Politico-Economic Mutual Care: Guiding the Future of Canadian Equalization

by Jason Andrew Aston

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Department of Economics
Carleton University

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1. Introduction

Canada's federal system is one of competition among the provinces, and is taken as given in the realm of political science. As the political arrangements of Canada's federal system have evolved, so too have its economic arrangements and this has motivated. Why is it that we see Alberta directly claiming unfair treatment by the federal government, or Saskatchewan and Newfoundland & Labrador threatening the federal government with legal lawsuits? Why are natural resource developments in the Maritime Provinces so important to Alberta or Saskatchewan? The answers lie in the highly politically and economically charged subject of equalization. Perhaps Canada's least understood policy, the enigmatic equalization system touches every taxpayer.[1] This paper is divided into six sections. In the first section, we investigate the political and economic theory behind as well as bases for equalization. In the second section, we explore *fiscal federalism* as the institutional medium which integrates the political and economic considerations of fiscal matters into federal countries. More specifically, this analysis will compare and contrast the historically competing viewpoints of fiscal federalism from the outlooks of both an economist and a political scientist. The comparison will illustrate our line of reasoning for Canadian equalization that there are immutable concerns to provinces both political and economic that will always prevent optimal efficiency and optimal equity in equalization but have been in the constitution of

[1] Regular, Ken. *Understanding Equalization is Canada's Challenge*. Available at: http://www.ctv.ca/servlet/ArticleNews/print/CTVNews/20060524/understanding_equalization_060524/20060526/?hub=Canada&subhub=PrintStory [Accessed April 26, 2008].

what we term a politico-economic mutual care/altruism between the provinces. Substantiating the thrust of the paper, the third section presents a historical timeline and analysis of the Canadian equalization experience in the 20th century in order to demonstrate the earlier political and economic compromises of Canadian equalization (the rise of politico-economic mutual care) followed by the substantial alterations to the program (decline of politico-economic mutual care) that have contradicted the many analyses of academics and equalization experts.. In the fourth section, we narrow our focus to the most prominent element of Canadian equalization's political economy, the equalization formula. In this section we note that formulas are and will remain an essential element of not just equalization in Canada but modern functional federalism amongst the provinces harnessing the critical amount of politico-economic mutual care necessary to ensure stability. Moreover, we also address essential queries. Why do provinces agree to a formula? Why would they want it changed? Are there benefits to having a flexible formula? With the introduction of a model in the fifth section, we illustrate that there are latent political as well as economic elements (including politico-economic mutual care) that converge when creating a formula, and selecting its constituent elements. In the final section, we conclude in quickly assessing the current status of equalization in Canada to offer economic and political explanations for its recent decline in national support. The concept of an ideally optimal equalization system is a fallacy and to crusade in search for such a perfect system is completely infeasible. We can avoid repeating the destructive path that equalization has followed if a stable and unanimously robust level of politico-economic mutual care can be captured in an equalization formula. As there are significant economic and political differences

amongst Canada's ten provinces; the federal government and provinces must appreciate that while countering optimality, sound compromise has and will continue to be the exigent rule for furnishing politico-economic mutual care among the provinces and henceforth, stable equalization in Canada.

Briefly, equalization is a program that is used in many federal countries. It attempts to redistribute income amongst sub-national units to "equalize" each province's financial ability or fiscal capacity, so that they may guarantee comparable services across all provinces at comparable levels of taxation to their citizens. The program is also of cultural significance to the Canadian identity and has become widely accepted as a program that harnesses the best in all Canadians' values.

Entrenched in Canada's constitution, the federal government is continually committed to the "principle of making equalization payments to ensure that provincial governments have sufficient revenues to provide reasonably comparable levels of public services from reasonably comparable levels of taxation."[2] While formally entrenched in 1982, the rationale for this practice, consistent with Canadian political culture, has in fact been ongoing since the 1950s having been supported by the early classical economic theory of James Buchanan. (1950). However, as Canada's provincial economies have come to experience; Ottawa and the provinces have been squabbling over their respective shares like "putative heirs to a wealthy estate."[3] The goal of the program has been to raise provinces' fiscal capacity to a higher level based on a national norm. If a province's per capita tax revenues were ever to fall below a national standard, that province would find itself eligible for additional federal compensation.

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[2] *Constitution Act* 1982 sect. 36(2).

[3] *Equalization for the 21st century*. Avail: www.cbc.ca/new/background/cdngovernment/equalization.htm [Accessed June 23, 2007].

1.1Political & Economic Theory of Equalization
1.1.1 Efficiency bases for equalization

Economic efficiency is captured by the notion of Pareto optimality in the sense that "resources are allocated efficiently when a change cannot make one person better-off without making another worse off."[4] In applying the concept of economic efficiency (the notion of Pareto optimality) to equalization in Canada, Boadway and Usher have both suggested that it is essential to investigate a model of the Canadian economy with perfectly mobile capital and labour.

In the general case: we assume that Canada's stock of labour and capital are fixed and that full employment is an objective. In the case of a unitary Canada, Boadway assumes that factor rewards are determined in accordance with their marginal products. Without equalization or any other interregional transfer program, the general belief is that factors would allocate themselves among provinces over the long run in the most efficient manner.[5] (equal marginal products of both labour and capital across the provinces).

However, efficiency in the context of equalization is complicated by the major factor of Canadian federalism and its resultant imposition of separate but equal provincial governments' fiscal powers. Each province is empowered with its own personal income tax powers and budgetary priorities within the province. Prima facie, federalism is not a direct imposition on efficiency in equalization inasmuch as the style/characteristics of Canadian federalism are. Canada's federalism consists of ten provinces that are all dissimilar from each other. For example, Ontario is over 1 000 000 square kilometres in

[4] Boadway, Robin. (1982). *Equalization in a Federal State: An Economic Analysis*. Minster of Supply and Services Canada, Ottawa: ON, p11.
[5] Boadway at Ibid., p28

area with a population of over 12 000 000 and an approximate GDP of $597 billion. Prince Edward Island on the other hand is a province of just over 5 600 square kilometres, population of just under 140 000 and a provincial GDP of just over $4 billion. The main efficiency complication this creates for equalization is highlighted by Boadway from concepts such as redistributive progressive taxation or investment tax credits in all the separate provinces, and others. In any sense, there is the fact that provinces' fiscal activities effectively alter the representative provincial citizen's real income since it is no longer being solely determined by their labour or capital reward but also by the effects of the individual province's budget. Consider a province that receives a considerable amount of per-capita equalization transfers (Determined as a result of the individual province's budget and fiscal behaviour). Elaborating from Boadway, the argument maintains that for example labour supplying citizens within this province will no longer base their labour supply decision solely on the value of their wage/marginal product of labour but rather the equalized value. Such a citizen may in turn decide not to migrate to another higher wage province because of the equalizing difference being provided. The main conclusion is that as long as net fiscal benefits and the provincial tax rates on capital also differ across all provinces; both labour and capital will be inefficiently allocated between all the provinces.

As a result, the economic thought behind the concept of equalization in Canada is that economic efficiency would be improved if we could design and implement "an interregional transfer system that would eliminate or reduce these distortions that arise from provincial fiscal activities."[6] The objective political and cultural trajectory in Canada has always been to share the wealth within the Canadian family. In fact to share

[6] Boadway at Ibid., p28.

it exactly by equalizing provinces' abilities to deliver this wealth to its citizens but the crux of the exact/equalizing thrust has been most difficult as it is quite opposite to the economic characteristics of Canada's provinces as wealth and economic development among the provinces has been very disparate.

1.1.2 Equity Bases for Equalization

Equity serves as the second fundamental criterion for which equalization is prescribed. As previously discussed, the constitutional element of federalism in the *British North America Act* of 1867 has created the inevitable result of differential net fiscal benefits or real income across the provinces. To elaborate, the differentiation of net benefits to otherwise identical persons across provinces can occur from a number of sources and for a number of reasons. Provincial governments under the constitution finance much of their own public expenditures which must come from their own tax sources. The tax sources or tax bases within these provincial economies upon which the fiscal capacity of provinces depend can easily vary for a myriad of reasons from natural resource scarcity, fear of investment, lack of sectoral diversity etc.

The compounding effect of these differences in tax bases within numerous categories across provinces and the inevitable disadvantages some provinces face has created difficulty for economic development. Poorer provinces have faced such impediments for years whether it be geography or natural resource scarcity and other inconsistencies leading Boadway to label this horizontal inequity.[7] Strictly speaking, horizontal inequity exists in Canada, when "two persons, otherwise identical, are treated

[7] While Boadway labels this horizontal inequity, the concept is also discussed by Usher and others.

unequally by the tax and expenditure system."[8] Boadway provides other reasons for which provincial differentiation in net fiscal benefits to otherwise identical persons can arise. They include; "differences in access to income tax and sales tax revenues when per capita incomes differ and when tax liabilities are related to incomes; differences in the cost of providing public services because of geographical factors, different wage rates, different climates, differences in the need for public spending due to different proportions of old persons and dependents, different health characteristics."[9]

While horizontal equity is the primary concern for equalization in Canada, it is worth mentioning the concept of vertical equity in the same breath as it is often used in the context of interregional redistribution transfers. In considering equalization in a federal state, vertical equity is the belief that there be attention paid to the relative weight given to changes in the well-being of persons at different levels across provinces.[10]

However, according to Wilson (2005), vertical equity is not and mainly should not be a concern of equalization nor should it form a basis for prescribing or evaluating such a policy within Canada. He writes "Equalization is to ensure horizontal equity, that individuals of the same ability are treated equally by government as a whole wherever they live."[11] Equalization in an economic federation such as Canada's will entail some redistribution from rich to poor across provinces as well as from poorer to richer across provinces if the net fiscal benefits happen to differ accordingly. In Wilson's view, vertical inequity may be an unavoidable by-product in the pursuit of horizontal equity;

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[8] Boadway, Robin. (1992). *The Constitutional Division of Powers: An Economic Perspective.* Minister of Supply and Services Canada. Ottawa: ON, p49

[9] Boadway at Ibid., p49

[10] Boadway, Robin. (1982). *Equalization in a Federal State: An Economic Analysis*. Minster of Supply and Services Canada, Ottawa: ON, p12.

[11] Wilson, L.S. (2005). *Key Questions on Equalization: A Discussion*. Department of Economics University of Alberta, p4.

however, the end result is of a politically and economically preferred nature for the entire federation of Canada.

2. Fiscal Federalism

Equalization in Canada has generally been part of the literature on the overarching subject of fiscal federalism. Central to this concept has been the approach to fiscal federalism from the viewpoints of both political scientists and economists.

Political scientists have seen federalism as a purposive manner for dividing powers. Kenneth C. Wheare defined federalism as "the method of dividing powers so that the general and regional governments are each, within a sphere, co-ordinate and independent."[12] The concept of federalism for an economist has been somewhat different. The structure of government and the method in which power is divided are a matter of primacy in the view of an economist. As their main concerns are centrally focused on "the allocation of resources and the distribution of income within an economic system" (in this case a federal economic system).[13] Economists have even proposed their own definitions of federalism, "A public sector with both centralized and decentralized levels of decision-making in which choices are made at each level concerning the provision of public services are determined largely by the demand for these services and the residents of (and perhaps others who carry on activities in) the respective jurisdiction."[14]

By its very nature, *fiscal federalism* attempts to reconcile the economic and political considerations of federalism. According to Oates, fiscal federalism "explores what economic theory implies about the division of fiscal functions among levels of

[12] Oates, Wallace E. (1972). *Fiscal Federalism*. Harcourt Brace Jovanovich: New York, p16.
[13] Oates at Ibid, p17.
[14] Oates at Ibid, p17.

government, and the extent to which such theoretical structure can explain the organization and workings of the public sectors of different countries."[15]

As a result, the political scientist's view of fiscal federalism and an economist's view of fiscal federalism are of interest on the subject of equalization and in the context of ameliorating one's understanding of and appreciation for an equalization program and formula. We look at the exchange where Wallace E. Oates described an economist's view of fiscal federalism while Samuel H. Beer expounded the political scientist's view to fiscal federalism in response to Oates. We need to understand the purely economic reasoning behind the involvement of government in equalization and the principal of perfect mobility. Moreover, we must also comprehend the suboptimal arguments for equalization that contradict the purely economic viewpoint and the political causes of provinces to support such a policy in a federation.

2.1 An Economist's View of Fiscal Federalism

Given that both economists and political scientists struggle with how to define federalism separately, one can anticipate their differences on fiscal federalism. Oates sees fiscal federalism as a segmental emergence of multilevel finance. Multilevel finance has been stimulated by the renewed tension in modern states in the second half of the twentieth century "between the economic and political forces inducing greater centralization and the opposing centrifugal attractions [to] local fiscal control."[16] Oates stresses as well that federalism for an economist is not to be strictly construed from a legal document.

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[15] Oates at Ibid, pvi.

