Fiscal Federalism and the Future of Canada
Selected Proceedings from the Conference – September 28-29, 2006

Natural Resource Shocks and the Federal System: Boon and Curse?

Robin Boadway*

Why would one suppose that a major oil and gas boom could be a curse? I will argue that our federal system is not well suited to deal with such a boom when it is concentrated largely in across regions do not give rise to similar problems. We begin by outlining the consequences for the private economy of such a resource boom. This is followed by a discussion of the public policy responses in the unitary nation, and an outline of some of the key policy issues that arise in responding to a large resource boom.

Private Sector Outcomes

First principles of economics inform us of the likely response of the private sector to a major increase in the value of oil and gas in Region A. The immediate consequence is that large amounts of labour and especially capital are attracted to the resource sector. The labour will be attracted from other industries and other regions, and to some extent other countries as well. This labour required in the resource industry will span various skill levels from engineering to equipment operators. Some training will typically be required, though many of the skills are of a general type and readily transportable from other uses. The increase in the demand for labour will put upward pressure on wage rates, particularly for those skill-types that are relatively important for resources. In the case of capital, it is useful to distinguish between physical capital and financial capital. Assuming that the manufacturing base is limited in Region A, physical capital may be attracted from other regions or it may be imported. In this sense, some of the economic activity induced by the resource boom is spread to other regions. But the need to import capital goods has an important effect in reducing the adjustments that must be made in the rest of the country. In the case of financial capital, the fact that Canada's capital markets are integrated with the rest of the world means that much of the required financial capital is primarily attracted from international capital markets. Nonetheless, there is likely some national segmentation of capital markets, so some of the additional financial capital needed will be diverted from uses in other regions.

The resource boom will naturally have different consequences for different regions. In Region A, the population rises as a result of both interregional migration and immigration from abroad. The age structure of the population declines and its skill structure rises as a result of the inflow of working-age persons. Wage rates rise, possibly dramatically, due to labour shortages. Indeed, the increase in wage rates is the means by which persons are attracted to Region A. This is accompanied by an increase in property values as the adjustment of the housing stock to accommodate the increased population takes time. The boom in the oil and gas industry spills over to other industries in Region A that are required to service the growing population. Indeed, the larger population may itself induce further growth because of agglomeration economies that exist when population is more concentrated and labour markets deeper. To the extent that this occurs naturally, even more resources need to be shifted to Region A.

The rise in economic activity in Region A is accompanied by a reduction elsewhere, although the reduction will not be one-to-one. As mentioned, some of the physical capital needed in the oil and gas industry might be imported from abroad and much of it may be externally financed. As well, some of the additional labour requirements in Region A will be met by immigration. The fact that the oil and gas industry itself is capital-intensive reduces the need to attract labour from other regions. However, the growth in the non-resource industries in Region A, especially the labour-intensive non-traded service and construction sectors, will increase the demand for labour in Region A. This will increase the pressure on wage rates, which will hurt important sectors elsewhere in the country, including the important manufacturing and high-technology sectors where much of the productivity growth occurs.

In the nation as a whole, the fact that much of the output of oil and gas is sold abroad, and that foreign investment flows in to finance the industry's expansion, means that the real exchange rate rises. This is dampened, however, by the induced imports of intermediate goods and capital equipment and, potentially more important, to the extent that domestic savings increases. The latter is very much affected by how the revenues generated by oil and gas sales are used. If they are saved, particularly in foreign assets, exchange rate effects will be considerably mitigated. However, if they are spent, additional pressure may be put on industries elsewhere in the country depending where the revenues are spent. What is done with the oil and gas revenues is a matter for policy to decide, as discussed below. In any case, there is likely to be some shift in industrial structure from non-resource to resource industries, including from industries with innovation potential. This is the so-called Dutch disease, also referred to as the resource curse.[3] The extent to which it occurs depends on how much the real exchange rate (and the wage rate) rises, and that again is partly a matter of policy.

Finally, regional disparities are affected by the oil and gas boom. Per capita incomes will increase in Region A relative to elsewhere, although some of the benefits of the boom will spread elsewhere by changes in activity levels as well as due to the fact that capital ownership is spread across the country. Unemployment will be induced in other regions as the industrial structure increases, although this will be mitigated by migration. Other regions will lose working-age population to Region A and will be left with a higher age structure. All these things will have policy consequences, to which we now turn.

Public Sector Consequences and Policies in the Unitary Nation

The private sector adjustments mentioned above are necessarily accompanied by public policies. It is these public policy responses that differ according to whether the nation is federal or unitary. Here, we focus on the hypothetical question of what the policy responses might be if the country were governed as a unitary nation. This pedagogical device serves to focus the mind on the particular problems that an oil and gas boom has for a federation.

