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SLOW-GROWTH, HIGH-INCOME PROVINCES: A PARADOX RESOLVED

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Abstract.
In an integrated economy, interregional adjustments are realised, not through price or income differentials but through people's mobility. Populations adjust, not prices, except for the price of land, a fixed resource. This adjustment process continues until real incomes have equalised across the regions of an integrated economy.

Our data confirm that in the U.S., the U.K., France and Canada economic integration leads to real per capita income equalisation. At the same time, the debate on Quebec growth since the Quiet Revolution finds its resolution. Quebec is a lagging province to the extent that its share of the Canadian population, of the GDP and of the labour force has relatively declined since the Quiet Revolution. But by the convergence principle, real per capita income has converged between Ontario and Quebec. The wide divergence in total growth between Ontario and Quebec has been entirely capitalised in land prices.

The thesis offers important insights into regional development both in Canada and abroad and its implications for federalism are far-reaching. One such implication: Equalization has no analytical basis in an integrated economy, since per capita income equalises across regions. Its impact in so-called poor provinces is thus entirely compensated for by a lower rate of emigration.

Key Words: Integrated economy, real income equalisation, land price capitalisation, federalism.

JEL Codes: R10, H77.

Résumé. Provinces à faible croissance, mais à revenu élevé : le paradoxe résolu
Dans une économie intégrée, les ajustements interrégionaux se réalisent, non pas par les prix ou les écarts de revenu par tête (sauf le prix du sol, une ressource fixe), mais par la mobilité de la population. Ce processus se poursuit jusqu'à ce que le revenu réel par tête s'égalise à travers les régions.

Les données confirment que l'intégration économique aux États-Unis, au Royaume Uni, en France et au Canada, mène à l'égalisation des revenus réels par tête. De la même façon, le débat sur la croissance du Québec depuis la révolution tranquille se résout. Le Québec est une province retardataire depuis cette époque, en ce que son PIB, sa population et sa main-d'œuvre déclinent relativement au reste du Canada. Mais en vertu du principe de convergence, le revenu réel par tête converge entre l'Ontario et le Québec. Le grand écart entre la croissance globale de l'Ontario et du Québec s'est entièrement capitalisé dans le prix du sol.

Corollaire important du fédéralisme: la péréquation n'a pas sa raison d'être dans une économie intégrée, puisque le revenu réel par tête s'égalise entre les régions. Son impact dans les provinces « pauvres » est entièrement compensé par un taux d'émigration moindre.

Mots clés : Économie intégrée, péréquation du revenue réel, capitalisation du prix du foncier, fédéralisme.

Codes JEL : R10, H77.

Introduction

One important subject frequently discussed in economic geography is how regional growth and income adjust to the overall economy. For instance, the traditional rationale for equalisation programs in Canada mostly rests on the fact that growth varies across provinces. This interpretation assumes that a province lagging in terms of overall growth also loses ground in terms of income per capita. Thus, because Newfoundland and Saskatchewan have become more prosperous while Ontario's manufacturing sector has lost ground to cheap-labour economies, the Premier of Ontario and some economists argue that equalisation has become an anachronism.

By contrast and drawing on the same empirical basis, we show below that per capita income has moved up as rapidly in slow-growing regions as in prosperous provinces. Economic theory and empirical evidence suggest that interregional adjustments in an integrated economy take the form of people mobility rather than price or per capita income changes. This adjustment process continues until real per capita income is equalised across provinces, so that people become indifferent between locations. Living standards tend to converge across all provinces, no matter what the overall growth is in particular regions. The political and institutional implications of this viewpoint are far-reaching.

Growth Divergence and Interregional Convergence of Living Standards in an Integrated Economy

The location of one's residence is mostly determined by real standards of living. People move from lagging regions to the more prosperous ones until real income per capita have equalised across the regions. Quantities, in this case 'populations', adjust to differential growth rates, not prices or incomes. But land is the exception to this rule because it is a resource in fixed supply. Its price increases more rapidly in prosperous provinces. In the long term, growth and income differentials are simply capitalised in the price of land, the only price that diverges across regions and which reflects itself in other components of the living cost. Why in these circumstances would anyone live in relatively declining regions? For one reason: it's cheaper. They like the higher monetary income in fast-growing regions, but they also like lower real estate prices in lagging ones. Over time lagging-regions' advantages in lower land prices compensate for the lower nominal income. But data on regional Gross Domestic Product (GDP) as officially measured in Canada only uses a national deflator. One important implication empirically validated below is that, for lack of regional price indices, GDP per capita as now published cannot serve as a measure of overall growth and of living standards in a given region.