[16] Oates, Wallace. (1977) *An Economist's Perspective on Fiscal Federalism* in Oates, Wallace. (ed.). (1977). *The Political Economy of Fiscal Federalism*. Lexington Books: Toronto, ON, p3.

Oates puts forth as an economist a decentralization theorem featuring a model from Charles Tiebout and three main economic objectives of fiscal federalism that serve as paramount to the subject's understanding for an economist. As fiscal federalism in the economist's view is motivated by local fiscal autonomy, Oates introduces the Tiebout model to suggest that we envision a world in which different communities offer varying levels of public services, in which each individual chooses as a community of residence a locality with a service level corresponding to his or her individual level of demand.[17] Oates stresses that if consumers be perfectly mobile, they can generate an efficient outcome. "By voting with their feet, individuals at the same time reveal their preferences and promote an efficient allocation of resources with the public sector."[18] Oates also believes that fiscal federalism is about decentralization and diversified local outputs. Centralized output of a public service to everyone generates welfare losses for all as Oates' model demonstrates. Oates sets out three main objectives for fiscal equity in a federal system; where fiscal equity proposes that equal sub-national units be treated equally. They are horizontal equity, minimum service levels and vertical equity. Oates acknowledges some existing conflicts between economic efficiency and equity in the Tiebout model. Relating fiscal federalism to a policy level, Oates suggests that "matters of fiscal equity have, in fact, weighed very heavily in the formulation of budgetary programs."[19] Oates suggests that horizontal inequity between provinces is "self-policing" and will correct itself with the mobility model. "Mobility ensures that equals will be treated equally."[20]

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[17] Oates at Ibid., p6.
[18] Oates at Ibid., p7.
[19] Oates at Ibid., p12.
[20] Oates at Ibid., p13.

The second economic objective of minimum service levels is paradoxical to fiscal federalism for Oates in that his efficiency mindedness stresses for decentralization in the public sector for services. While on the other hand, equity concerns puts constraints directly on the decentralization motivating "centrally imposed constraints on local fiscal behaviour."[21]

The third economic objective of fiscal federalism which Oates mentions is vertical equity where Oates stresses as an economist that any redistribution of income be directed by the federal/central government to individuals and not by intergovernmental agreements and grants.

Oates believes that the central government is free of the many local constraints that fiscal federalism can generate and as a result has the capacity "for a more progressive revenue structure and the avoidance of certain deadweight losses because of natural uniformity."[22] Overall, Oates' perspective of fiscal federalism is that of a phenomenon of multilevel finance in modern states that stresses decentralization optimally and the economics of perfectly mobile consumers. Fiscally federal states should strive for minimum service levels, horizontal equity and vertical equity as permanent goals. His analysis touches very little on the political consequences and implications of his implied models and structure and as such is strictly an approach stressing the economics of fiscal federalism. That being said, Oates acknowledges that the economic logic of his arguments sometimes points in a direction that can be disconcerting in terms of its social implications. Oates's analysis is completely unrealistic in the Canadian context. Minimum service levels for provinces in Canada is simply not a consideration that can be

[21] Oates at Ibid., p14.
[22] Oates at Ibid., p18.

entertained given the ever-expanding expenditures and services provinces are now delivering as compared to the central government. Oates' analysis also proposes the perfect mobility of citizens across Canada. While this certainly contains merit at the surface, "perfect" mobility is unworkable in a country the size of Canada as many citizens face the social implications of mobility such as attachments to home, families etc. Oates simply needs to appreciate that citizens in his analysis are simply not as perfectly mobile across provinces in the same manner as capital and that to formulate an argument through such a narrow view adversely weakens its salinity.

In looking at earlier, more elaborate and purely economic literature on fiscal federalism, we note it was very much in favour of equalization from an efficiency standpoint. James Buchanan (1950) examined the possible efficiency bases for introducing equalizing payments into a program of bloc or unconditional grants and served as one of the first sources to discuss this topic. We will discuss this just before our historical timeline in section 2.3.

2.2 A Political Scientist's View of Fiscal Federalism

Samuel H. Beer (1977) writes the political scientist's view of fiscal federalism in response to Oates and in the view that Oates' approach is too analytical. Beer's view of fiscal federalism is appreciative of Oates' analysis but takes issue with Oates' narrow focus. For example, Oates' employment of multilevel finance as an approach directed to understanding problems of public policy dealing with externalities. Oates discusses equalization specifically in the context of externalities.[23] Beer maintains that in dealing

[23] Beer, Samuel H. (1977) *An Economist's Perspective on Fiscal Federalism* in Oates, Wallace. (ed.). (1977). *The Political Economy of Fiscal Federalism*. Lexington Books: Toronto, ON, p22.

with such a problem, "it is futile to discuss only its fiscal aspects."[24] He also disagrees with Oates' decentralization theorem and its mobility model; "one must have difficulty accepting the limits of those traditionally central concerns of the economist –efficiency in the allocation of resources and equity in the distribution of income."[25]

Beer is of the strict belief that the social and political consequences of Oates' efficiency minded, purely economic reasoning are a good deal more dangerous than the purely economic ones. In Beer's view Oates and economists' treatment of fiscal federalism has constituted a new subject that is greater in scope than the denoted term. An economist's view of fiscal federalism "diverts attention from the broad merit and powerful uses of the idea to confine it to budgetary behavior and economic consequences."[26] Beer challenges Oates' mobility model stressing that it implies a strong central government, that will marginally draw the boundaries of the sub-national units so as to create "perfect correspondence of tastes with [the sub-national units] in the provision of public goods."[27] Beer shows that this would no doubt involve redrawing the borders of the sub-national units (provinces) and this is hardly realistic as for example the provincial borders of Canada are not only deliberate but decidedly well established. In Oates' view it would be highly sub-optimal for the small economically less significant provinces like Nova Scotia or Prince Edward Island to be equal sub-national units to that of Ontario and Alberta for example. In countering to Oates, Beer maintained that such a solution does not require strong intervention by a central government as Oates contended but rather solely the actions of individuals and their respective governments if three

[24] Beer at Ibid., p23.
[25] Beer at Ibid., p23.
[26] Beer at Ibid., p23.
[27] Beer at Ibid., p25.

conditions can be simultaneously imposed. They are the freedom of mobility, of partition, and of combination. Freedom of mobility is similar to Oates' view whereas freedom of partition is where a community or dissatisfied group be entitled the freedom to secede from its own sub-national unit and create their own government and/or polity to provide their services.[28] Similarly, freedom of combination is the notion that "local [sub-national units] be able to provide for the services desired by a wider body of citizens."[29]

How much better is this perspective from that of Oates? Beer highlights the importance of considering local politics. Extending from Oates' deficient view in this regard, Beer maintains that decentralized federations produce personalized politics within the polities. He contends that a voter "may indeed report a sense of greater personal efficacy from taking part in the small polity."[30] This is very similar to the provinces in Canada as Canadians are continuing to identify more significantly with the jurisdictions of their home provinces as they continue to have a greater impact on their day to day lives. Strong social identifications produce the sub-national/polity driven politics for individuals.[31] These are significant consequences of Oates' view that need to be considered and Beer is of the opinion they were omitted.

In accommodating these newly introduced interests to fiscal federalism, Beer discusses the longevity and sustainability of fiscal federalism. "Times change and with them the demands that are legitimated by the reigning public philosophy."[32] In compromising conflicts, "the balance of mutual concessions that is arranged and accepted will be guided by and will need to find legitimation in such conceptions. The formation

[28] Beer at Ibid., p26.
[29] Beer at Ibid.
[30] Beer at Ibid., p36.
[31] Beer at Ibid., p36.
[32] Beer at Ibid., p40.

of majority coalitions…cannot be based solely on self-interested bargains but must also accord with certain 'principles'."[33] For example, on redistribution, Beer is adamant that there must continuously be a political cause if a central government is exercising a policy of redistribution. In Canada this political cause stems from the cultural ideals of federalism, of a compact between ten provinces and the federal government to be separate but equal. Enduring politico-economic mutual care in federalism has necessarily and sufficiently imposed an equality to be enjoyed by provinces in their fiscal capacity. Over 140 years later, federalism remains the glue that keeps Canada together. Federalism's provincially driven strong social identifications and cultural effects have generated a notion much like that of mutual care for the provinces. Beer's analysis of fiscal federalism encompasses the political economy of fiscal federalism more completely while complementing Oates' decentralization theorem (stressing that we must extend our perspective beyond that of rational choice)[34] which served as an excellent and thought provoking insight of modern multilevel finance analysis at the time. Beer enriches Oates' perspective by raising the resulting inability of the Oates approach when extending multilevel finance when examining problems of public policy though. Issues of this nature are not only fiscal but immutably political and as result "cannot be confined within a purely fiscal view of their source or remedy" as Oates' perspective does.[35] While Beer and Oates each maintain their separation of viewpoints, there is convergence on some levels.

[33] Beer at Ibid., p40.
[34] Beer at Ibid., p42.
[35] Beer at Ibid., p22.

2.3 Fiscal Federalism of Equalization

Early academic analyses of fiscal federalism were all grounded in "neoclassical orthodoxy" and efficiency was defined by "least-price distortion" (where taxes are rationally analyzed in their ability to satisfy minimization criteria in their disruption of market efficiency. Least-price distortion was the accepted norm for market efficiency).[36] Predominant concerns were the satisfaction of horizontal equity with efficiency considerations treated as closely secondary. In his analysis of the efficiency bases for equalizing payments, Buchanan proposed the introduction of bloc or unconditional grants to the sub-national units to ensure horizontal equity.[37] Counter arguments were made by A.D. Scott (1950) to the effect that transfers such as Buchanan proposed would slow down resource allocation.[38] Transfers from richer to poorer areas were alleged to reduce incentives for workers to migrate to wealthier more productive areas. Moreover, transfers would be highly inefficient because richer provinces would experience labour shortages and pay into equalization while poorer provinces would experience high unemployment. At the same time, equalization would compensate the provincial treasury for the marginal benefits lost from failing to substantially encourage migration to the wealthier provinces in demand of labourers.

In defending his position to A.D. Scott, Buchanan (1970) made the case that at minimum some equalization was absolutely necessary to prevent regional allocation distortion. Buchanan considered the need to accommodate an economy that contained differentiations in per capita incomes among the different sub-national regions with some

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[36] James Buchanan. (1950). Federalism and Fiscal Equity. *The American Economic Review*. vol. 40, p583-599.

[37] Buchanan at Ibid., p 592-3.

[38] Scott, Anthony D. (1950). A Note on Grants in Federal Countries. *Econometrica*. vol. 17, p416-22.

regions containing more high income earners than others. For the model of a federalized political structure, assume that the central government coincides in area with the national economy. Subordinate units of government contain equal populations and each state provides a single purely public good which is non excludable and non rivalrous among all the provinces.[39] A good is non-rival if its consumption by one individual does not prevent the simultaneous consumption from another. A non-excludable good is a good whose benefits and enjoyment cannot be excluded from those who have not paid for it. Within each of these provinces, each citizen pays a marginal tax price equal to his own marginal evaluation for the good and the summed marginal evaluations equals the Marginal Cost.[40] In simpler terms, within the provinces, each citizen would be paying as their tax rate, the evaluation price for one extra unit of the public good. This provides a fiscal incentive for individuals to migrate to wealthier regions of the economy, "Under the starkly simple conditions of this early model, this resource flow will continue until all persons are located in the single highest income state."[41] This source provides a very early model for inter-regional income redistribution.

Figure 1 on p. 146 (See attached figure)

The policy implication was that an efficiency basis existed for making equalizing transfers in a federation. The potential real-world relevance is clear from the simple logic of Buchanan's analysis; individuals make migrational choices on the basis of marginal private values and average public values because of the absence of enforceable property rights in the latter. The argument strongly suggests the desirability of initiating

[39] Buchanon, James. *An Efficiency Basis for Federal Fiscal Equalization*. in Margolis, Julius. (ed.). (1970). *The Analysis of Public Output.*. Columbia University Press: New York, p144.
[40] Buchanon at Ibid.,p144-5.
[41] Buchanan at Ibid.,p145.

equalizing fiscal transfers aimed to offset the differential in fiscal surplus. The degree or extent of the differential surplus is believed to privately motivate excessive resource concentration in a particular space. This assumes in the absence of equalization that individuals would respond at high rates to the out of province migrational forces that differential fiscal surpluses can stimulate.

