion in Part III, above, the manager's choice in the model is a function of the degree of management ownership and of shareholder monitoring. Management ownership increases the direct financial benefit the manager may receive from uses (i) and (ii), whereas shareholder monitoring determines the amount of weight the manager attaches to shareholder benefits generated by such uses. Both arrangements counterbalance the manager's incentive to allocate retained earnings to uses of type (iii) (*i.e.*, pet projects). The ability of the manager to allocate earnings for his private benefit is also, of course, a function of monitoring.⁹²

Suppose that, given choices made about management ownership and the degree of shareholder monitoring, the private firm manager still siphons μ from each \$1 of corporate funds for pet projects. How does this affect the firm's sensitivity to the corporate income tax? To the shareholder of the firm, the disvalue of the firm paying \$1 of tax, leaving \$1 less of after-tax profits, is the disvalue of losing $\$(1-\mu)$ of any other kind of fund: This is because μ from each \$1 of corporate retained earnings would not have been put to uses that benefit the shareholders anyway.⁹³ Of course, this amount μ is not observable to the shareholders. This means that the misuse of corporate retained earnings reduces the tax sensitivity of shareholders and therefore the tax sensitivity of the manager as (i) a fiduciary of the shareholders and (ii) as a shareholder. On the other hand,

90. These are the choices faced by managers of private firms in Chetty and Saez's model of payout policy. See Chetty & Saez, *supra* note 25 at 9.

91. *Ibid.*

92. This can be illustrated using a simplified version of Chetty and Saez's model. Suppose that the weight the manager attaches to \$1 of the utility of other shareholders (the "Shareholder") is a function of the amount of the Shareholders' monitoring, and suppose that amount has been fixed such that \$1 of additional profit or loss to the Shareholder means $\$ \gamma$ of gain or loss to the manager. Suppose, further, that the percentage of management ownership is fixed at α . Finally, suppose that $\$ \lambda$ is the private return derived by the manager for each \$1 invested in a pet project. Given α , γ , and λ , the manager is faced with a problem of maximizing private benefits by choosing the appropriate allocation of corporate funds among uses (i)-(iii). Chetty and Saez show that there is a solution to this problem of maximization: The manager allocates μ of each dollar of corporate funds to pet projects, where μ is a function of α , γ , and λ .

93. If dividends are taxed, the disvalue of \$1 corporate tax paid is less than or equal to the loss of $\$(1-\mu)(1-t_d)$, where t_d is the tax rate on dividends.

the manager is adversely affected by the \$1 of tax paid, as he or she has $\$ \mu$ less available for his or her pet projects.⁹⁴ All of these factors are additional to any effect of corporate tax on the manager's non-equity based compensation.

Now consider the incentives of an SOE manager. Again, to be consistent with Part III, above, assume that he or she does not own any shares of the firm (*i.e.*, that the SOE has not been privatized). Assume also that the level of shareholder monitoring is fixed, possibly at a lower level than at a private firm because of the lack of incentives on the part of the bureaucrats acting on behalf of the state owner. Given these assumptions, suppose that for any \$1 of corporate fund, the manager allocates $\$ \pi$ to pet projects.⁹⁵

For an SOE, any amount of tax paid creates no disvalue to the shareholder because the government is the shareholder. Compared to the private firm manager, the SOE manager, in his or her capacity as a fiduciary, should therefore be less sensitive to tax. By hypothesis, he or she also does not suffer as a shareholder. Thus, the SOE manager suffers from the tax paid only because it reduces the amount of funds allocable to pet projects. Yet if the SOE manager is generally able to allocate more retained earnings to pet projects (*i.e.*, $\pi > \mu$), he or she suffers more in this regard from the tax payment than the private firm manager. Overall, therefore, whether the SOE manager or the private firm manager is more tax sensitive depends on (i) the level of monitoring in each type of firm and (ii) the amount of management ownership in the private firm.⁹⁶

Examining the agency problem in SOE management introduces yet another reason why SOEs might be less tax sensitive than private firms. For an SOE's