The unitary national government will run a national system of revenue-raising that imposes a common tax structure on all households and firms regardless of where they reside. This implies that the national government obtains the public share of rents from natural resources using some combination of sales of rights, resource taxes and royalties. These resource revenues could be put directly into the national consolidated general revenues, or they could be set aside and saved in a heritage-type fund. As mentioned, their disposal has consequences for manufacturing and other industries. To the extent that they are saved, the consequences of the resource boom for these other industries will be dampened. Moreover, the domestic economy will be sheltered even more if the savings are held in foreign assets so that they are not used to fuel domestic investment, at least presuming the domestic capital market is to some extent independent of world capital markets despite the fact that they are integrated.

Other aspects of the national fiscal system will kick in as well. The corporate income tax system applies to resources as well as to other industries affected, and will receive additional revenues as the profits of these industries rise. Some of these additional tax revenues will be reimbursed to domestic shareholders through the dividend tax credit system, but that will not be the case for profits accruing on behalf of foreigner shareholder or tax-sheltered shareholders like pension funds. Additional revenues will also be indirectly obtained from income and sales tax revenues resulting from increased wage earnings and induced consumer spending.

The redistributive consequences of the oil and gas boom will also be addressed by the national fiscal system. The national progressive personal income tax system will address changes in distribution of personal income, including those reflecting regional differences. The various elements of the social safety net, such as employment insurance and welfare, will provide temporary social protection for those displaced from employment in other regions of the national economy. The national government will also respond to changes in regional populations and their demographic characteristics by gradually adjusting public service levels in all regions. To the extent that comparable levels of public services are provided to the relevant target groups in all regions, there is implicit social insurance and implicit equalization provided nationwide via the public sector.

Finally, the national government assumes undertaken in Region A. It may be more effective to train, say, engineers in existing universities elsewhere in the county.

Problems for Policy-Making in the Unitary Nation

The public sector cannot help but respond to an oil and gas boom. Property rights to natural resources rest with the public sector, so the on the domestic economy; it shields the domestic economy against major changes in the industrial structure – the resource curse or Dutch disease – it reduces exchange rate appreciation that might be detrimental to the domestic economy, and it shelters the government from volatility that characterizes resource revenues. But implementing the Norwegian system entails a level of commitment that few governments show evidence of satisfying.

In addition to designing a system for collecting resource rents, it is important to have in place a corporate/business tax system that is as non-distortionary as possible so that investment is allocated efficiently among different uses. To use economics jargon, the tax system should ensure that marginal effective tax rates are reasonably uniform across industries and regions, and that otherwise serves the clear purpose of the corporation tax as a withholding system to avoid sheltering of corporate income within the corporation to postpone taxes as well as to withhold against non-resident shareholders. It is clear that the current business tax system in Canada does not satisfy these ideals. As the Mintz Report (1998) documented, it favours the resource sector by its system of generous write-offs, and until recently by the availability of the income trust vehicle that was heaving used to reduce corporate tax liabilities in the resource sector. Moreover, it is hard to justify allowing provincial royalties to be deductible from the federal income tax base.

The design of a national tax/transfer/social insurance system is also relevant as a means of addressing the consequences of resource development for individual workers and their households in all regions. This includes the progressivity of income tax and social protection system of employment insurance and welfare. Designing these systems must take due account of the trade-off between social insurance and the incentive that potential workers might have to seek employment, including in other regions. This is the classical equity-efficiency trade-off that involves important value judgments as well as judgments about the role of the state in providing social insurance as opposed to other institutions, such as family, friends and community, and charitable organizations.

The social protection system involves more than transfers and social insurance. It also involves the choosing of public service levels in areas like health, education and social services, to provide in Region A versus other regions, given rapid changes in population, as well as the dispersion of population in rural and remote areas. How rapidly should hospitals, schools, colleges and universities be built in Region A to facilitate population adjustment? At the heart of this decision is a the chos inanas. Ho0giosde sTD[dchantha,)Tfl.8864(o(egodif63rD

a major oil and gas boom in one province, say, Alberta.

The economic impact of the oil and gas boom in Alberta will generate significant fiscal capacity differences between it and the rest of Canada (ROC) even in the absence of resource revenues. Wage rates will be bid up, and per capita incomes will be above the national average. The Equalization system exists to address differences in revenue-raising capacity, but even under a ten-province standard, Alberta would be left with a substantially higher fiscal capacity than other provinces. That is because, although the have-not provinces would be raised to the national average under a Canadian type equalization program, above-average provinces like Alberta would not be equalized down.