Buchanan identified the most lasting argument of equalization; namely, the labour mobility/migration issue that equalization inherently attempts to address. In a purely economic sense, with perfectly mobile workers who have little or no attachment to home, the private sector and real wages act as driving forces across the country to equate each provinces' marginal products of labour (MPL). Equalization acts against these forces by delivering to citizens in all provinces basic comparable services at comparable taxation levels, thus mitigating some of the incentive to migrate to a province with a higher marginal product of labour and/or wage. In turn, this deters substantial amounts of migration that would normally be efficiency or equilibrium welfare driven under *MPL=MPL* across provinces. In Canada, since 1867, the structure of the federation recognized two levels of government within which transfers were viewed not to distort or provide incentives for the efficient outcome but rather transfers be made in the "full settlement of all future demands on Canada."[42] Then in 1937, at a time of deep economic turmoil when the fiscal stress of the depression had mounted the federal government set up the Rowell-Sirois commission. The federal government did not establish the commission with a mandate of seeking solely the most economically efficient optimal economic solution for the federal government to bestow upon the provinces. Consistent

[42] MacNevin, Alex. (2004). The Canadian Federal-Provincial Equalization Regime: An Assessment. *Canadian Tax Foundation*, Canadian Tax Paper No. 109, Toronto, ON, p191.

with politico-economic mutual care and respect for all the provinces in the federation, the commission was instead given the mandate of assessing the situation and making recommendations for improving the fiscal position of all the provinces. The thought of the commission's recommendation was parallel to that of its mandate, "to make it possible for every province to provide for its people services of average Canadian standards."[43] This was a clear manifestation of the infusion of politico-economic mutual care in Canadian federalism's intergovernmental public policy discourse.

In observing the history of Canadian equalization, the economic thought, early ideals and beliefs of equalization in Canada were all rooted in a sound, proper and progressive direction. In the process, they embraced the economic considerations for fiscally equalizing transfers, the political concerns of such transfers for Canadian federalism and the disparate nature of all the provincial economies across Canada creating a unique Canadian understanding of equalization. This constituted the promulgation of politico-economic mutual care/altruism amongst the provinces in the spirit of solidarity into Canadian federalism.

3. Equalization in Canada
3.1 Historical Timeline & Analysis

The equalization program as it exists today is the result of a philosophical, structural and institutional evolution that has taken place for several decades. Based on the enumerated division of legislative powers in the *British North America Act 1867*, (ss. 91 and 92 respecting the division of powers of the federal and the provincial orders of government) the federal government was to retain the majority of its revenue generating for the purposes of economic development and national projects, such as the creation of

[43] MacNevin at Ibid., p191.

the national railroad. This defining mechanism of federalism in Canada was 'coordinate federalism' in which the provincial governments functioned independently and autonomously but within a strictly defined set of powers. (sec. 92)

Federalism remained somewhat subordinate until the 1930s when financial hardship had stricken Canadians in the form of the Great Depression. As a result, the Rowell-Sirois commission was assembled and given a mandate to look into federal-provincial relations and the Canadian economy.[44] The Commission was struck as a direct result of several provinces having gone bankrupt in attempting to deal with the Great Depression. The government's attempt at dealing with the depression had demonstrated severe unanticipated deficiencies in the fiscal design of Canadian constitution. Simply put, the federal government kept the major revenue gathering or taxation powers while the province's expenditure obligations were considerably higher and larger than their revenue collection abilities (provincial taxation). In the Commission's report of 1940, it concluded that the Canadian constitution did not provide "[T]he provinces sufficient taxing power to meet their constitutional responsibilities across the social policy areas for which they were responsible (outlined in sections 92 and 93 of the *Constitution Act*)."[45] These deficiencies that the provinces faced were as a result of flawed constitutional design and were inherently systematic in nature. The constitutional division of powers had allotted the provinces with the responsibility of welfare, education and health care at a time when these were only minor concerns. However, by the late 1930s, they were all

[44] Courchene, Thomas J. (2007). A Short History of Equalization. *Policy Options.* March 2007, p22.
[45] Belanger, Claude. *The Rowell Sirois Report and Canadian Federalism during the Great Depression (1929-1939).* http://faculty.marianopolis.edu/c.belanger/quebechistory/federal/rowell.htm [Accessed Sept.20th, 2007].

massive expenditures and the provinces' taxing power were not powerful enough to extract the necessary revenue for the expenditures.

However, as the constitutional culture of the time was still heavily in preference of centralizing power (with the federal government acting as head power actor), the decision was made to reject all decentralizing amendments in favour of three integral recommendations. These recommendations were made in the belief that taxation powers remain very centralized and that there be a guaranteed annual income to the provinces and territories by the federal government. A guaranteed annual income would allot every province a fixed level of income which would be granted in a uniform manner and not be subject to vary. The commission's recommendations to the federal government were:

- Take over control of unemployment insurance and old age pensions;
- Take over the collection of all major taxes, including personal income tax and succession duties (taxes placed on property or assets of an individual following their death, generally paid by the heirs to the estate);[46]
- Compensate the provinces for lost tax revenue (and the removal of previous subsidies), by paying annual "National Administration Grants."[47] These Grants would help provinces provide adequate services (at the average Canadian standard) without excessive taxation (on the average Canadian basis).

Essentially, these were the foundations of what we currently label equalization.

However, the provinces were unwilling to cede their taxation powers and as a

[46] University of Lethbridge. *Equalization Payments in Detail: From tax rental agreements to Social Services, the concept and how it's applied, explained.* Available at: http://www.mapleleafweb.com/old/features/economy/equalization/payments-in-detail.html [Accessed August 8, 2007], wbp1.

[47] University of Lethbridge at Ibid., wbp1.

result, only unemployment insurance was newly administered by the federal government.[48] From 1940 to 1956 then, provinces fiscal relations with Ottawa involved a tax rental scheme that was not exactly equalization and did not have the participation of all the provinces. While the majority of the provinces eventually participated in the agreement, they were consistently uneasy about the entire process, Ontario did not enter the scheme until 1952 and Québec never participated in the tax rental agreements whatsoever. The tax rental scheme was designed to solely compensate provinces for lost tax revenue. In the tax rental scheme, the provinces "rented out" their rights to collect taxes to the federal government.[49] The renting of taxation was a temporary administrative grant of power. For the provinces that participated, the federal government took over the collection of personal income taxes, corporate income taxes and succession duties from those provinces that participated in the rental scheme.[50] The federal government proceeded to pay annual compensation to the provinces in order to make up the income each province lost by not collecting these taxes.[51] Federal compensation such as this was unconditional in the manner in which was spent so provinces could spend it as they saw fit.[52] The compensation's goal was only to recover for the province's lost tax revenue and not to reach a higher level based on a national pre-established standard.

In 1953, Quebec's Tremblay Commission Inquiry on Constitutional Matters was struck to study the problem of tax sharing between different levels of government and to examine the encroachments of the federal government in the matters of Quebec in the

[48] University of Lethbridge at Ibid., wbp2.
[49] University of Lethbridge at Ibid., wbp2.
[50] University of Lethbridge at Ibid., wbp2.
[51] University of Lethbridge at Ibid., wbp3.
[52] University of Lethbridge at Ibid., wbp3.

field of direct taxes. The Quebec provincial government believed heavily in protecting its own special interests. Québec remained isolationist within confederation at this time and was significantly protectionist of their culture, language and nationhood from any outside forces. Preventing the federal government from administering any provincial affairs was central to their concerns. The protection of the province and people of Quebec was paramount and to fulfill this goal, any provincial government in Quebec had to insist on the respect of the fiscal autonomy of the province. Given this view, the commission recommended that Quebec institute its own personal income tax (PIT) system.[53] The province did so as it was perfectly in their constitutional authority under section 92(2) of the constitution. The Tremblay Commission had highlighted the fact that provinces would be constitutionally within their right to collect their own separate taxes. Consequentially, Canadian federalism was beginning to exhibit marked elements of provincial autonomy. The federal government feared that this would result in a chain reaction across Canada with several separate income taxes across provinces.[54] "Therefore in 1957, Ottawa agreed to transfer shares of the three so-called standard taxes to the provinces –10 percent of the Personal Income Tax (PIT), 9 percent of the Corporate Income Tax (CIT) and 50 percent of succession duties."[55] This marked the unofficial beginning of equalization in Canada as a noble and redistributive gesture, inimical to Canada's evolving character and culture of politico-economic mutual care to share the wealth within the Canadian family while forging consensus with an intransigent Québec that was stubbornly refusing to compromise. At the time, these transfers were on a "derivation" basis, which meant that they were in line with what was actually collected

[53] Courchene, Thomas J. (2007). A Short History of Equalization. *Policy Options.* March 2007, p23.
[54] Courchene at Ibid., p23.
[55] Courchene at Ibid., p23.

in each of the provinces.[56] This resulted in the richer provinces receiving larger per capita transfers. Equalization was also the federal solution to this resulting revenue inequality.

The initial version of equalization in Canada guaranteed that all provinces' revenues from these shares of the standard taxes (Business, Corporate Income and Personal Income) would be compensated to the per capita level of the average of the richest two provinces. This top-two province standard lent itself heavily to significant levels of equalization. Simply put the two province standard left only one province without an equalization payment, which was Ontario at the time. In the following years, the federal government would transfer progressively larger shares of the PIT and CIT to the provinces.[57] This was the first actual *equalization formula*. The nature of this program made Canada-in terms of transferring taxation powers one of the most tax-decentralized federations in the world.[58] This was an equitable idea, as the poorer provinces had the equalization program to compensate them where the tax point transfer just wasn't enough given their weaker base. Moreover, the richer provinces were able to exact necessary revenue from their much stronger and far superior tax bases and in some cases, no longer require an equalization payment.

In 1962, the tax arrangements were revised in order to re-manage the equalization formula from how it initially existed in 1957. There were increases in the share of PIT entering the equalization formula from 10 to 13 then 16 percent.[59] Most importantly, this

[56] Courchene at Ibid., p23.
[57] Courchene at Ibid., p23.
[58] Courchene at Ibid., p23.
[59] Courchene, Thomas J. (2007). A Short History of Equalization. *Policy Options.* March 2007, p23.

was the first time that natural resources were included in the formula for equalization.[60] At the time, the other provinces expressed concern over the formula's exclusion of natural resources, since Alberta was receiving equalization whilst it was also boasting rich natural resources. Hence, the formula's expansion to include revenues from resources. Initially, it was to be 50 percent of the three-year average of provincial resource revenues that would be eligible for equalization.[61] Still operating from the top two province standard drove the norm upward as well with Ontario and Alberta together, therefore a national average standard was simultaneously adopted. [62] Furthermore, provinces were offered the choice between a lump sum tax rental payment and an equalization payment which would raise the province to a national norm. This was the last renegotiation of fiscal provincial-federal relations in which certain provinces were still "renting" (as explained previously) their taxation powers. By 1967, every province began to collect their own taxes again.

Politics and political considerations came to the fore in 1963 when the newly elected Pearson government re-modified the distribution of equalization. Staying true to an election promise (made for Atlantic provinces fearing equalization clawbacks based on natural resources), the top two province standard was reinstated and natural resource revenues were removed from the formula.[63] The program was now as it had originated with the replacement of natural resources being the "resource revenue override" in which

[60] Courchene at Ibid., p23.
[61] Courchene at Ibid., p23.
[62] Courchene at Ibid., p23.
[63] Courchene at Ibid., p23.

50% of the natural resource revenues accruing to a province were deducted from that province's equalization entitlement.[64]

Gone was the national program, with national standards and national efficiency. The national program was being represented by only two provinces. While the two-province standard meant that Ontario was the only 'have' province again, the resource revenue override meant that Alberta would not receive equalization as it was deducted from their equalization entitlement. By now, the have/have not label was becoming commonplace when discussing the fiscal affairs of the federation. To be a have province, was to be a province that when all equalization calculations were completed, this province would "have" a per capita surplus on average which could be redistributed to other provinces that had been deemed to "have not" via the formula.

Next came the evolutionary modernization for Canadian equalization when in 1967 the representative tax system (RTS) was introduced as a new approach to equalization. This system calculated a province's fiscal capacity for several different revenue sources "as the product of the relevant national average tax rate and the province's tax base."[65] This marked the first comprehensive approach to equalization and was receptive to the Canadian economy's new found prosperity, modernization and sophistication in that the Canadian economy was that of a booming welfare state with a large population surge and expansion of several different economic sectors. Under the RTS, all provincial taxes and revenues were subject to equalization including one

[64] Courchene at Ibid., p23.
[65] Courchene at Ibid., p23.

hundred percent of natural resource revenues.[66] Fiscal capacity in the context of equalization is generally understood as the

potential of a province to generate revenue. As former British Columbia finance

Minister, Paul Ramsey explains,

> "The usual method of estimating fiscal capacity begins with the calculation of a national average tax rate for each of the over 30 tax bases used by provinces to obtain revenue. These rates are then applied to the corresponding tax bases of each individual province to calculate the total hypothetical revenue that would be generated."[67]

The RTS formula initially included 16 separate revenue sources.[68] By the late 1960s, Canadian provinces were increasingly becoming competitively independent from the federal government in Ottawa as well as other provinces. Their legislative jurisdictions were becoming increasingly important in the day to day lives of their citizens. This required an increasing amount of fiscal competency and independence. As a result, there were 10 provinces with ten different fiscal strategies at delivering all the same services to Canadians who would otherwise be identical at comparable levels of taxation. In the near future, the infusion of net fiscal benefits analysis towards equalization would eventually assist in ameliorating this situation in the near future.