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94. $\$(1-\mu)$ of loss to the Shareholder implies $\$ \gamma(1-\mu)$ of loss to the manager as a fiduciary. In addition, the manager suffers a loss of $\$ \alpha(1-\mu)$ as a shareholder. Finally, he or she has less corporate funds at his or her disposal. Specifically, not being able to invest $\$ \mu$ in pet projects implies a loss of $\$(\lambda^* \mu)$. Therefore, in total the private firm manager suffers a loss of $\$[(\alpha+\gamma)(1-\mu) + (\lambda^* \mu)]$ from each \$1 of corporate tax payment. All other things being equal, the more sensitive the private manager is to tax, the higher the values of α , γ , λ .
95. Assume that the level of shareholder monitoring is fixed such that each dollar of loss to the government shareholder is given weight σ ($< \gamma$), and that the marginal value to the SOE manager of each \$1 invested in pet projects is also $\$ \lambda$. π is a function of α ($=0$), σ , and λ .
96. Since any amount of tax paid gives rise to no disvalue to the government shareholder and since the manager does not own equity of the firm, for each \$1 of tax paid, the SOE manager suffers a disvalue of $\$(\lambda^* \pi)$. Comparing the SOE manager and the private manager, then, if $(\lambda^* \pi) < [(\alpha+\gamma)(1-\mu) + (\lambda^* \mu)]$, the SOE manager may be less sensitive to tax than a private manager. Conversely, if the SOE manager is to be as tax sensitive as the private manager, then $(\pi-\mu) = [(\alpha+\gamma)(1-\mu)]/\lambda$, which is greater than 0. That is, it must be that more is allocated by the SOE manager to pet projects than by private managers. This, of course, is quite possibly the case, given weaker corporate governance in SOEs, so equal tax sensitivity between the two types of managers cannot be ruled out.

government shareholder, tax paid by the firm not only represents no disvalue, it is in fact worth more than the same amount kept as corporate retained earnings since a portion (albeit unobservable) of such latter funds would be used for pet projects. By contrast, the tax payment has a negative value for the SOE manager. It is therefore possible for the government to give the manager some incremental credit (reputational, financial, or otherwise) for paying \$1 of tax: As long as the magnitude of the credit is smaller than $\$ \pi$, the government is better off, while the manager will be less averse to paying the tax.⁹⁷

Let us look more closely at the question of why a government should ever give any form of credit to SOE managers for paying tax. If taxing SOEs is essentially a matter of forcing distributions at a fixed rate, and if, let us suppose, that rate has not been set suboptimally high,⁹⁸ giving credit for paying taxes amounts to giving back what the government has bargained for in setting the tax rate. Why should the government do that? The answer is that insofar as an SOE's payment of tax causes no detriment to the shareholder but only hurts the manager, inducing the SOE manager to pay taxes is similar to inducing him to make distributions. On the one hand, with respect to payment of taxes, the government suffers fewer disadvantages from information asymmetry than with respect to the manager's use of corporate funds in general. To reduce tax payments, an SOE can either engage in legal tax planning or attempt illegal tax evasion. Both can, at least in theory, be discovered through proper auditing, and tax evasion can be stopped via enforcement action. On the other hand, to the extent that an SOE can legally reduce or delay paying taxes, the government is precisely not in a position to *force* distributions through taxation. It must induce them. The logic here is analogous to granting the managers of private enterprises equity compensation in order to address the managers' dividend averseness.⁹⁹

97. We can represent this extra benefit to the shareholder from \$1 of tax paid as $m = 1/(1-\pi)-1$. It follows that $m > \pi$. On the other hand, each dollar of tax paid has a disvalue for the SOE manager worth $\$(\lambda^* \pi)$. This is smaller than π and therefore smaller than m .

98. Suppose, for example, that the optimal payout ratio for an SOE is 55% of pre-tax profits. It follows, then, that a 25% tax rate is not too high a rate of forced distribution.

99. Suppose for each \$1 of tax paid, the manager gets "credit" of $\$ \omega$ (note, by contrast, that the government is generally in no position to reward managers of private firms for taxes paid.) Then, if $[(\lambda^* \pi) - \omega] < [(\alpha + \gamma)(1 - \mu) + (\lambda^* \mu)]$, the SOE manager will be less sensitive to tax than a private manager. By hypothesis, the magnitudes of π and λ (the portion of corporate funds that an SOE manager is likely to allocate to pet projects and the personal benefit the manager derives from each \$1 allocated to such use) are unobservable to the government shareholder, and it is possible for the government to set the value of ω either too low or too high. This may introduce a degree of randomness to the SOE manager's tax sensitivity.

In summary, SOE managers may be more tax sensitive than private firm managers because:

1. Due to weaker corporate governance, they have greater leeway to use firm funds for pet projects. In other words, the opportunity cost for the SOE manager of the tax paid is higher.

However, they may be less tax sensitive than private firm managers because:

1. Their compensation may be linked to pre-tax, as opposed to post-tax, profits;
2. They are not motivated to reduce taxes in their capacity as fiduciaries for shareholders since the government shareholder suffers no disutility from tax payments; and
3. They may be given extra incentives by the government to pay taxes just as private firm managers may be given extra incentives to make profit distributions.

This analysis shows that SOEs' sensitivity to the corporate income tax is a contingent, empirical matter. It depends on the strength of factor (1) relative to the aggregate effect of factors (2)–(4). The efficiency of taxation as a method of forcing distributions from SOEs therefore also depends on the above empirical factors.