At the same time, there would also be changes in the need for provincial public services in Alberta and the ROC. Migration would cause increases in population in Alberta and reductions elsewhere, and public services would have to adjust accordingly. However, since the migration would involve mainly younger, healthier working-age persons, the relative need for public services per capita would rise in some regions in the ROC (especially Atlantic Canada) and fall in Alberta. This would be offset to the extent that in-migrants to Alberta located in remote areas where costs of providing public services are higher. In principle, a system of equalization could deal with these changes in the expenditure requirements, but the current system does not. It effectively assumes that expenditure requirements are equal per capita, implying that demographic and cost of provision changes are not accounted for.

On balance, the shift in economic activity from the ROC to Alberta would likely exacerbate differences in the ability of provinces to provide comparable levels of public services at comparable levels of taxation. As the fiscal federalism literature stresses, such differences can lead to both inefficiencies and inequities. Inefficiencies arise to the extent that persons and businesses are encouraged to migrate to take advantage of higher levels of public services at lower tax costs (higher so-called net fiscal benefits). Of course, there are likely to be many other factors drawing persons to Alberta, such as the prospect of higher-paying jobs. Nonetheless, empirical evidence suggests that fiscal factors have some influence on migration decisions.[6] This not to say that there should not be significant migration into Alberta from elsewhere, only that it should reflect productivity factors rather than purely fiscal ones.

The changes in fiscal capacity among provinces can be thought of as a passive consequence of the oil and gas boom in the sense that they arise even if provincial governments do not change their fiscal stances. However, provinces are not likely to stand pat in the wake of an oil and gas boom in Alberta. More generally, provincial fiscal policies are not taken in isolation, but reflect an awareness of the competition that exists for valuable mobile resources and businesses. Fiscal competition is generally taken to be one of the healthy features of a federation. It enhances the efficiency and accountability with which provinces provide services for their citizens, and encourages innovation. However, these benefits presume that provinces are on reasonably equal footings in their abilities to engage in fiscal competition. But, where one province has a significant fiscal capacity advantage over the others (after equalization), the value of competition can break down.

In the context of a major oil and gas boom in Alberta, fiscal competition likely favours this province with its much higher fiscal capacity, and it can take various forms. Fiscal measures might be taken to attract good workers to Alberta, and other provinces might find it difficult to respond. By the same token, fiscal policies, using both tax policy and infrastructure, might be used to attract businesses to the province. Even in the absence of provincially owned resource rents, Alberta can be expected to engage in province-building activities that will attract industrial activity away from the ROC. Given that the differential fiscal capacity benefit that Alberta enjoys is a result of its endowment of oil and gas rather than some natural industrial advantage, the ability to use its superior fiscal capacity to engage in beggar-thy-neighbor industrial policies can lead to an inefficient pattern of industrial location. More generally, given that part of the costs of adjustment to resource development are borne by other regions, there may be an incentive for a single region to develop resources too rapidly.

There are other sorts of inefficiencies that can arise from decentralized decision-making, such as non-harmonized tax/transfer systems, distortions in the internal economic union, and spillovers of benefits or costs of provincial programs. Most of these are not unique to natural resource booms. In the case of an oil and gas boom, some such problems can be identified. One is that coordination among provinces is required to transport oil and gas across provincial boundaries. Another is that the heavy use of water in the process of extracting oil from the tar sands could affect the supply of water in neighbouring provinces and territories. There could also be environmental spillovers across provincial boundaries.

This is an unprecedented source of horizontal imbalance in the Canadian federation. If these are used for current purposes, the purely fiscal incentive created for persons and businesses to migrate to Alberta are substantial. Although there is some dispute over the relative magnitude of fiscally induced migration, the numbers for gross inter-provincial migration are now sizeable and the demographics of migrants are relatively favourable to Alberta, which makes the horizontal imbalance more pronounced. Recent work on the long-run welfare consequences of fiscally induced migration suggests that it is quantitatively significant (Wilson 2003).

Related to these effects of the oil and gas boom on fiscal capacity disparities is the fact that, even under the existing system of fiscal arrangements, the Equalization system is strained. This is especially the case the more decentralized are revenue-raising responsibilities in the Canadian federation. The affordability of the Equalization system is already becoming an issue with the gradual reallocation of tax room from the federal government to the provinces, which itself increases fiscal disparities. It will become even more acute with the increase in disparities resulting from the oil and gas boom in Alberta as well as lesser resource booms in other selected provinces. And, the affordability problem has been magnified buy the fact that, for various reasons, the federal government has chosen not to exploit fully its ability to obtain resource revenues through the income tax system. As has been well documented (the Mintz Report 1998), the existing system of business taxes provides preferential treatment to the resource industries through its generous treatment of exploration and development expenses. In addition, federal revenue losses occur through the deductibility of provincial resource levies from the federal corporate tax base, and, until recently, through the toleration of income trusts. We return briefly to these issues in the final section.