This decade certainly marked the politicization of the equalization program. Rationale in Canada had been on mainly political/equity based equalization with efficiency considerations and concerns being secondary in importance. It is argued that in a federalized state with decentralized tax and fiscal policies, federal transfers can be

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[66] Courchene at Ibid., p23.

[67] *Fiscal Capacity and Provincial Budgets*. Available at http://www.fin.gov.bc.ca/archive/budget00/reports/bgt2000_report_g.htm [Accessed Jan. 10th, 2007].

[68] MacNevin, Alex. (2004). The Canadian Federal-Provincial Equalization Regime: An Assessment. *Canadian Tax Foundation*, Canadian Tax Paper No. 109, Toronto, ON, p193.

used to correct resource misallocations that result from a variety of fiscal spillovers among jurisdictions

At the beginning of the 1970s there were minor alterations to miscellaneous categories for the RTS that were to be included in the formula. While mainly a refining or tinkering exercise, this included the removal of medicare premiums from a catch all category to its own category.[69] 1973 marked the end of a period since 1967 in which 100% of both energy revenues and energy tax bases from the provinces was fully included in the formula.[70] By 1974, the world price of oil had quintupled in two years. Provinces that were rich in oil producing began to increase their royalty rates on oil and gas. Simultaneously, the federal government disallowed the deduction of such royalty payments from the corporate income tax calculations (CIT) in the equalization formula.[71] Energy prices and energy related revenues created a substantial effect on the equalization system in Canada and its entitlements. The Trudeau government altered the equalization formula so that all "basic energy revenues" would continue to be fully equalized and one third of "additional energy revenue" would enter the formula.[72] "Additional energy revenue" was meant to include the significant gains in fiscal capacity from natural resources in an encompassing manner. The domestic price of oil was able to rise now without creating a significant fiscal distortion in the economies of the provinces. In the west of Canada, this was very disruptive to federal-provincial relations. Federalism had reached a new confrontational stage as the western economy was developing natural resource wealth and political autonomy while simultaneously being subverted for the

[69] Courchene, Thomas J. (2007). A Short History of Equalization. *Policy Options.* March 2007, p23.
[70] Courchene at Ibid., p23.
[71] Courchene at Ibid., p24.
[72] Courchene at Ibid., p24.

benefit of all Canadians by a federal government mandate. This was not the first time that western provinces had fought vehemently for sole authority over their natural resources. To Albertans, this amounted to confiscation and thievery; putting a significant strain on the politico-economic mutual care in the federation. Provincial "Revenues that ought to be flowing into provincial treasuries were being effectively transferred to Canadians in the form of subsidized domestic energy prices on the one hand and transferred to Ottawa via the export tax on the other."[73]

In many ways, the alterations were an attempt to stabilize the size of the equalization payments and adjust due to the immense effect that the commodity of oil was having on the program. However, this was coming at a great cost to the strong social identification of equalization in the provinces.

In 1977, further changes to the formula were implemented in an attempt to reconcile the concerns of the richer natural resource provinces and the equalization program. This included the introduction of a resource cap on all energy-based equalization. Any province receiving equalization could not be receiving more of a third of their total equalization from "energy based equalization."[74] Energy based equalization was equalization provided to a province whose fiscal capacity was below average in the natural resource revenue category. As natural resources were not a significant industry across all provinces, the resource cap served as a caveat to prevent otherwise prosperous provinces with little natural resources to reap the rewards of equalization from other provinces through the program. Furthermore, the elimination of the "additional and basic" separation for *energy revenue*s was replaced by alternatively including 50% of all

[73] Courchene at Ibid., p24.
[74] Courchene, Thomas J. (2007). A Short History of Equalization. *Policy Options.* March 2007, p24.

*non-renewable resource revenue*s in the formula.[75] From the late 1970s into the 1980s, global events continued to cause further increases in the value of mainly global non-renewable resource commodities. This eventually raised the size of equalization payments in the non-renewable resources revenues category substantially to the point where Ontario was in fact briefly a have-not province.[76] As a result, an approach was made by the federal government to have more of the provinces that were incurring the large per capita increase to bear more of the equalizing cost. By the end of the 1970s, copious alterations to the formula had increased the number of revenue categories from 16 to 29.[77]

In the 1980s, Alberta was caught in the middle of a double disadvantage. A federally mandated domestic oil price was being followed that was at about 40% of the world price, provinces were therefore producing much smaller tax bases in that category.[78] This resulted in a significant requirement of equalization revenues from the "have provinces" which no doubt included Alberta. The National Energy Program (1980)(hereinafter NEP), while not well received by the Alberta government, did not affect equalization directly as much as it did the national economy more generally. Additionally the NEP did further exacerbate one concern. The concern that the federal government was still capable of taxing, regulating and heavily controlling the energy sectors of provinces affected equalization. In 1982, the principle of equalization was entrenched in the constitution as it had become widely accepted by provinces and

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[75] Courchene at Ibid., p24.
[76] Courchene at Ibid., p24.
[77] MacNevin, Alex. (2004). The Canadian Federal-Provincial Equalization Regime: An Assessment. *Canadian Tax Foundation*, Canadian Tax Paper No. 109, Toronto, ON, p193.
[78] Courchene at Supra., p26.

Canadians by this point. "While embraced in principle, the program lay in shambles."[79] The principle being embraced was that of politico-economic mutual care amongst the provinces and this was the principle's first legal manifestation. The priorities of the federal government with respect to equalization were "[T]wofold: to find a way to minimize or in any event to reduce the impact of energy on the formula, and to find a way to exclude Ontario via the operation of the formula."[80] Both priorities having been motivated by political rationale as competitive federalism had now been co-opted as the federal-provincial norm. In simpler language, the federal government had to draft a financial solution that would not only satisfy the economic efficiency requirement and the equity requirement but also the politico-economic mutual care element of the program. If the federal government was to be tailoring a solution to equalization for any province it would have to be doing so in an equitable manner so as to not create federal-provincial and/or inter-provincial objections (which only serve to weaken politico-economic mutual care). Eventually, the federal government's solution was to adopt a five province standard comprised of Ontario, Quebec, Saskatchewan, Manitoba and British Columbia for the purposes of calculating the equalized standard value.[81] This standard was intended to go up the middle as an equalizing standard from both the efficiency and equity standpoints. This formula would now re-include all resource revenues (100%) in the standard, (no Alberta or Atlantic provinces). With a new five province standard in place, approximately 61% of natural resource revenue was excluded. This meant that

[79] Courchene at Supra., p26.
[80] Courchene at Supra., p26.
[81] Courchene at Supra., p26.

provinces were now receiving 39% of the energy equalization it would have received under a National Average Standard (NAS)[82].

Furthermore, there were self-interested formula side deals, namely the Atlantic Accord which provided for the "generic solution"[83]to Nova Scotia and Newfoundland & Labrador. The Atlantic Accords were the result of "protracted" court battles against the Mulroney government over offshore resources.[84] Equalization went fairly smoothly though under the new standard of five provinces, the Atlantic Accord considerations and the generic solution. However, the following decade would see the return of a liberal led federal government accompanied by the continued wooing of provinces insisting on their own personalized bilateral equalization deal making the program a marked departure from its original self thus decreasing the binding level of politico-economic mutual care/altruism provinces once exhibited.

The Chrétien era saw Ottawa economizing under its own fiscal burden including budgetary and debt concerns, equalization became "patched together like an improvised quilt, with its almost incomprehensible formulas and side deals to withstand the strains."[85] Having lost its national uniformity and general understanding, equalization had lost much of its original policy direction with very little cohesion and binding mutual care as was intended given this was program under federalism. Furthermore, the

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[82] Courchene at Supra., p27.

[83] The Atlantic Accord ensured the generic solution to the provinces that sheltered their energy revenues from equalization. The generic solution being that "if a province has 70 percent or more of an equalization tax base, then it can shelter 30 percent of these revenues from entering the formula; i.e., the maximum equalization clawback will be 70 percent. In order to ensure that Newfoundland and Nova Scotia would qualify for this 70 percent inclusion rate, they were given separate tax bases for their offshore revenues - one for Newfoundland and one for Nova Scotia — so that by definition they have 100 percent of the tax base, not just the needed 70 percent" Ibid., p27.

[84] *Equalization for the 21st century*. Avai: www.cbc.ca/news/background/cdngovernment/equalization.htm [Accessed June 23, 2007].

[85] Ibid.

secessionist movement in Quebec had come to dominate much of the national political in the mid 1990s giving equalization concerns a low political priority as the very future of Canada as a ten province federation was in the hands of Quebecers. After the referendum of October 1995, where Quebecers decided by a margin of 0.4% to not secede from Canada, political attention paid to sovereignty very slowly began to fade in order for other federal-provincial matters to regain publicity. The beginning of which came in 1997 with the Canada Health and Social Transfer Act, (CHST) now known as the Canada Social Transfer (CST) in which the federal government contributes money to the provinces which must be spent on only Health and Social expenses. This was a downloading of responsibilities by the federal government as provinces were previously held to specific health and social standards in order to receive these funds. Provinces felt as though their jurisdictional autonomy in these fields had been invaded and was being compromised and this was unacceptable as the provinces had become fiercely decentralist since the mid 20th century and were resolved in their ability to administer on what they felt were their grounds of legislative competence.

The Chrétien leadership era officially came to an end with the minority election of Paul Martin's government in 2004. In 2004-2005, equalization payments were approximated to decline to low of 8.9 billion. The federal government's finances had also improved resulting in balanced budgets and eventually unanticipated surpluses. "A number of federal transfer programs had been reduced by a substantial amount in the mid 1990s and provincial pressures were mounting to increase Equalization as well as other transfers, particularly in the case of health care."[86] Therefore, in October 2004, the First

[86] Department of Finance. Expert Panel on Equalization and Territorial Formula Financing. *Achieving a national purpose : improving territorial formula financing and strengthening*

Ministers and Prime Minister Paul Martin agreed to a new framework for equalization. This new framework abandoned the formula approach in determining equalization and replaced it with a fixed pool of funds which was set at $10 billion in 2004-2005.[87] Equalization payments would be calculated on a three-year moving average of entitlements. "Entitlements for a given fiscal year would be the average of entitlements as currently defined, for the three previous years."[88] The intention was to smooth the equalization payments to provinces.

In that same year, at the request of individual provinces, the federal government committed itself to increase the equalization pool by 3.5 percent annually over the next 10 years.[89] The previous approach to equalization had been abandoned and the significance and role of the formula had been reduced to serve as an allocation tool or distributor for recipient provinces. This amendment was introduced into legislation as Bill C-24, "Bill C-24 stated the exact amounts that would be transferred to the provinces over the coming years in respect of equalization payments."[90] Changes in fiscal capacities which vary with economic circumstances were intended to form the basis of the allocation of equalization payments for 2005-06 but not subsequent years.[91] This dramatic alteration to equalization was to be legislated on an interim basis. When the new framework was adopted, the federal government appointed an expert panel to review

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Canada'sTerritories. Ottawa, Ont. : Department of Finance, Government of Canada, 2006. Avail. at: http://www.eqtff-pfft.ca/epreports/EQ_Report_e.pdf [Retrieved Feb. 12, 2008], p29.

[87] Ibid.

[88] MacNevin, Alex. (2004). The Canadian Federal-Provincial Equalization Regime: An Assessment. *Canadian Tax Foundation*, Canadian Tax Paper No. 109, Toronto, ON, p233.

[89] Courchene, Thomas J. (2007). A Short History of Equalization. *Policy Options.* March 2007, p28.

[90] LeGoff, Philippe. (2005). *Equalization: Waiting for the Perfect Formula*. Library of Parliament. Economics Division: Ottawa, p8. Avail. at: http://dsp-psd.pwgsc.gc.ca/Collection-R/LoPBdP/PRB-e/PRB0450-e.pdf[Retrieved Mar. 2, 2008].

[91] LeGoff at Ibid.

a new formula as well as several different approaches to measuring capacity, the inclusion, exclusion or exclusion in part of different revenue categories while ensuring that payments be stable and predictable over time.[92] The Expert Panel on Equalization and Territorial Formula Financing released its report approximately two years later in May 2006.