It is useful to contrast the analysis adopted here, which analyzes SOE tax sensitivity in terms of the SOE manager's expected value from a marginal dollar of corporate profits, with another model of the interaction between corporate taxation and corporate governance offered by DDZ.¹⁰⁰ These authors study the impact of taxation in the private firm context—they do not try to explain the very fact of taxing firms as I try to for SOEs. They argue that taxation may compensate for weak corporate governance. But the mechanism by which they envision this to happen is quite different from those sketched above.

In the DDZ model, insiders—controlling shareholders who also act as managers—divert funds from both outside shareholders and the tax authority. That is, insiders are conceived of as hiding income from both the tax collector and other shareholders, engaging simultaneously in theft and tax evasion. Therefore, the funds insiders divert for their own use come from pre-tax, not after-tax, income. A high corporate tax rate increases the opportunity cost of not diverting since diverted funds are not subject to tax at all, whereas non-diverted funds accrue to the benefit of the insider shareholder only after tax has been paid. Thus, all other things being equal, a high tax rate renders the corporate governance problem worse. The beneficial effect of taxation in the DDZ model comes instead

100. See Desai, Dyck & Zingales, *supra* note 26.

from tax enforcement: Because diversion is equivalent to tax evasion under the model, the tax collector, by reducing tax evasion, also reduces diversion.

By contrast, our discussion does not conceive of managers as hiding income: The funds used for pet projects come from after-tax revenue. Most fundamentally, this is because I (like Chetty and Saez) focus on agency problems in determining payout policy: Managers are not ‘stealing,’ they are just not presenting accurate information about investment opportunities to shareholders.¹⁰¹ This is more consistent with the traditional (and, I believe, correct) conception of the agency problem for SOEs as lying primarily between managers and the state shareholder, not between insiders and minority shareholders. As DDZ admit, their model does not consider empire-building, and “is more appropriate characterizing countries where large shareholders dominate and the main agency problem is the conflict between insiders and minority shareholders.”¹⁰² Because the fundamental issue examined in this article is why SOEs are taxed in the first place, where to set the tax rate and levels of enforcement are secondary questions. To address the more fundamental issue, the agency problem in payout policy is of primary significance.

While the preceding analytical discussion may strike some readers as purely speculative, SOEs’ responses to taxation, like the dividend policies of private firms, actually are the subject of active empirical research. For example, a widely cited study¹⁰³ reports that among listed companies in Malaysia, observed effective corporate income tax rates are lower for those with greater state ownership relative to private firms with otherwise similar firm characteristics. Lower effective tax rates (“ETRs”) have also been reported for SOEs owned by the central government in China.¹⁰⁴ In fact, the Chinese studies are more striking because some of the SOEs display lower ETRs even after the researchers control for a very wide range of relevant firm characteristics.¹⁰⁵ This should seem puzzling even if we do not assume SOEs to be indifferent to paying taxes: Why, being subject to the same tax system as private firms, should SOEs end up paying *less*

101. SOE managers may of course also “steal”—not only preventing the distribution of funds from corporate coffers but also keeping such funds out of corporate coffers in the first place. Insofar as this is the case, the DDZ model is also relevant for SOEs.

102. Desai, Dyck & Zingales, *supra* note 26 at 600.

103. Adhikari, Derashid & Zhang, *supra* note 12.

104. See Cui, “Taxation,” *supra* note 11 at 125ff.

105. Many studies control for firm size, leverage ratio, ratio of fixed assets to total assets, measures of firm performance, growth prospects, the sectors in which the firms operate, and nominal tax rates in examining the impact of firm ownership on ETRs. Some studies control for an even wider range of firm characteristics such as manager compensation and structures of the corporate board.

tax? Among the different theories of SOE taxation, only the forced distribution view seems to offer a solution: The opportunity cost of the tax paid is higher for the SOE manager.

The empirical evidence on SOE taxation is, in reality, more complex. For example, research on Chinese SOEs shows that SOEs owned by sub-national governments have higher ETRs than comparable private firms,¹⁰⁶ which is more consistent with the view that SOEs are indifferent to taxation. However, a subgroup of such studies shows that sub-national SOEs' ETRs appear to be negatively correlated with enterprise autonomy and the effectiveness of managerial incentives to generate profit.¹⁰⁷ In directly examining SOEs' tax responsiveness, some studies have found that SOEs are less sensitive than comparable private firms to changes in tax rates and the tax base,¹⁰⁸ while others find that SOEs engage in similar tax planning as private firms.¹⁰⁹ These findings are not necessarily inconsistent with one another: Researchers are still refining their methodologies and measurements. But overall, it is fair to say that, as an empirical matter, it is no longer news that SOEs (whether with full or partial government ownership) may behave like 'real' taxpayers. Not only is the conceptual analysis offered in this section consistent with this emerging, exciting body of scholarship, it can also motivate further research by providing it with a theoretical underpinning.