Empirical validation in the U.S., in the U.K., in France and in Canada

The convergence of real per capita income has been documented in the U.S., the U.K. and Canada. Between 1920 and 2000, per capita income variations across the U.S. have significantly declined despite wide movements in populations. The share of population in the West has almost tripled, while significant declines occurred in the Northeast and the

Midwest. Yet economists have shown that the distribution of per capita income has narrowed over the century. At the end of the period, real income dispersion per worker between the four big regions remained extremely low. With a national average equal to 100, interregional variations in 1980 ranged from 96 to 105 (Mitchener and McLean, 1999). A NBER study on real wage differentials between college graduates and other workers reaches the same conclusion. In the author's own words: "When I deflate nominal wages using a location-specific CPI, I find that the difference between the wage of college graduates and high school graduates is lower in real terms than in nominal terms and has grown less. At least 22% of the documented increase in college premium is accounted for by spatial differences in the cost of living." (Consumer Price Index (CPI) adjusted for changes in the cost of housing to account for the fact that college graduates are concentrated in metropolitan areas.) (Moretti, 2008:1). Interregional income differentials in England are on the whole tightly distributed, once adjusted for cost of living differences (Baran and O'Donoghue, 2002). In general, rural areas show lower average income than London as published in official statistics; yet equalisation is nonetheless realised across both types of territory for similar occupations. Analysts at the Institut National de la Statistique et des Études Économiques (INSEE) summarise their results on regional income in France as follows: "Overall differences in price levels between the Paris region and the rest of the country is of the same order of magnitude as differentials in earnings levels". (Fessau et al, 2008: 1).

In Canada, a recent federal budget indicates that "even though economic disparities between provinces are still substantial, they have nevertheless declined significantly over the past 25 years" (Department of Finance, 2006: 116). This reduced dispersion occurred as important movements of the Canadian population took place: declining shares in the Atlantic Provinces and Quebec together with rising shares in Ontario, Alberta and British Columbia. The Quebec share of the Canadian population remained around 29% between 1941 and 1966, but after that period, it shows a constant negative trend to reach 23.2% in 2009. Overall, our data confirms that economic integration through trade, labour market adjustments and immigration, leads to real income equalisation, not to price or income differentials.

Quebec, a Typical Slow-Growth High-Income Province

In Quebec, a form of consensus on the state of the economy is by now entrenched. From this view, not only is the province not losing ground, it has improved its position relative to the rest of Canada and to Ontario in the last few decades (Fortin, 2002). Because GDP per capita in Quebec has moved up nearer the level for Ontario from the end of WWII, this result is interpreted as proof that rising intervention by the Quebec government since the so-called Quiet Revolution was behind the narrowing gap. What this actually shows is that economic theory works, that the indifference principle applies across regions and that interregional adjustments are realised not by per capita income but by migrations.

The Quebec-Ontario economic disparity is the most vivid case in point. The overall Quebec economy has witnessed a widening gap with Ontario (and the rest of Canada) over the last half century, when measured in terms of overall economic growth, population, investment and employment. Considering the period from 1981 to 2004, as studied by Boyer (2006), real GDP growth averaged 2.4% in Quebec against 3.0% in the rest of Canada, for an overall gain of 70.9% in Quebec and 96.3% in the rest of Canada. The Quebec share of the national GDP declined by 2.4 percentage points to 21.0%. Employment gained 43.9% in the rest of Canada (38.7% in the U.S.), but only 32.8% in Quebec. With 23.6% of the population in 2004, Quebec created only 19.7% of the new jobs available in Canada. While only 56.2% of the Quebec population aged 15 and above was employed, the corresponding figure amounted to 61.2% in the rest of Canada and 61.9% in the U.S.

In terms of published GDP per capita, personal disposable income and average weekly earnings, Quebec lags behind Ontario by 10% to 16% per cent, but those figures are not adjusted for differences in the cost of living since no such provincial index is available. But by the Consumers Price Index for October 2006, the cost of living based on a market basket of all goods and services in Montreal was 14.7% below Toronto, while the housing cost stood at 30 to 35% below Toronto. For its part, Human Resources and Social Development Canada (2007: 78) in 2004 set the cost of an identical basket of goods and services at 19.2% below its counterpart in Toronto. Housing costs alone explained 90% of the gap estimated at $5,796 per year. Montrealers in general earn lower monetary incomes, but these are wholly offset by lower land and local services prices. When extended to the whole of Ontario and Quebec territories, this suggests that the lower cost of land in Quebec almost perfectly compensated for the lower GDP per capita. The divergence in total growth has been capitalised in land prices.

What does not equalise across the economy is the price of the fixed resource, land and physical structures. Quebec's per capita income has matched real income in Ontario in spite of its dismal growth and therefore in spite of the "Quiet Revolution", not because of it. As a result of century-old trade, the economies of the two provinces are closely integrated. Labour market adjustments and how immigrants choose their location have resulted in real income levels being equalised between the two provinces, despite the widening gap in total GDP.