Prior to the First Ministers meeting in October 2004 however, the federal government had indicated its intent to continue bilateralizing the multilateral framework of equalization that had been in place for over twenty years prior further weakening the broad political support, politico-economic mutual care and strong social reasoning provinces once unanimously afforded the program. This prompted many provinces to lose faith in the framework by this point and its associated formula. Leading up to the 2004 election, Prime Minister Martin gave the guarantee in private contact to Newfoundland and Labrador Premier Danny Williams that federal equalization clawbacks to maritime offshore energy-related revenues would be reduced to zero.[93] An equalization clawback has become the hostile term that is used when a province's newly or rapidly increasing fiscal capacity as a result of a particular revenue category generally natural resources is included at a high rate into the equalization formula for the purposes of equalizing other provinces. More bluntly, the marginal return of developing or investing in a provincial project that raises a province's fiscal capacity in that particular revenue category is strongly reduced as it is used to compensate other own-province fiscal capacities that may be deficient. Capacities which would have been compensated via an out-of-province equalization payment that the project not been developed. The

[92] LeGoff at Ibid.
[93] Courchene at Supra., p28.

bilateral politicking of equalization continued with further guarantees for the Maritime Provinces. The 2004 federal budget also promised Nova Scotia and Newfoundland & Labrador a reset to the equalization offset provision for offshore petroleum resources to start in 2001.[94] The budget also extended the deadline for Newfoundland & Labrador to choose "either the generic solution under the equalization program or the benefits of the Atlantic Accord from December 31 of the fiscal year for which payments are made to the month before the final determination of equalization for that fiscal year."[95] Soon thereafter, Premier Williams openly began supporting Paul Martin's tenuous minority government in the election and stood strongly behind Prime Minister Martin's deal for Newfoundland and Labrador. The deal played itself as such that the energy revenues would still enter the formula however the provinces would be repaid. Putting pen to paper, Prime Minister Martin created a new set of Atlantic Accords to follow through on the promise that had been made. This deal infuriated provinces that were still experiencing the clawback. Newfoundland & Labrador and Nova Scotia were not just exclusively offered a favourable fiscal incentive, but rather guaranteed a redistribution of their only genuine financially substantive contribution to national equalization as well their own equalization payment on top of all that.[96] Simply put, specific provinces were courted for political purposes and the result was a side deal. In response, as the theme had been for almost 15 years, federal provincial relations suffered and so other single provinces demanded compensation/equity further resulting in individual side deals for

[94] MacNevin, Alex. (2004). The Canadian Federal-Provincial Equalization Regime: An Assessment. *Canadian Tax Foundation*, Canadian Tax Paper No. 109, Toronto, ON, p233.
[95] MacNevin at Ibid., p234.
[96] Courchene at Supra., p28.

provinces like Saskatchewan and Ontario[97] and British Columbia virtually depleting the level of politico-economic mutual care/altruism between the provinces and seeding a provincial self-interest and economically autonomous outlook in its wake. "Often referred to as an integral part of the east-west 'glue' of the federation, equalization appeared to be imploding into a series of bilateral personalized deals."[98] Courchene described its deterioration 9hence that of its politico-economic mutual care also) as "most inappropriate" and "most inexplicable."[99]

Finally in 2005-6, the election campaign of Conservative Party of Canada Leader Stephen Harper was certainly guilty of mixed messaging to the Atlantic Provinces on the subject of equalization as it mattered greatly to them as an election issue. The Harper campaign promised during the 2006 federal election campaign that a Conservative government would exclude non-renewable resources in any new equalization formula.[100] However, when the government's second budget was introduced in March 2007, it was found that non-renewable resources of all provinces were now being included in the equalization formula. This was met with significant criticism from both the Newfoundland and Labrador Premier Danny Williams and also the Saskatchewan provincial government who once again felt as though their revenues would be clawed back in a confiscatory manner and that they were effectively duped into a political ploy in order to generate necessary electoral support.[101] In May of 2006, the long awaited and anticipated Expert Panel on Equalization and Territorial Formula Financing released its

[97] Courchene at Supra., p28.
[98] Courchene at Supra., p28.
[99] Courchene at Supra., p28.
[100] Courchene at Supra., p29.
[101] Courchene at Supra., p27.

report entitled *Achieving a National Purpose: Putting Equalization Back on Track*. Among the recommendations of key interest; at least fifty percent of resources revenues should be included in determining the overall size of the equalization pool and actual resource revenues should be used as a measure of fiscal capacity in the equalization formula.[102] The panel heard one consistent message throughout its consultations, "it was the need to return to a rules-based, formula-driven approach."[103] The panel's report was written in the outlook and state of mind of equalization having lost its politico-economic mutual care and stability therein requiring serious restoration.

4. Common Issues in Both Equalization Frameworks

Economic scholars have investigated the 1982-2004 framework of equalization, offering thought provoking observations and insight into the successes of equalization and its issues for improvement. The frequently discussed issues included the inefficiency in the program and the outcomes therein. Michael Smart (1998) discussed the use of RTS in the context of equalization. Smart argues that the move to RTS for equalization was groundbreaking and most definitely motivated by efficiency and sound economic theory. Smart makes his case from the fact that RTS based equalization "effectively compensate sub-national governments for a portion of the deadweight loss associated with taxes."[104] Smart analyses intergovernmental transfer programs as part of an equalization scheme through the method of attempting to equalize differences in sub-

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[102] Department of Finance. Expert Panel on Equalization and Territorial Formula Financing. *Achieving a national purpose : improving territorial formula financing and strengthening Canada'sTerritories*. Ottawa, Ont. : Department of Finance, Government of Canada, 2006. Avail. at: http://www.eqtff-pfft.ca/epreports/EQ_Report_e.pdf [Retrieved Feb. 12, 2008], p62,65

[103] Ibid., p50.

[104] Michael Smart. (1998). Taxation and deadweight loss in a system of intergovernmental transfers. *Canadian Journal of Economics*. 31(1): p228.

national jurisdictions tax capacities purely on the basis of the Representative tax system. Smart compared the program to the redistributive taxation of individual incomes and redistribution targeted to low-income and implicitly or explicitly, taxing high revenue regions. Equalization programs in Smart's view have often served equity objectives across provinces and were less concerned with efficiency as a result.[105] Swan and Garvey(1991) identified that grants may tend to influence sub national states' behaviour within the federation and although in our model this is fixed, influence their behaviour in that they may tend to increase the distortionary tax rate chosen by provincial governments (leading to low tax effort).[106] "Most notably, simple strategic behaviour such as recipient sub-national units over-providing public services and contributing sub-national units under providing public services so as to alter their calculated entitlements."[107] This is of course inefficient. Together with Smart as well Swan & Garvey's analysis, such inefficiencies were exemplified by the disincentives that arose under the 1982-2004 framework specifically. Provinces expressed concerns of having to compete fiscally with their provincial neighbour and on their approach to taxing income to remain competitive.[108] Maritime Provinces expressed concern over the framework's standard as being principally focused on efficiency rather than equity. Quebec argued that the "distortions and cross-province effects of fiscal changes" drastically affected

[105] Smart mentions the potential for this outcome at numerous points in his article including pp.190, 191, 192, 193. It seems that in Smart's view, provinces are continuously considered as rational actors maximizing their own gain from equalization and minimizing their own contribution.

[106] Swan, Peter L. and Gerald Garvey. (1993). *The Equity and Efficiency Implications of Fiscal Equalisation.* New South Wales Treasury, p73.

[107] This is pointed out by both Swan, Peter L. and Gerald Garvey. (1993). *The Equity and Efficiency Implications of Fiscal Equalisation.* New South Wales Treasury. & Petchey, Jeffrey, and S Levtchenkova. (2004). Fiscal equalisation in Australia: proposals for an efficiency-based system. *Economic Papers* (23): 189-200, p193.

[108] MacNevin, Alex. (2004). The Canadian Federal-Provincial Equalization Regime: An Assessment. *Canadian Tax Foundation*, Canadian Tax Paper No. 109, Toronto, ON, p233.

their equalization entitlements from year to year independent of their fiscal behaviour.[109] Equalization's negative effect on the incentives to develop resources was also expressed as an issue requiring a strong assertion of support by the program, to increase the economic incentive for provinces to develop resources.[110] Smart's and Swan & Garvey's articles raise a host of political and economic issues for Canadian equalization. The issues contributed to the gradual degradation of politico-economic mutual care amongst the provinces, which crucially acted as a lasting support mechanism for equalization. The main source of the provinces' reservations and objections for accommodation stemmed from one focal element, the equalization formula. Since the equalization formula was transparent, provinces could easily calculate their payments under various tax policies (and those of other provinces). This transparency gave provinces incentives to avoid taxation or induce transfers by adopting sub-optimal tax policies.[111]

Swan & Garvey (1991) discussed this point in more detail. They examined the effect of this visibility on the "tax effort" of welfare-maximizing provincial governments. Given the open knowledge of the redistribution system in place, just how hard each province worked at raising enough fiscal capacity/wealth for their expenditures depends on the tax bases from which they could effectively tax.[112] These implications were explored for the optimal design of such programs, a design that would act as a blueprint for both federal and provincial governments. A blueprint to instruct them on the limit and extent to which ad hoc provisions/special considerations were to be made to

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[109] MacNevin at Ibid., p229.
[110] MacNevin at Ibid., p229.
[111] Michael Smart. (1998). Taxation and deadweight loss in a system of intergovernmental transfers. *Canadian Journal of Economics*. 31(1): p205-6.
[112] Peter L. Swan and Gerald Garvey. (1993). *The Equity and Efficiency Implications of Fiscal Equalisation*. New South Wales Treasury. p57-59.

provinces at the expense of the rest of the federation. To paraphrase Swan and Garvey, such an outcome would be the result of each province's financial status within the federation. The provinces with "sufficient powers to tax and enforce their own rights under the constitution will achieve a credible delegation of power."[113] Extending beyond Swan and Garvey it should also be noted that provinces with less financial sufficiency but considerably sufficient electoral power would be in possession of a temporary delegation of power. Aspects of both the efficiency and equity motivations behind equalization required that impacts on provinces be rightly considered just as much as their impacts on the overall program, the formula and the redistribution of the funds collected therein.

After the dramatic shift to a new fixed pool of equalization funds framework in 2004, there remained issues stemming from inefficiency once again. Primarily there were inefficiency concerns directed at the treatment of the property tax base and personal income tax base. The 2004 framework proposed a shift toward the adoption of a market value basis for the measurement of property tax bases.[114] As an experiment, the formula would only use fifty percent of the proposed residential tax base. This alteration considered that "Special Consideration will be made for British Columbia, where property values are significantly higher than in other provinces, reflecting to some extent nominal rather than real differences in the quantity and quality of properties."[115] According to MacNevin (2004), the switch to market-based valuation was likely only going to apply to British Columbia and manifested an asymmetrical and bilateral consideration for British Columbia. In response to Saskatchewan and other provinces'

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[113] Ibid.,p10-11.

[114] MacNevin, Alex. (2004). The Canadian Federal-Provincial Equalization Regime: An Assessment. *Canadian Tax Foundation*, Canadian Tax Paper No. 109, Toronto, ON, p232.

[115] MacNevin at Ibid., p232.

concern from replacing the tax-on-tax approach to a tax-on-income approach, the 2004 framework adopted a new approach to estimating the personal income tax base within the province.[116] "'The new base will model each province's tax system and will have the added benefit of automatically adapting to changes in provincial tax regimes'…it is not clear how the proposed approach fits into an RTS framework, since it seems to involve modelling each individual province's income tax regime rather than a typical or representative regime."[117] Petchey (2004) highlighted the consequences of bilateral politicking for the fiscal federalism of equalization using Australian equalization as his case study. He argued that when redistributive programs lose their efficiency basis, the program becomes susceptible to conceding to interregional differences.[118] Sub-national units will begin to develop transfer dependency from the national unit and its citizens will also develop an attachment to home, acting against the efficient forces of migration. Such interstate differences will become economically motivated such as fiscal externalities, economic rents and factors of production across provinces. This inefficiency inevitably induces strategic behaviour by provinces resulting in political bilateral personalized side deals with the federal government[119] thereby weakening the politico-economic mutual care of the provinces. These side deals act in an irrationally reactionary sense to hastily resolve political disputes from the disruptive forces that strategic provincial behaviour creates on the economic and political stability of fiscal federalism in Canada. Petchey indicated that when a province is appeased, such bilateral personalized deals come at too great a cost (such as 'under-provision' and/or 'over

[116] MacNevin at Ibid., p233.
[117] MacNevin at Ibid., p232.
[118] Petchey, Jeffrey, and S Levtchenkova. (2004). Fiscal equalisation in Australia: proposals for an efficiency-based system. *Economic Papers* (23): 189-200.
[119] Petchey and Levtchenkova at Ibid., p192.

provision of public services within the province.)[120] The formula remained the source of and focal point for many of the provinces' issues with equalization as it stood prior to 2004. In the period before the new framework (1982-2004) and the period of the new framework, the formula's structure in particular was continually the most commonly identified issue within the program as a polarizing point of contention and debate.