With affordability being threatened, the sustainability of even the existing Equalization system becomes tenuous. Despite the well-known commitment of Section 36(2) of our Constitution, the sustainability of Equalization requires a non-trivial national consensus about the extent of the Canadian sharing community. How much are Canadians in all provinces willing to commit to ensuring that residents of all provinces can enjoy comparable levels of public services at comparable levels of taxation? To put it another way, how far does national social citizenship as opposed to provincial social citizenship extend? Do we define our sharing community primarily at the national level or at the provincial level?[9] These become open questions when disparities of fiscal capacity become wide.

Perhaps the most critical consequence of provincial resource ownership is the intensification of asymmetric fiscal competition. Alberta clearly has the resources to engage in infrastructure and other forms of spending designed to diversify the provincial economy and province-build, to a large extent, at the expense of other provinces. It is certainly questionable as to whether this province-building constitutes efficient development since it is based not on any economic geography rationale but simply on the availability of resource revenues to finance province-building. A priori, one might expect that province-building is not efficient, because it is based on the interest of one province only, whereas other provinces are affected. Unfortunately, considerations of this sort seem to be missing from the national debate. The issue is quite similar to that which has animated the debate about cities. Those who worry about neglecting the existing cities as potential sources of growth should doubly worry about too many resources being devoted to building up infrastructure in Alberta simply because it has oil and gas revenues. No economic imperative suggests that the best place for economic development is where large treatment of resource disparities under equalization is not an important issue. But that alone is not sufficient to meet the challenge of responding to the possible inefficient consequences of province-building that follow a significant resource boom. This all implies that the way in which the federal government deals with fiscal balance in light of the new reality is critical. The final section discusses the more modest issue of what feasible measures might be taken to address the fiscal balance issue given the present realities. The more ambitious agenda of responding to province-building is left for further study.

The third argument is that full equalization of resource revenues discourages have-not provinces from developing natural resources. This incentive problem is over-stated. There is no evidence that the full equalization of resource revenues that has applied for the past two decades has had any effect on the rate at which federal spending power enable provinces to pursue their priorities in an unfettered way, but it would also avoid the kind of abrupt and unexpected changes in transfers to the provinces such as occurred in the 1995 budget when the federal government reduced transfers dramatically. The final argument is that turning over sales tax room to the provinces could be a way of encouraging the provinces to harmonize their sales taxes. Arguably, the harmonization of provincial sales taxes is the most important step that could be taken to improve the efficiency of the Canadian economic union and the competitiveness of Canadian industries.

There are, however, compelling counterarguments to further decentralization of revenue-raising to the provinces. The accountability argument is not very convincing and really amounts to an argument of faith. There have been good arguments made as to why provinces should be less vigilant spending general revenues that come from their own sources as opposed to from federal transfers. Both are fungible once they are received. Moreover, accountability already exists for marginal increases in revenue since they must additional taxes raised in the province. Perhaps more important, in the case of the sales tax, provinces simply do not use sales tax rates to fine-tune their budgets. Instead, they essentially take as given whatever revenues come in at their given tax rates. Why they should treat those revenues as any different from unconditional revenues received as transfers is not clear. If one took the accountability argument seriously, one would have to suppose that serious accountability problems ale for 40.00/r0006 Trtass vigilant spendingvince007e0.0002a2S indliobta(fd)3 fromsour.( )Tj
ovin tinht verita sincs iduld be less w 0 -1.147 TDts ng the prov usnttagraduntia(d sappeey dces. y aiious)]TJ0.0008 Tw 0 -
they

unlikely that such a scenario will occur given the incentives for province-building. Perhaps that is all the more reason for the federal government to pursue its own infrastructure and human capital development strategy.

ENDNOTES

[1] Provincial ownership is given by section 117 of the Constitution Act, which states that the provinces should retain their "public property not otherwise disposed of by this Act" (e.g., turned over to the federal government) and reinforced in section 109 which says that "all land, mines, minerals, and royalties belonging to the several provinces" should continue to belong to them. Provincial property rights over natural resources are further protected in section 125, which states: "No Lands or Property belonging to Canada or any Province shall be liable to Taxation." More recently, the amendments to the Constitution in 1982 included Section 92A, which reaffirms provincial rights of ownership and management of natural resources within their territories and extends the powers of the provinces to market and tax non-renewable resources. In particular, provinces can pass laws respecting the sale of non-renewable resources to other parts of Canada and can raise money by indirect taxation of non-renewable resources as long as they do not discriminate against other provinces.