V. POLICY IMPLICATIONS

The forced distribution theory of SOE taxation elaborated in Parts III and IV, above, has many policy implications, which I will illustrate in this section in connection with international tax policy. As discussed in the introduction, SOEs from many different countries have been internationally active.¹¹⁰ This raises important tax policy questions for both countries that are home to SOEs and countries that host foreign SOE investors. For the former, for example, it may be asked whether traditional international rules for taxing foreign income, such

106. Cui, "Taxation," *supra* note 11 at 125-26.

107. In other words, holding the extent of state ownership constant, the more autonomous and performance oriented that SOE managers are, the less tax is paid by the SOEs they manage.

108. See Fuest & Liu, *supra* note 13 (SOEs' borrowing decisions respond to changes in tax rates less than private firms' borrowing decisions; their wage payments also respond to changes in deductibility of such payments less than at private firms).

109. See Shevlin, Tang & Wilson, *supra* note 13.

110. See *supra* notes 4, 5. Much of China's much discussed outbound investments, for example, are dominated by SOEs. See Randall Morck, Bernard Yeung & Minyuan Zhao, "Perspectives on China's Outward Foreign Direct Investment" (2008) 39:3 J Int'l Bus Stud 337.

as the granting of foreign tax credits for foreign income tax paid or, alternatively, the exemption of foreign income from home taxation, will have the same effect on SOEs as on private firms. For the latter, by contrast, the question may be whether to welcome or discourage SOE investment and what it means to ensure that private foreign investors compete on a level playing field with foreign SOEs.

To answer either question, we should start with the premise that SOEs are subject to income taxation in their home countries—which is much more likely the case than not. But we might also assume that SOEs are less sensitive than private firms to paying the home country's income tax. As discussed in Part IV, above, this may be because the government owner of the SOE links the SOE's managers' compensation to pre-tax, as opposed to post-tax, profits and may even give extra credit to the managers to pay taxes (just as private firm managers may be given extra incentives to make profit distributions). Moreover, SOE managers, in their fiduciary role, may not be motivated to reduce taxes since the government shareholder suffers no disutility from tax payments. Thus for domestic investments, SOEs effectively enjoy, in a hidden way, a lower tax rate: This lower tax rate is not reflected in the amount of tax payments made to the government; instead it corresponds to how much the domestic tax 'hurts' the SOE manager.

This, however, ceases to be the case when it comes to foreign taxes. Any foreign tax paid by an SOE is of no value to the SOE's government shareholder. Consequently, there is no reason for such shareholder to compensate SOE managers on the basis of *pre-foreign-tax* profits. As fiduciaries, the SOE managers should also aim to reduce foreign taxes. In other words, when an SOE pays a dollar of domestic tax and a dollar of foreign tax, although the monetary amount of the tax is the same, the former payment has a lower subjective cost for the SOE—in the sense that it has less impact on the behaviour of the SOE manager.

SOEs may therefore be expected to try to minimize foreign taxes on their foreign income, much like tax-exempt investors (*i.e.*, pension funds) or multinationals whose foreign income is effectively subject to exemption treatment in their home countries. This, however, is not noteworthy in itself. What is noteworthy is that the discrepancy between foreign and domestic tax payments for an SOE has the following implications for the SOE's choice between domestic and foreign investments (see Appendix, below, for a full example). First, under many countries' tax regimes, domestic tax is imposed on a resident corporation's worldwide income, while a credit is given to the resident corporation for foreign

income taxes that it has paid on its foreign income.¹¹¹ For private firms, the foreign tax credit (“FTC”) serves to neutralize differences in tax rates imposed by different countries: The taxpayer has to pay the same domestic rate of tax on income wherever it earns it, therefore it may be encouraged to seek the highest pre-tax return from investments wherever they arise.¹¹² However, this mechanism is likely to fail to achieve neutrality for SOEs: If a dollar of foreign tax paid has a higher disutility than a dollar of domestic tax paid because the SOE is less sensitive to the domestic tax, a dollar-for-dollar FTC will not make the SOE indifferent between domestic and foreign taxes.

Second, alongside FTC mechanisms, many countries also adopt an exemption approach to the foreign income (usually active income) of resident corporations: The (active) foreign income earned by a resident corporate taxpayer may be subject only to foreign taxes (if any) imposed by the countries where the income arises but not to any home country tax.¹¹³ The exemption approach may have the effect of encouraging domestic private firms to invest abroad when foreign tax rates are lower (and putting the domestic private firm on an equal footing with foreign investors with respect to foreign investments).¹¹⁴ However, this effect may again be absent for SOEs: Faced with two otherwise similar investments, one at home that is subject to a domestic tax rate of 25% and another abroad that is subject to a foreign tax at a lower, 20% rate, the SOE may still choose the domestic investment since 25¢ of domestic tax paid may still possess less disutility to the SOE manager than 20¢ of foreign tax paid.