4.1 The Formula

The discussion of a formula seems most pertinent above all else at this point. Especially, given our review of the efficiency issues and identifying other tensions underlying the equalization program prior to as well as after its transformation in 2004. The quick history of Canadian equalization has lead many to question the very notion of a formula in the Canadian context of such a program. What is the rationale for a formula? Why/when do provinces agree to a formula? Why/when do provinces want to change the formula in place? Why would the federal government agree to change the formula? Are there economic benefits from having a flexible formula? Lastly, is this economically and politically feasible?

The leading rationale for a formula has been adopted given the political and institutional circumstances and constraints in Canada. In a competitive ten province federation, each with significantly diverse economies, the rationale is that a formula "provides greater stability and credibility for the program."[121] Each of the provinces

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[120] Petchey and Levtchenkova at Ibid., p192.

[121] Department of Finance. Expert Panel on Equalization and Territorial Formula Financing. *Achieving a national purpose : improving territorial formula financing and strengthening Canada'sTerritories*. Ottawa, Ont. : Department of Finance, Government of Canada, 2006. Avail. at: http://www.eqtff-pfft.ca/epreports/EQ_Report_e.pdf [Retrieved Feb. 12, 2008], p36.

holds diverse views on the approaches to equalization as each sub-national unit is attempting to fully maximize their per capita benefit based on their per capita capacity. LeGoff confirms that each province is basically strategic in its outlook towards an equalization formula, "whether the federal and provincial governments are in favour of a particular formula or recommendation advanced by the expert panel will depend on the benefits they stand to derive from it."[122] However, over a time, a province's overall fiscal capacity may significantly increase or the advent of a new discovery or development in their economy may significantly reduce their per capita benefit relative to their per capita capacity. As the fiscal disparities among the provinces and the costs of providing services evolve, it is reasonable to expect changes in the formula that would be accommodated by the federal government.[123] This is best exemplified by the recent evolution of provincial responsibilities which have increased the significance of interprovincial differences in fiscal resources and expenditure needs.[124] For decentralized federations such as Canada, equalization will play a greater role in keeping the country together.[125] Therefore in addition to having a flexible formula, the equalization program must appreciate changes in the relative economic circumstances of the provinces while ensuring that payments are stable and predictable.[126] The benefits of a flexible formula are particularly valuable in the case of Canada as the caterwauling of the provinces tainting the formula as "complex", "opaque" and "punitive"[127]serves only to weaken the

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[122] LeGoff, Philippe. (2005). *Equalization: Waiting for the Perfect Formula*. Library of Parliament. Economics Division: Ottawa, p8. Avail. at: http://dsp-psd.pwgsc.gc.ca/Collection-R/LoPBdP/PRB-e/PRB0450-e.pdf[Retrieved Mar. 2, 2008].
[123] LeGoff at Ibid.,p2
[124] Marchildon, Gregory. (2005). Understanding Equalization: Is it possible? *Canadian Public Administration*, vol 48(3), p422.
[125] Marchildon at Ibid.
[126] LeGoff at Supra.
[127] LeGoff at Supra, p1.

uniting synergistic culture and the meaning of equalization to the provinces, in the form of politico-economic mutual care. The main factors remain the parameters of the formula as determined in part by what revenue categories it includes versus excludes and this is a highly politically charged issue as provinces can often be unaware of economics circumstances in the long run. In the present, a province may possess a large endowment or fiscal capacity of revenue category#1 that is not included (in exchange for including revenue category#2) and simultaneously be unaware of a benefit from above average growth in the future fiscal capacity of revenue category#2. Therefore, the composition of a formula is very much a dynamic game of maximization over time between all of the provinces and the federal government.

4.2 Natural Resources
The Non-Renewable Resources Debate

Among the categories of interest for equalization, natural resources has arguably generated the most fervour amongst provinces and been of keen interest to most federal observers and pundits of equalization. Natural resources contribute strongly and significantly to Canada's wealth, Canada's natural resource wealth has grown approximately 10% per year during the last decade.[128] In 2006, Canadian natural resource wealth (the dollar value of selected natural resource reserves) was above $1 trillion or more than $30,000 per capita.[129] As resource prices have risen as well in the last twenty years, the importance of natural resource wealth has become more and more apparent in Canada.

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[128] Islam, Kazi. (2007). "Canada's natural resource wealth at a glance. Ottawa, Ont. Statistics Canada, Government of Canada. 2007. Available at: http://www.statcan.ca/english/freepub/16-002-XIE/2007003/10454-en.htm [Acc. Apr. 4, 2008].

[129] Islam at Ibid.

As of 2007, the importance of natural resources to individual provinces cannot be underscored. Since 1997, natural resource wealth has accounted for between 12% and 19% of Canada's total wealth.[130] In continuance, natural resources have not only generated exorbitant wealth but also contributed plenty of raw materials as primary inputs to the creation of other forms of wealth such as buildings, and capital such as machinery and equipment.[131] All across Canada, forest resources like timber as well as iron continue to be used extensively in constructing houses and bridges primarily.[132] Secondary uses include machinery and equipment that continue to be made from a variety of metals such as iron, copper and zinc.[133]

Furthermore, as Islam (2007) indicates these resources constitute major "components of consumer durables such as cars and computers" and as a result, it is self-evident that natural resource wealth plays an important role in generating income for all the provinces.[134] Businesses invest the inputs of capital and labour to produce, process, market, transport and export resources and in the process, they earn profits but pay taxes and royalties to the provincial and federal governments.[135] To paraphrase Islam (2007), such investments and exports as well as profits and taxes constitute major components of provincial Gross Domestic Product (GDP) or current income. Not surprisingly, provinces are very cautious in their exploitation and treatment of natural resources as its wealth ensures a consistent income.

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[130] Islam at Ibid.
[131] Islam at Ibid.
[132] Islam at Ibid
[133] Islam at Ibid.
[134] Islam at Ibid
[135] Islam at Ibid

Natural resources have become an essential source of wealth for all Canadian provinces whether blessed with largely valuable deposits that are relatively inexpensive to extract or smaller more difficult to extract deposits. The economic wealth and prosperity that natural resources bring to provinces inevitably fuels an economic autonomy. Economic autonomy is the "the capacity of states to make independent decisions about their respective economic futures."[136] Provinces burgeoning in natural resource wealth find themselves much more hesitant to contribute to the redistributive ideals of equalization as it presents the threat of decreasing their provincial return on the extraction of their own natural resources. As of the late 1930s the ownership of natural resources or natural resources rights disputes have been fully settled with their access legally guaranteed to the provinces. As a result, the fate of natural resources in their extracted and invested form (wealthy provincial income) has become a valuable case study for the sensitivity of fiscal federalism in Canada, in terms of politico-economic mutual care and the inevitably calculative and formulaic approach required to broker its convergence in the agreement of an equalization formula.

Previously, under the RTS framework of equalization, 14 of the formula's 33 revenue categories related to natural resources, twelve of which were non-renewable resources. "In the case of oil, the categories included, new oil revenues, old oil revenues, heavy oil revenues, light and medium third-tier oil revenues, heavy third-tier oil revenues and 'other' oil(and gas) revenues."[137] Independent of the equalization program, provinces are incapable of controlling for several independent events or conditions that

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[136] Sarooshi, Dan. (2004). Sovereignty, Economic Autonomy, the United States and the International Trading System: Representations of a Relationship. *European Journal of International Law*. Vol.15 No. 4: pp.651-676, p651.

[137] Marchildon, Gregory. (2005). Understanding Equalization: Is it possible? *Canadian Public Administration*, vol 48(3), p424.

may affect the value of their natural resource tax bases and that of other provinces. Furthermore, certain provinces may not foresee the discovery or exploitation of discovered natural resources by other provinces ex ante when deciding on a formula. Additionally, a formula that is brokered to explicitly include the tax bases of natural resources may be agreed to ex ante based on politico-economic mutual care/altruism and/or an established hierarchy of the provincial economies that exist at the time. However ex post, the strength of this agreement to include natural resources bases in the formula for equalization may be significantly be compromised if an unanticipated economic element is introduced.

5. A Political Economy Model of Equalization

In order to demonstrate the tenuousness of unanimous provincial agreement on different variants of a hypothetical equalization formula, we introduce the following model. The model's purpose is not only to demonstrate the described tenuousness but also to capture the extent to which an equalization formula is stable. The outlook from which the model is motivated is that there is uncertainty about the wealth of provinces since additional natural resources can be discovered. As a result, we interest ourselves in seeking a formula with both the economic and political stability. We characterize stability in terms of the variance of the provincial 'altruism' parameter (a proxy of care for the welfare of citizens residing in other provinces other than the own province). As discussed earlier, the fiscal federalism of the past fifty years of instituted equalization has demonstrated an immutable sense of mutual care within the federation for provinces' well being. The federal government has also given purpose to an effect of addressing isolated provincial reservations to specific equalization policies affecting their own province (The

piecemeal bilateralization of equalization.) It is this altruism that has appreciated and incorporated consideration for the fact that lasting equalization must confront the impediments of purely economic and political optimality to produce agreement amongst the provinces. If a formula is stable, then the consenting level of politico-economic mutual care should not vary significantly ex-ante to ex-post.

5.1 The Model

Imagine a federal country with three provinces, one rich, one average and one poor. Each province has equal populations of citizens. There are different wealth values by province defined by $W_r \succ W_a \succ W_p$, an exogenous tax rate τ, a probability of discovering oil q and a provincial wealth value for an oil discovery. In this country only the rich and the poor provinces can discover oil yielding four specific scenarios; neither province discovers, both rich and poor discover and one discovers while the other does not.

$$V_i = C_i + \ln(G_i)\text{, } i=r,a,p$$ [138]

Where r=rich, a=average, p=poor

$$V_r = C_r + \ln(G_r)$$
$$V_a = C_a + \ln(G_a)$$
$$Vp = C_p + \ln(G_p)$$

$$C_i = (1-\tau)\frac{W_i}{N_i}$$ [139]

Where we define consumption as the after tax per-capita wealth

[138] Dodds, S. & J. Aston. (2008, February). *Quick Model to capture to what extent an equalization formula is stable.* Unpublished. Carleton University, Ottawa, ON.
[139] Dodds, S. & J. Aston at Ibid.

$$G = gN_i\tau\left(\frac{W_i}{N_i}\right)$$
$$= g\tau W_i$$

We define G as a public good used by the province for miscellaneous services and expenditures

Provincial Utility

$$U_r = C_r + \ln(G_r) + s\left[\frac{C_a}{2} + \frac{1}{2}\ln(G_a) + \frac{C_p}{2} + \frac{1}{2}\ln(G_p)\right]$$ [140]

$$Ua = C_a + \ln(G_a) + s\left[\frac{C_r}{2} + \frac{1}{2}\ln(G_r) + \frac{C_p}{2} + \frac{1}{2}\ln(G_p)\right]$$ [141]

$$U_p = C_p + \ln(G_p) + s\left[\frac{C_a}{2} + \frac{1}{2}\ln(G_a) + \frac{C_r}{2} + \frac{1}{2}\ln(G_r)\right]$$ [142]

Where the utility of the *i*th province is defined as a function the utility of their own representative citizen utility and a social utility comprised of the average utility of the two other provinces' representative citizens. Where the s parameter operates directly over the provinces social utility as a multiplier much like that of politico-economic mutual care.

Equalization Grant

$$\underbrace{\frac{E_i}{N_i}} + \underbrace{\tau\left[\frac{W_i}{N_i}\right]} = \underbrace{\tau\left[\frac{W_a}{N_a}\right]}$$ [143]

$$\frac{E_i}{N_i} = \tau\left[\frac{W_a}{N_a} - \frac{W_i}{N_i}\right] \text{where } i = r,a,p$$

[140] Dodds, S. & J. Aston at Ibid.
[141] Dodds, S. & J. Aston at Ibid.
[142] Dodds, S. & J. Aston at Ibid.
[143] Dodds, S. & J. Aston at Ibid.

$$E_i = N_i \tau \left[\frac{W_a}{N_a} - \frac{W_i}{N_i} \right]$$

Where the *i*th equalization grant per person acts to equate the provincial per-capita tax receipts in the *i*th province to the provincial per-capita tax receipts in the average province.

Where wealth accrued to resources discoveries in either the rich, the poor or both provinces can either be included or excluded in the equalization formula as defined by their respective wealths thus altering their entitlement/contribution.

$$W_{r\&oil} = W_r + W_{oildis\,cov\,ery} \quad \text{and} \quad W_{p\&oil} = W_p + W_{oildis\,cov\,ery}$$

Under No Equalization

$$V_r = \ln\left((1-\tau)\frac{W_r}{Nr} \right) + g\tau W_r$$

$$V_a = \ln\left((1-\tau)\frac{W_a}{N_a} \right) + g\tau W_a$$

$$V_p = \ln\left((1-\tau)\frac{W_p}{N_p} \right) + g\tau W_p$$

With Equalization

$$V_r^e = \ln\left((1-\tau)\frac{W_r}{N_r} \right) + g\left[\tau W_r - E_r \right]$$

$$V_a^e = V_a (E_a = 0)$$

$$V_p^e = \ln\left((1-\tau)\frac{W_p}{N_p} \right) + g\left[\tau W_p + \overbrace{E_p}^{Grant\ to\_poor} \right]$$ [144]

Where E_r is the equalization contribution from the rich province and E_p is an equalization to the poor.

[144] Dodds, S. & J. Aston at Ibid.

Almost certainly; $U_a^e \succ U_a, U_p^e \succ U_p$

When will rich go along with equalization?
$U_r^e \succ U_r$ **or** $U_r^e - U_r \succ 0$

$$\underbrace{\underbrace{\left(V_r^e - V_r\right)}_{\substack{loss\_in\_rich\_citizen's \\ well\_being\_due\_to \\ equalization}}}_{-} + s \underbrace{\underbrace{\left(V_p^e - V_p\right)}_{\substack{gain-in-poorer \\ citizen's\_well-being \\ due\_to\_equalization}}}_{+} \succ 0$$ [145]

This model captures the basis principles of the longstanding RTS approach to equalization where provincial wealth constituted the calculation of a province's equalization entitlement. We have also isolated a mathematical expression for provincial utility as a function of own citizen utility and other province average utilities including a coefficient on the average. This coefficient *s* serves as a proxy for the level of politico-economic mutual care/altruism among the provinces in the federation. We have also allowed for the exclusion and inclusion of wealth from natural resource discovery to be either excluded or included in the equalization formula.

5.2 Simulation

We are interested in determining what level of s is capable of generating agreement among the three provinces ex-ante when we have resource uncertainty. Is this politico-economic mutual care level for agreement going to be the same ex-post when resource uncertainty has been resolved? To isolate this, we will establish a value for s that garners agreement ex-ante if the wealth value for natural resources should be included or excluded from the formula. Ex-ante, neither the rich province nor poor province knows which one or whether both will discover natural resources given the

[145] Dodds, S. & J. Aston at Ibid.

subjective probability of discovery *q*. In simulating the model, we will demonstrate the importance of politico-economic mutual care (*s* parameter) among provinces to the stability and agreement of a formula. We use the following values to simulate the model.

$$N_{r,a,p} = 1$$
$$W_r = 5$$
$$W_a = 3$$
$$W_p = 1.75$$
$$\tau = 0.25$$
$$g = 1$$
$$oil = 1$$
$$q = 0.8$$

5.2.1 Deciding on an Equalization Formula Ex-Ante

Now imagine starting in an "initial state" where we know that there are certain oil-finding probabilities. Who likes equalization, and what kind?

If *s* is bigger than R1, rich province prefers equalization with oil IN the formula to no equalization.

$$U_r(EqI) = -0.425980839 + 0.204055217s$$
$$R1 = 2.087576320$$

If *s* is smaller than A1,average province prefers equalization with oil IN the formula to no equalization

$$U_a(EqI) = -0.008935205s$$
$$A1 = 0$$

If *s* is smaller than P1, poor province prefers equalization with oil IN the formula to no equalization

$$U_p(EqI) = 0.408110431 - 0.212990420s$$
$$P1 = 1.916097593$$

For these values, there is no agreement on including oil revenues into the equalization formula versus no equalization, since $R1 \prec s \prec P1$ simultaneously.

If *s* is bigger than R2, rich province prefers equalization with oil OUT of the formula to no equalization

$$U_r(EqO) = -0.362028971 + 0.236031150s$$
$$R2 = 1.533818613$$

If s is smaller than R2, average province prefers equalization with oil OUT of the formula to no equalization

$$U_a(EqO) = 0.055016663s$$
$$A2 = 0$$

If s is smaller than P2, poor province prefers equalization with oil OUT of the formula to no equalization

$$U_p(EqO) = 0.472062299 - 0.181014487s$$
$$P2 = 2.607870270$$

We would have unanimous agreement on OUT so long as $1.533 \prec s \prec 2.607$

5.3.2 Stability of Agreement on the formula Ex-Post (When Resources Discovered)

Ex-post Scenario #1

Suppose poor discovers, but rich does not. The payoffs in provincial utility are presented as follows. If s>R3, rich continues to agree to OUT versus IN.

$$U_r(poor\_discovers, rich\_does\_not) = -0.097638470 + 0.085312759s$$
$$R3 = 1.14447676$$

and average agrees to OUT

$$U_a(poor\_discovers, rich\_does\_not) = 0.036493525s$$
$$A3 = 0$$

and poor agrees to OUT if s<P3

$$U_p(poor\_discovers, rich\_does\_not) = 0.170625517 - 0.048819234s$$
$$P3 = 3.495046993$$

As a result in the ex-post scenario that the poor province discovers oil while the rich province doesn't, the desired policy among the three provinces to exclude oil revenues from the formula will be persistent as long as $1.14 \prec s \prec 3.49$

Ex-post Scenario #2

Suppose that rich discovers and poor does not. The expected payoffs in provincial utility are presented as follows. If $s \prec 3.49$, the rich province continues to agree keeping oil OUT versus IN.

$$U_r(rich\_discovers, poor\_does\_not) = 0.170625517 - 0.048819234s$$
$$R3 = 3.495046993$$

$$U_a(rich\_discovers, poor\_does\_not) = 0.036493525s$$
$$A3 = 0$$

and poor agrees to OUT if $s \succ P3$

$$U_p(rich\_discovers, poor\_does\_not) = -0.097638470 + 0.085312759s$$
$$P3 = 1.14447676$$

As a result, both the rich and poor provinces would continue to agree to out as long as $1.14 \prec s \prec 3.49$

Ex-post Scenario #3
Consider ex post where both rich and poor discover oil. The expected payoffs in provincial utility are presented as follows. If $s \succ R3$, rich continues to agree to OUT versus IN.

$$U_r(poor\_discovers, rich\_discovers) = 0.081678031 + 0.040839016s$$
$$R3 = -1.999999976$$

$$U_a(poor\_discovers, rich\_discovers) = 0.081678032s$$
$$A3 = 0$$

If $s \succ P3$, poor will continue to agree to "OUT" as the desired policy.

$$U_p(poor\_discovers, rich\_discovers) = 0.081678031 + 0.040839016s$$
$$P3 = -1.999999976$$

5.3 Analysis of Results

The model demonstrates the sensitivity of provincial politico-economic mutual care given an equalization formula's constituent components. In Canada's current state of federalism, that of a decentralized asymmetry there is much need to analyze programs through an ex-ante and ex-post outlook as needed improvements, adjustments and renegotiations of agreements will surely arise. Our model first considered a three province federation that did not have equalization where only the rich and the poor

provinces could independently discover natural resources but discovery was defined by uncertainty. Provincial utilities were measured as a function of their own-province citizen's utility and a care or altruism parameter on the average utility of the other two province's representative citizens. We introduced the concept of equalization into the federation and demonstrated the equalizing effects of the payments across all three provinces' utilities. Given the probability of a natural resource discovery, we were then able to isolate the payoffs for the rich, average and poor provinces in their utility when natural resources were included and when natural resources were excluded. In evaluating the four scenarios, we looked at a situation where ex-ante there was resource uncertainty and the three provinces would either agree to keep resources out of the formula or in. Keeping resources out of the formula, there resulted in a closed interval of the parameter $1.533<s<2.607$ for which unanimous provincial agreement could be brokered. Ex-post, the scenarios of discovery presented a shift in the parameter for politico-economic mutual care s and its stability. When the poor province discovers and the rich does not (Scenario#1), there remained a unanimous agreement to keep natural resource discoveries out of the formula, $1.144<s<3.495$. When the rich province does discover while poor province fails to discover (Scenario#2), there also remained an ex-post agreement to keep natural resource discoveries out of the formula, $1.144<s<3.495$. Where both the rich and the poor discover natural resources (Scenario#3), the agreement to keep natural resources out of the formula also held as $s > -1.999$.

In Canada, one can consider the ex-ante period for Canada to have been the first "experimental" period of equalization between 1957 and 1967. In 1967, the Representative Taxation System (RTS) was introduced as a formulaic approach to the

program. As already pointed out under the RTS, all provinces' tax revenues were subject to equalization including one hundred percent of natural resource revenues for a brief period.[146] By the 1970s though, the emergence of natural resources was now a "major financial weight in provincial revenues…rarely…did economic events change so quickly as to materially affect the per capita fiscal capacity of a particular tax base."[147] Consistent with the model's ex-post results, mainly the rich and the poor provinces in Canada have since lobbied to exclude natural resources from the equalization formula. In particular, Alberta, Nova Scotia and Newfoundland & Labrador have consistently maintained for quite some time that their natural resource discoveries be free of equalization clawbacks.

Is it the uncertainty of discovery, the value of the discovery or even the tax rate that drives this model? To broaden the explanatory ability of our model we consider alternate values for the three aforementioned parameters such as the wealth value of oil discovery, the probability of discovery and the tax rate. We gain valuable insight from the fluctuation of the politico-economic mutual care/altruism parameter *s*. The smaller the value of the natural resource discovery, the more provinces become indifferent to including or excluding the *oil* wealth ex-ante. As the value of the natural resource wealth become increasingly large however, *s* demonstrates that agreement is only reached on excluding *oil* ex-ante as well as ex-post (See Appendix 5A). Simulating the model with different probabilities of resource discovery, we observe that for probabilities as low as q=0.25 and q=0.01 provinces are different ex-ante and the *s* interval is not as high as it is when q approaches 0.9. The model is demonstrating that if the probability of natural resource discovery is high, the level of politico-economic mutual care must be higher

[146] Courchene, Thomas J. (2007). A Short History of Equalization. *Policy Options.* March 2007, p23.
[147] Martin, Roland. (2001). *Equalization: Milestone or Millstone?* Atlantic Institute for Market Studies. Halifax: NS, p9.

than if q was relatively low (See Appendix 5B). When the probability of discovery is very high (ie. q=0.9 and higher) there is only agreement to exclude natural resources from the formula ex-post (See Appendix 5C). Consistent with our model's results; ascribing to the OUT policy ex-ante and any situation of discovery ex-post remains the frequent ground for stability in the politico-economic mutual care parameter in the face of resource uncertainty.

6. Conclusion

Economists, political scientists and policy experts have been vexed by new eras of executive, confrontational and asymmetrical federalisms and their detrimental effects on equalization. Simply put, many of the developed nations with federal equalization programs are all attempting to grapple with this politically charged and economically controversial dynamic of equity and efficiency. Equalization in an advanced federal state and economy such as Canada is no longer thought of in the sense that Buchanan believed but rather it is viewed now as a sensitive interplay and balancing act between the regionalized equity concerns, federal political realities and national efficiency concerns of the federation. In a review of fiscal federalism from the views of both a political scientist and an economist, we have noted that equalization programs are necessarily required to integrate the politico-regional concerns of each and every constituent province in order to truly to be equitable. In striving for efficiency within equalization, vertical and horizontal equity must also be the goals of the central government. From the early years before equalization was in fact instituted in Canada, we had only the primitive economic literature of Buchanan to inform us of this very new but laudable concept for

equalization. Nonetheless Canada embarked on the journey of equalization, intending to ensure an equal experience for all Canadians. In the spirit of mutual care/altruism in Canadian federalism dynamics, regional political cultures and provincial economic interests have each played a part in directing Canadian equalization's evolutionary direction. This has been evidenced by the historical timeline of equalization in Canada leading up to and including the monumental alterations of 2004. Among the more immutably controversial issues under equalization over this time period were the average or national standard, natural resources and the recent more sophisticated issues such as Swan & Garvey's analysis of tax effort, strategic behaviour and Smart's advocacy for the RTS system. Embodying the vast majority of all these issues has been the equalization formula which over the years since RTS has emerged distinctly as a topic of visceral assailing by provincial premiers and conversely, the compassionate support of federal and provincial pundits.

At the heart of the Canadian equalization formula are its core constituent revenue categories that are included in the calculation of provincial fiscal capacity. The epitomistic embodiment of this ever-evolving issue is best captured by natural resources. Since the inclusion/exclusion of these revenue categories significantly affects a province's fiscal capacity, equalization payments or entitlements; and their consent to a formula based on the stability and consistency of the level of mutual care/altruism amongst provinces. Such stability and consent has and will continue to be a difficult but crucially important element of Canadian equalization. This was captured in a brief model of three equalization participating provinces of different respective wealth, with equal populations and the conjecture that resource uncertainty (we assigned a subjective

probability of discovering that resource) ex-ante would affect provinces' consent on a unanimous basis or in part to agree to a formula ex-post. In looking at these issues, we note that in order to make equalization work, there is the requirement of strong social reasoning on behalf of the provinces towards each other in the form of mutual care. In fact, our model showed that if no province was caring or exhibited no politico-economic mutual care, there would not be equalization as the rich would never agree to it. Therefore to make equalization stable over time, we require a critical level of politico-economic mutual care/altruism that is capable of withstanding shocks to the provincial discoveries of oil and the probability of discovery. As our historical timeline demonstrated, equalization in Canada gradually lost its supportively broad social reasoning from the provinces with the advent of greater regional majority coalitions and self-interested bargains exclusively between provinces and the federal government as Beer warned against. Provincial examples in our timeline included British Columbia, Saskatchewan, Nova Scotia and Newfoundland & Labrador.