In other words, traditional principles of neutrality in international taxation were based on the assumption that investors ‘feel the pain’ of all taxes, whether domestic or foreign. This is true for private investors, but it may not be true for SOEs. For the latter, traditional tax policy instruments seem to have indeterminate effects. For example, might SOEs engage in more aggressive tax planning abroad than private firms given that their home governments are not effectively absorbing the cost of foreign taxes through FTCs? The problem also goes beyond FTC or

111. The Canadian counterpart to this approach is found in the *Income Tax Act*. See *Income Tax Act*, RSC 1985, c 1 (5th Supp), s 126. See also Jinyan Li, Arthur Cockfield & J Scott Wilkie, *International Taxation in Canada: Principles and Practices*, 2nd ed (Toronto: LexisNexis Canada, 2011) ch 12.

112. This effect is called capital export neutrality or “CEN.” See Li, Cockfield & Wilkie, *ibid* at 221-22.

113. See *Income Tax Act*, *supra* note 107, s 113(1); Li, Cockfield & Wilkie, *supra* note 111, ch 14 at 304ff.

114. This effect is called capital import neutrality or “CIN.” See Li, Cockfield & Wilkie, *ibid* at 220-21.

exemption mechanisms: Unless SOEs' response to taxes is better understood, what can be said of their propensity to use tax havens?¹¹⁵ For countries that are home to many SOE multinationals, the objectives of international tax policy are therefore far from clear.

The discrepancy between foreign and domestic tax payments for an SOE also has striking implications for their competitive positions vis-à-vis private investors. This is because foreign SOEs seem to suffer from an inherent comparative disadvantage relative to private investors when investing abroad.¹¹⁶ In a domestic context, while an SOE and a private enterprise may pay the same amount of tax, the payment has a lower impact on the behaviour of the SOE manager—it is as if the SOE enjoys a hidden, lower rate. But there is no such disparity between SOEs and private enterprises when they invest abroad: They should be 'hurt' the same by each dollar of foreign tax paid. To put it differently, while private firms can be assumed to be indifferent between a dollar of domestic tax paid and a dollar of foreign tax paid, SOEs prefer paying the dollar of domestic tax. All other things being equal, then, an SOE has a comparative advantage for investing in domestic taxable transactions, and a private enterprise enjoys such an advantage investing in taxable transactions abroad because its relative cost for such investments is lower.¹¹⁷

We can add to this the less subtle consideration that some powerful SOEs can expect to obtain special preferential treatment domestically. Such treatment is generally not available to foreign investments. Thus, paradoxically, the greater the domestic political clout an SOE possesses, the more comparative advantage it has to lose when it decides to invest abroad. This point goes well beyond tax policy. In a number of emerging economies such as China, SOEs are generally

115. What pet projects of SOE managers can funds in tax havens help finance?

116. The notion of comparative advantage should be distinguished from the notion of absolute advantage. In the traditional use of the former, producer X may be able to produce two goods, A and B, both at lower absolute cost than producer Y can. Y may nevertheless be able to produce good A at a lower relative cost to the cost of producing B. In this case, Y would have a *comparative advantage* in producing A, and X should cede the production of A to Y and trade good B (which it produces) for good A (which Y produces). For a discussion of the notion of comparative advantage in matters of taxation, see Michael S Knoll, "Taxes and Competitiveness" (2006) University of Pennsylvania Law School Institute for Law and Economics Research Paper No 06-28, online: <scholarship.law.upenn.edu/cgi/viewcontent.cgi?article=1129&context=faculty_scholarship>.

117. This is so even if the absolute tax cost of the foreign investment is higher for the private investor than for the SOE.

credited with many privileges in making foreign investments:¹¹⁸ the power to win approval under regimes of capital control, the ability to get financing for large investments, and, most importantly, the outsized amount of retained earnings that allow one to consider foreign acquisitions to begin with.¹¹⁹ However, these privileges are correlated with a large set of other advantages SOEs enjoy at home, many of which are lost as soon as SOEs step beyond their national borders.

Interestingly, the comparative disadvantage of SOEs investing abroad creates room for host countries to offer select incentives to foreign SOEs to make greater investments—if that is desired¹²⁰—without the fear that, simply because these incentives are not simultaneously given to private investors, the latter are put at a disadvantage. If SOEs are at a disadvantage compared to private firms, then inducements may be harmlessly offered to SOEs up to the point where their comparative disadvantage disappears. Such incentives can be offered in both tax¹²¹ and other policy areas. The United States, for example, currently offers tax incentives to certain foreign SOEs both under domestic law¹²² and in US tax treaties. For example, it is common for US tax treaties to offer exemptions for interest on loans made by foreign governments and government-owned lenders¹²³ even though the United States itself does not always expect actual reciprocal benefits. Australia has pursued a similar policy through the Australian Tax Office’s administrative practice.¹²⁴ Such policies have evoked expressions of

118. See Daniel H Rosen & Thilo Hanemann, “China’s Changing Outbound Foreign Direct Investment Profile: Drivers and Policy Implications” (June 2009), online: Peterson Institute for International Economics <www.iie.com/publications/pb/pb09-14.pdf>.