Since 2004, this critically broad political support is now non-existent. Why is this? Economic explanations point to the inability of the equalization program to robustly integrate the fact that any wealth accrued from discovering natural resources within a province can disrupt their level of politico-economic mutual care/altruism stability and as a result their consent for a formula. Political explanations indicate that broad support levels depend heavily on the level of mutual care/altruism that provinces will persistently commit to each other in the event that natural resources are discovered by one or more provinces in the future or never at all. While each of these may prove to be plausible explanations it is certain that the importance of this program cannot permit

the provinces and federal government to passively negotiate its deterioration to the point that the program lay in what Courchene once labeled "shambles." In order to ensure the equalization program guards against this, a formula must be devised that satisfies the highlighted criterion of stability in the level of politico-economic mutual care/altruism between the provinces and robustness to shocks in natural resource discovery and probability of discovery.

In May of 2006, the Expert Panel on Equalization and Territorial Formula Financing seconded highlighted the requirement for a formula in its report entitled *Achieving a National Purpose: Putting Equalization Back on Track*. The panel heard one consistent message throughout its consultations, "it was the need to return to a rules-based, formula-driven approach."[148] Sourcing the concerns of both academics and provinces, the "former rigour of the Equalization program has been replaced by more ad hoc, one-off decisions with individual provinces and on individual issues."[149] In appreciating the panel's recommendations and those of its academic contributors, one observes that the direction for re-invigorating equalization will no doubt include a formula.

In the specification of this formula however, it is of paramount concern that the provinces and federal government negotiate in considering the sensitivity of the mutual care/altruism parameter as it is this politico-economic element which is integral to the stability of an equalization formula in the advent of natural resource discovery over time.

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[148] Department of Finance. Expert Panel on Equalization and Territorial Formula Financing. *Achieving a national purpose : improving territorial formula financing and strengthening Canada'sTerritories*. Ottawa, Ont. : Department of Finance, Government of Canada, 2006. Avail. at: http://www.eqtff-pfft.ca/epreports/EQ_Report_e.pdf [Retrieved Feb. 12, 2008], p50.

[149] Department of Finance at Ibid. at p50.

Procedurally, the provinces and federal government must ultimately negotiate in good faith, ensuring the equalization formula has substance. If not, the constitutionally entrenched mandate of equalization (sec.36(2)) will surely prevent their eventual race to the bottom in emasculating the equalization formula's core revenue categories, that deliver integral financial support to provinces and citizens proper across Canada. It will also be imperative that the federal government act as an equitable interlocutor for federal-provincial matters in portending cautious and consensual asymmetrical initiatives with the provinces. The intergovernmental process in pursuit of a new equalization formula will most certainly be replete with conflict however in learning from the Canadian history of equalization; the outcome will be bountiful in its politico-economic benefits. As there is much at stake, such a Canadian achievement for the 21st century will serve as a template for federal-provincial negotiations of the future. A template in which every province's politico-economic mutual care/altruism will continually embrace equalization and the equalization formula as a stable and justly sound policy for the provinces, federal government and Canadians alike.

Appendix 5A Assessing Stability with changes to the wealth value of the discovery

Parameters $N_r, N_a, N_p,$ $W_r, W_a, W_p, \tau,$ oil, q	**Ex-Ante**		**Ex-Post**		
	IN	**OUT**	**Scen#1**	**Scen#2**	**Scen#3**
$N_r = N_a = N_p = 1$ $W_r = 5, W_a = 3, W_p = 1.75,$ $\tau = 0.25, oil = 0.01, q = 0.8$	$1.393 \prec s \prec 2.861$	$1.394 \prec s \prec 2.869$	$1.00 \prec s \prec 3.993$	$1.001 \prec s \prec 3.993$	$s \succ -2.00$
$oil = 0.1$	$1.457 \prec s \prec 2.746$	$1.41 \prec s \prec 2.835$	$1.015 \prec s \prec 3.939$	$1.015 \prec s \prec 3.939$	$s \succ -2.00$
$oil = 1$	$2.087 \prec s \prec 1.916$	$1.534 \prec s \prec 2.607$	$1.144 \prec s \prec 3.495$	$1.144 \prec s \prec 3.495$	$s \succ -1.99$
$oil = 6$	$8.259 \prec s \prec 0.4842$	$1.694 \prec s \prec 2.3610$	$1.693 \prec s \prec 2.362$	$1.693 \prec s \prec 2.362$	$s \succ -2.00$
$oil = 12$	$33.57 \prec s \prec 0.119$	$1.675 \prec s \prec 2.388$	$2.158 \prec s \prec 1.853$	$2.158 \prec s \prec 1.853$	$s \succ -1.99$

Appendix 5B Assessing Stability with changes to the probability of discovery

Parameters $N_r, N_a, N_p,$ $W_r, W_a, W_p, \tau,$ oil, q	**Ex-Ante**		**Ex-Post**		
	IN	**OUT**	**Scen#1**	**Scen#2**	**Scen#3**
$N_r = N_a = N_p = 1$ $W_r = 5, W_a = 3, W_p = 1.75,$ $\tau = 0.25, oil = 1, q = 0.01$	$1.397 \prec s \prec 2.863$	$1.393 \prec s \prec 2.871$	$1.144 \prec s \prec 3.495$	$1.144 \prec s \prec 3.495$	$s \succ -1.99$
$q = 0.25$	$1.544 \prec s \prec 2.589$	$1.428 \prec s \prec 2.800$	$1.144 \prec s \prec 3.495$	$1.144 \prec s \prec 3.495$	$s \succ -1.99$
$q = 0.8$	$2.087 \prec s \prec 1.916$	$1.533 \prec s \prec 2.607$	$1.144 \prec s \prec 3.495$	$1.144 \prec s \prec 3.495$	$s \succ -1.99$

$q = 0.9$	$2.237 \prec s \prec 1.788$	$1.558 \prec s \prec 2.567$	$1.144 \prec s \prec 3.495$	$1.144 \prec s \prec 3.495$	$s \succ -1.99$
$q = 0.99$	$2.393 \prec s \prec 1.671$	$1.581 \prec s \prec 2.529$	$1.144 \prec s \prec 3.495$	$1.144 \prec s \prec 3.495$	$s \succ -1.99$

Appendix 5C Assessing stability with changes to the exogenous tax rate

Parameters $N_r, N_a, N_p,$ $W_r, W_a, W_p, \tau,$ oil, q	**Ex-Ante**		**Ex-Post**		
	IN	**OUT**	**Scen#1**	**Scen#2**	**Scen#3**
$N_r = N_a = N_p = 1$ $W_r = 5, W_a = 3, W_p = 1.75,$ $\tau = 0.05, oil = 1, q = 0.8$	$2.087 \prec s \prec 1.916$	$1.533 \prec s \prec 2.607$	$1.144 \prec s \prec 3.495$	$1.144 \prec s \prec 3.495$	$s \succ -2.00$
$\tau = 0.1$	$2.087 \prec s \prec 1.916$	$1.533 \prec s \prec 2.607$	$1.144 \prec s \prec 3.495$	$1.144 \prec s \prec 3.495$	$s \succ -2.00$
$\tau = 0.25$	$2.087 \prec s \prec 1.916$	$1.533 \prec s \prec 2.607$	$1.144 \prec s \prec 3.495$	$1.144 \prec s \prec 3.495$	$s \succ -2.00$
$\tau = 0.4$	$2.087 \prec s \prec 1.916$	$1.533 \prec s \prec 2.607$	$1.144 \prec s \prec 3.495$	$1.144 \prec s \prec 3.495$	$s \succ -1.99$
$\tau = 0.55$	$2.087 \prec s \prec 1.916$	$1.533 \prec s \prec 2.607$	$1.144 \prec s \prec 3.495$	$1.144 \prec s \prec 3.495$	$s \succ -2$

BIBLIOGRAPHY

Beer, Samuel H. (1977) *An Economist's Perspective on Fiscal Federalism* in Oates, Wallace. (ed.). (1977). *The Political Economy of Fiscal Federalism*. Lexington Books: Toronto, ON.

Belanger, Claude. *The Rowell Sirois Report and Canadian Federalism during the Great Depression (1929-1939).* http://faculty.marianopolis.edu/c.belanger/quebechistory/federal/rowell.htm [Accessed Sept.20th, 2007].

Boadway, Robin. (1982). *Equalization in a Federal State: An Economic Analysis*. Minister of Supply and Services Canada, Ottawa: ON

Boadway, Robin. (1992). *The Constitutional Division of Powers: An Economic Perspective.* Minister of Supply and Services Canada. Ottawa: ON.

Buchanan, James. (1950). Federalism and Fiscal Equity. *The American Economic Review*. vol. 40, pp583-599.

Buchanan, James. *An Efficiency Basis for Federal Fiscal Equalization*. in Margolis, Julius. (ed.). (1970). *The Analysis of Public Output*.. Columbia University Press: New York.

Constitution Act 1982.

Courchene, Thomas J. (2007). A Short History of Equalization. *Policy Options*. March 2007, pp22-29.

Department of Finance. Expert Panel on Equalization and Territorial Formula Financing. *Achieving a national purpose: improving territorial formula financing and strengthening Canada's Territories*. Ottawa, Ont.: Department of Finance, Government of Canada, 2006. Avail. at: http://www.eqtff-pfft.ca/epreports/EQ_Report_e.pdf [Accessed Feb. 12, 2008].

Equalization for the 21st century. Available at: www.cbc.ca/new/background/cdngovernment/equalization.htm [Accessed June 23, 2007].

Fiscal Capacity and Provincial Budgets. Available at http://www.fin.gov.bc.ca/archive/budget00/reports/bgt2000_report_g.htm [Accessed Jan. 10th, 2008].

Islam, Kazi. (2007). "Canada's natural resource wealth at a glance." Ottawa, Ont. Statistics Canada, Government of Canada. 2007. Available at: http://www.statcan.ca/english/freepub/16-002-XIE/2007003/10454-en.htm [Accessed Apr. 4, 2008].

LeGoff, Philippe. (2005). *Equalization: Waiting for the Perfect Formula*. Library of Parliament. Economics Division: Ottawa, p8. Available at: http://dsp-psd.pwgsc.gc.ca/Collection-R/LoPBdP/PRB-e/PRB0450-e.pdf[Accessed Mar. 2, 2008].

MacNevin, Alex S. (2004). The Canadian Federal-Provincial Equalization Regime: An Assessment *Canadian Tax Foundation*, Canadian Tax Paper No. 109, Toronto, ON.

Marchildon, Gregory. (2005). Understanding Equalization: Is it possible? *Canadian Public Administration*, vol 48(3), pp420-428.

Martin, Roland. (2001). *Equalization: Milestone or Millstone?* Atlantic Institute for Market Studies.

Oates, Wallace E. (1972). *Fiscal Federalism*. Harcourt Brace Jovanovich: New York.

Oates, Wallace. (1977) *An Economist's Perspective on Fiscal Federalism* in Oates, Wallace. (ed.). (1977). *The Political Economy of Fiscal Federalism*. Lexington Books: Toronto, ON.

Petchey, Jeffrey, and S Levtchenkova. (2004). Fiscal equalisation in Australia: proposals for an efficiency-based system. *Economic Papers* (23): pp189-200.

Regular, Ken. *Understanding Equalization is Canada's Challenge*. Available at: http://www.ctv.ca/servlet/ArticleNews/print/CTVNews/20060524/understanding_equalization_060524/20060526/?hub=Canada&subhub=PrintStory [Accessed April 26, 2008].

Sarooshi, Dan. (2004). Sovereignty, Economic Autonomy, the United States and the International Trading System: Representations of a Relationship. *European Journal of International Law*. Vol.15 No. 4: pp.651-676.

Scott, Anthony D. (1950). A Note on Grants in Federal Countries. *Econometrica*. vol. 17.

Smart, Michael. (1998). Taxation and deadweight loss in a system of intergovernmental transfers. *Canadian Journal of Economics*. 31(1): pp189-206.

Swan, Peter L. and Gerald Garvey. (1993). *The Equity and Efficiency Implications of Fiscal Equalisation*. New South Wales Treasury.

University of Lethbridge. *Equalization Payments in Detail: From tax rental agreements to Social Services, the concept and how it's applied, explained.* Available at: http://www.mapleleafweb.com/old/features/economy/equalization/payments-in-detail.html [Accessed August 8, 2007].

Wilson, L.S. (2005). *Key Questions on Equalization: A Discussion*. Department of Economics, University of Alberta.