119. See Bremmer, *supra* note 1.

120. For a discussion of the history of US policy attitudes towards the desirability of foreign governments investing in the United States, see New York State Bar Association Tax Section, *Report on the Tax Exemption for Foreign Sovereigns Under Section 892 of the Internal Revenue Code* (New York: NYSBA, 2008) [on file with the Journal].

121. See *e.g.* *Convention between the Government of The United States Of America and the Government of Japan for the Avoidance of Double Taxation and the Prevention of Fiscal Evasion with Respect to Taxes on Income*, 6 November 2003, Senate Consideration of Treaty Document 108-14 art 11(3)(b) [*US-Japan Tax Treaty*].

122. See *e.g.* US, Joint Committee on Taxation, *Economic and U.S. Income Tax Issues Raised by Sovereign Wealth Fund Investment in the United States* (JCX-49-08) (2008); Wei Cui, “Responding to Sovereign Funds: Are We Looking in the Right Place?” (2009) 123:1 Tax Notes 1237.

123. See *US-Japan Tax Treaty*, *supra* note 121.

124. See Austl, Commonwealth, Australian Taxation Office, *Private rulings for sovereign immunity – supporting information* (26 August 2014), online: <www.ato.gov.au/General/ATO-advice-and-guidance/In-detail/Private-rulings/Supporting-documents/Sovereign-immunity>.

disbelief from some commentators, who find it incredible that a country like the United States would favour “state capitalism” over “private capitalism.”¹²⁵ In fact, however, such policy may make perfect sense from the perspective of the host country’s national interest if it operates within the space of foreign SOEs’ comparative disadvantage. Here, as elsewhere, the claim that SOEs and private firms should be treated equally rings hollow once it is recognized that these two types of firms may not operate on a “level playing field” to start with.¹²⁶

VI. CONCLUSION

The forced distribution theory of SOE taxation developed in this article can be summarized in three basic claims. First, it holds that corporate governance problems, especially for wholly state-owned firms, make securing adequate dividend distributions a systematic challenge and that SOE taxation should be viewed as an institutional response to this challenge. This claim is motivated in part by the observation that SOE taxation is very widespread and can be justified neither as a condition necessary for securing competitive neutrality between state-owned and private firms nor by ad hoc references to mixed-ownership firms. The claim may nonetheless be surprising to some readers, who may believe that partial privatization has been the main approach adopted to solve SOE corporate governance problems. That an institution remains widely adopted mainly to solve such problems despite privatization may strike them as a heterodox idea. This first claim also implies that the greater a country’s SOE corporate governance problems relevant to dividend payouts, the more likely the country is to rely on SOE taxation. This claim certainly requires further refinement to be empirically tested.

The second claim made by the forced distribution theory is more intuitive and easier to verify. It is that SOEs should be expected to be sensitive to tax even if SOE managers are compensated on the basis of pre-tax profits. The fundamental intuition is that whereas income tax paid by SOEs and SOE dividends may all go to the same government, SOE managers are tax-averse precisely because they are dividend-averse. To anyone who has studied or observed how SOEs deal with their income tax obligations, the claim that SOEs are tax-sensitive to a significant extent (sometimes to degrees that match or even exceed the tax sensitivity of

125. See Victor Fleischer, “A Theory of Taxing Sovereign Wealth” (2009) 84:2 NYU L Rev 440.

126. See the discussion in Part II (particularly the text accompanying notes 53-57), above, concerning the consequences of SOEs enjoying a lower rate of discount.

private firms) is almost uncontroversial.¹²⁷ Such real-world observations, however, put strong strain on the orthodox public finance view that SOE taxation should have few behavioural consequences and is superfluous. As mentioned in the introduction, most OECD countries now have limited public sectors, and empirical patterns in SOE taxation are rarely scrutinized. However, in many other countries, striking patterns in SOE taxation have been found and can be explained only if one abandons the orthodox theory.

Finally, this article claims that the justification for SOE taxation, as well as SOEs' degree of tax sensitivity, has important policy implications. The discussion of such implications in connection with international taxation in the Part V, above, offers only limited illustrations, and it is easy to see that there are more. For example, in countries with significant SOE presence, the view that SOEs should be subject to the income tax in just the same way as private firms to ensure competitive neutrality is quite prevalent. However, I have argued that this view is fundamentally misguided. SOEs are different from private firms in that the supply of state capital to SOEs is inelastic (above a certain point) to the rate of return on such capital. Thus, the benefit (or burden) of setting the rate of taxation on state-supplied capital higher (or lower) than the rate of tax imposed on private firms is enjoyed (or suffered) only by the state shareholder itself and should not result in competitive advantages or disadvantages for SOEs. It follows that the implementation of SOE taxation should be evaluated not in light of some unreflective notion of fairness or neutrality but in light of the basic nature of SOE taxation as a mechanism for forced distributions. The important goal is to ensure adequate payout of SOE profits while minimizing tax-induced distortions and avoiding unintended consequences that may arise from adopting the same tax system for both SOEs and private firms.

This article suggests that as a widely adopted mechanism for forcing SOE distributions, taxation may have played an unrecognized, salutary role in disciplining SOE managers.¹²⁸ If it were not for the tax system, SOEs could have been even more unproductive. However, using the tax system to accomplish two drastically different purposes—to raise tax revenue in the case of private firms and to force distributions in the case of SOEs—risks reducing the efficiency of the system in accomplishing its primary revenue-raising objective. This begs the question of whether better mechanisms of corporate governance for SOEs can be found: Might there be other feasible mandatory distribution mechanisms, for

127. See Jenkins, *supra* note 9.

128. This is essentially the view of Professor John Whalley. See Whalley, *supra* note 14.

example? An explicit awareness of the reasons for the prevalence of SOE taxation as an institution of forcing distributions may help one to explore such alternatives.

From the perspective of countries (such as Canada) that no longer have large public sectors, the most widely shared policy concern regarding foreign SOE investments has been political: The fear of foreign government control of these investments and their use for political purposes.¹²⁹ However, commentators have also urged caution in acting on this fear, as irresistible as it might be. The theory advanced in this article offers the beginning of a rational perspective in thinking about the political threat posed by foreign SOEs. According to the theory, the pervasiveness of SOE taxation is explained by the fundamental fact that SOE managers are no more perfect agents for the SOEs' government owners than private firm managers are for their shareholders. If a sensible scheme for distributions from SOEs to their government owners could easily be devised, there would be no point to taxing SOEs. But precisely because such a scheme often cannot be found, there is a role for SOE taxation. The widespread use of SOE taxation suggests that the challenges to transmitting investment information from SOEs to their government owners could be massive. Otherwise we should not observe a situation (which obtains in a number of countries) where taxation is the main way in which state-owned productive assets contribute to the fisc—this would be completely contrary to the predictions of public finance theory.

It is quite likely that such asymmetries in information are systematic, making government control of SOE decisions rather difficult. Moreover, SOEs can significantly shape—and distort—the development of domestic legal systems, resulting in preferences and policy initiatives that would not otherwise be expected. The idea that the SOE manager merely acts at the behest of the government can be all too far from reality. Instead, SOE managers form an independent interest group shaping policy outcomes. A political theory of government control of SOEs is needed to understand these interactions. While this article neither offers nor makes use of such a theory, it clearly demonstrates the need for one.

VII. APPENDIX: DIFFERENTIAL EFFECTS OF STANDARD INTERNATIONAL TAXATION RULES ON SOES AND PRIVATE FIRMS

The interaction between the logic of SOE taxation and the standard approaches in international tax policy can be illustrated through the following example.

129. See Chen, *supra* note 5.

Suppose that there are two countries: A, the home country, has a corporate income tax rate of 25%, and B, the source country, taxes income received by foreigners at 20%. Country A has two firms: P, a private firm, and S, an SOE. Both P and S are considering investments either at home or in B. The investment opportunities in A and B generate equal pre-tax returns: For the same amount of investment, each gives rise to 100 units of income. Based on the analysis in Part IV, above, we assume that S is less insensitive to tax in A than P. In the extreme case, where S's manager receives enough recognition for any amount of tax payment to A's government,¹³⁰ S is completely insensitive to the domestic tax.

Consider three different approaches to outbound tax policy that country A might adopt, all of which apply equally to P and S.¹³¹ Under the first, foreign taxes are deducted like other business expenses when computing tax liability in A. Under the second, A exempts foreign income received by P or S from taxation. Under the third policy, for an investment in B, A would give a foreign tax credit. Although the numerical results of these different policies are the same for P and S, what the results mean for them differ. In the following, we will interpret the meaning of these different results for P and S and compare them with the baseline case of an investment in A.

A. DOMESTIC INVESTMENT

Both P and S would pay 25 units of tax on 100 units of investment income and keep 75 units as earnings. If the manager of S is recognized in some way for the tax payment S makes to A's government (as if the payment is a distribution), then, in the extreme case, the 25 units of tax payment has the same value to the manager of S as 25 units of additional retained earnings. In the intermediate case, the benefit the manager of S derives from the 100 units of domestic income is greater than the benefit he derives from the 75 units of retained earnings but less than 100 of retained earnings. For P's manager, however, only the 75 units of retained earnings is of value.

130. In the analysis in Part IV, above, "enough recognition" for an amount of x tax payment means a payoff that equals the manager's opportunity cost of using a portion of x (represented by π) for pet projects.

131. For overviews of these approaches to international taxation, see Daniel Shaviro, "Why Worldwide Welfare as a Normative Standard in U.S. Tax Policy?" (2007) 60:3 Tax L Rev 155; Rosanne Altshuler, "Recent Developments in the Debate on Deferral" (2000) 87 Tax Notes 255.

B. FOREIGN INVESTMENT WITH DEDUCTION OF FOREIGN TAX

For an investment in B that generates 100 units of income and 20 units of tax liability owed to B, A would collect 20 units ($25\% \times (100-20)$) as tax from P or S, leaving 60 units to the taxpayer. Any foreign tax paid is of no value to S's government shareholder. Hence for managers of P and S alike, the tax paid to B generates no benefit whatsoever. S's manager is still better off than P's manager in that he can get recognition for the 20 units of tax payable to A. But both are worse off in comparison with the option of investing domestically: Both have only 60 units (as opposed to 75 units) of retained earnings, and of the total 40 units of foreign and domestic taxes paid, S's manager can get recognition only for 20 units, whereas P's manager gets none. The deduction method thus successfully discourages both P and S from making foreign investments.

C. FOREIGN INVESTMENT WITH EXEMPTION

With the exemption method, P would pay 20 units of tax to B on an investment in B and have 80 units left that are exempt from tax in A. For P, this is an improvement over both the option of investing domestically and the deduction for foreign tax treatment. The exemption method thus favours foreign investments over domestic investments for the private firm.

It is S's response to the exemption method that highlights what is unique about SOE taxation. First, note that if S is insensitive to domestic tax, the exemption method offers no improvement over the deduction method. Under both methods, 20 units of foreign tax is paid that has no value to S's manager. While S has 20 units more of retained earnings under the exemption method than under the deduction method, in the extreme case of tax insensitivity, the 20 units of domestic tax paid under the deduction method has as much value to S's manager as 20 units of retained earnings. Even in the intermediate case where S is less sensitive to domestic tax than, but not insensitive, the improvement brought by the exemption method over the deduction method is less dramatic for S than it is for P. Second, and more importantly, the exemption method may fail to make the foreign investment more attractive to S than the domestic investment, despite the lower foreign tax rate. This is clearest in the extreme case, where S's manager derives value from all 100 units of the domestic investment income (whether the 75-unit portion of retained earnings or the 25-unit portion of tax paid), whereas for the foreign investment, he derives value only from 80 units. The nature of the bargain struck between A and S's manager makes it impossible to improve on the domestic investment from a tax perspective. Given the chance to invest in A, therefore, S's manager would not invest in B, notwithstanding

the lower tax rate in B. Even in the intermediate case where S is not completely insensitive to tax, if S's manager's benefit from the 25 units of domestic tax paid is greater than what he or she could derive from 5 additional units of retained earnings, he or she would prefer the domestic investment. In summary, if an SOE is less sensitive to domestic tax than a private firm, the exemption of foreign income may well fail to encourage the SOE to invest abroad.

D. FOREIGN INVESTMENT WITH FTC

Under the FTC method, P's investment in B results in 25 units of total tax payment (20 units to B and 5 units to A) and 75 units of retained earnings. This is (i) better than under the deduction method; (ii) just as good as a domestic investment; and (iii) not as good as the exemption method's treatment of an investment in B.

On the other hand, the effect of the FTC method on S is again distorted by the bargain between S's manager and A. If S is completely domestic tax insensitive, then just like the exemption method, getting foreign tax credit for tax paid to B offers no improvement over the deduction method. This is because S's manager will get recognition for the 5 units of residual tax paid to A and have 75 units of retained earnings. By hypothesis, this is the same—for a tax-insensitive S—as getting recognition for 20 units of tax paid to A and having 60 units of retained earnings (the deduction method) and having 80 units of retained earnings (the exemption method). All are inferior, from S's manager's perspective, to the option of investing in A—and deriving benefit one way or the other from all 100 units of the investment income.

If S is sensitive to domestic tax but less so than P, the FTC method still does not equalize the attractions of the domestic and foreign investments. Both investments would leave S with 75 units of retained earnings. Whereas S's manager might be able to derive benefit from 25 units of domestic tax paid on the domestic investment, he or she can derive benefit only from 5 units of domestic tax paid on the foreign investment.