Non Convergence in Non Integrated Economies

This income equalisation process differentiates integrated economies from economically isolated countries across the world. In the latter case, labour, like land, becomes a resource in fixed supply. Differential income across countries is then capitalised both in the price of land and in wages. When mobility across countries is low, people in more prosperous nations gain in terms of relative per capita income, while immobile people in lagging countries experience relative decline. That is precisely what is observed across some large areas of the world where underdeveloped countries have fallen further and further behind as industrialised economies speeded ahead. Because the global economy is less integrated than the economy of individual countries, data on GDP per capita in various countries is a valid measure of both relative income per capita and relative overall growth.

Unusual Preferences

When we say that people are indifferent between regions in an integrated economy, we implicitly assume that everyone shares identical preferences. But there are people with special reasons to live in a specific region. An unusual preference is, like land, a fixed resource which renders its holder liable to improve or damage his position as a result of differential growth rates. In Quebec, unilingual French Canadians are less mobile. The average income of unilingual Francophones still lagged behind in 2000, although not by much and not by as much as in 1970 (Béland and Roberge, 2003). Some are prepared to sacrifice some income in exchange for the benefit of living in a French-speaking environment. They are in a position similar to a particular region in a non integrated economy. For failing to invest in the knowledge of English, they show specific characteristics and concentrate in different occupations. Yet thanks to the mobility of other residents, they do not need to make a great sacrifice. They gain in lower land prices as a consequence of migration by other residents.

By contrast, the Montreal Anglos possess one important attribute: vis-à-vis the rest of Canada, they do not have to overcome language and cultural barriers when they choose to migrate. They also historically possess higher economic skills to take up demanding and lucrative employment. In a word, they are more mobile. As long as Quebec remains a lagging province, they will prove to be more likely to leave.

Equalisation

The Government of Quebec and of other so-called "have not" provinces have traditionally defended the level of equalisation payments on the basis of their economic situation. When measured in terms of official GDP per capita, Quebec conditions appear to be less favourable than those of Ontario or the average province. For this reason, it has received 8.0 billion dollars in equalisation payments in 2008-9, and Ontario zero. Yet, as shown above, there is no significant gap in real per capita income between slow-growth provinces and other regions. The level of equalisation payments to each province should therefore be similar, most likely zero.

One widely accepted critique of the equalisation program holds that it has magnified regional income disparities by preventing workers from moving to their most productive location outside slow growth regions. It is true that regional productivity is negatively impacted by equalisation. Equalisation does reduce the interprovincial mobility of resources. Fewer people have moved from Quebec and from the Atlantic Provinces to more prosperous regions of Canada. This has resulted in a suboptimal distribution of the population across the country. But observed real income convergence invalidates the conclusion that interregional income disparities have increased. Equalisation simply makes explicit the transfer of the burden of lagging provinces to other regions of Canada. Absent equalisation, higher growth and higher land rents would have ensued in Alberta, Ontario and B.C. High-growth provinces are the first victims of equalisation. Yet lagging provinces have gained nothing. They have lost in less depressed land prices what they have gained in equalisation payments. They also share in the reduced per capita income across the country due to higher taxes to finance the program. Equalisation is self-defeating. It mostly slows down the adjustment process.

Another analytical basis for equalisation programs rests on the hypothesis that interprovincial migration is beneficial or detrimental depending on whether migration in the absence of equalisation payments would be too high or too low. That in turn depends on why people migrate from one province to another. Boadway and Flatters (1982) claimed that equalisation is beneficial because it deters migration when some provinces just happen to have many rich people – people who would be rich no matter where they lived – who share their wealth automatically through the public provision of public goods and services. In this regard, it should be mentioned that a close association is observed between the concentration of rich people and the rate of overall growth. Deterrence of migration through equalisation payments becomes beneficial again when inter-provincial differences in income depend not on the productivity of labour, but on the sharing within the province of resource (oil) revenue or some other source of public revenue that is independent of the population of the province. In short, equalisation-induced constraints upon inter provincial migration is beneficial when the motive for migration is to acquire a share of a province's resource revenue, but harmful when labour productivity differs from place to place.

Ultimately, equalisation rests on the proposition that the central government adopts more efficient policies, policies with no regional incidences. This is a fragile basis to say the least, and one contrary to facts and to the traditional teaching of the economic theory of federalism. It should be mentioned in this regard that equalisation at various times specifically excluded provincial resource revenue from the calculation of equalising payments. All the more so that payment calculations to provinces solely rests, not on the overall rent levied by a province, but on the monetary revenue of the provinces. For instance, Hydro Quebec (and other public monopolies elsewhere) devotes as much resource rents to redistribution as Alberta in underpricing its electricity but it does so in a different manner. Yet this type of resource rent is not incorporated into the calculation of equalisation payment because it is not included in the budget of the province.

Furthermore, equalisation is but one policy enacted by the federal government exerting concentrated regional incidence in one or multiple provinces. Other programs like regional economic development policies and corporate welfare also differentially impact specific provinces. Regional development policies simply maintain populations in lagging regions…as long as they last. Emigration reasserts itself as soon as they are abandoned. The Employment Insurance scheme is clearly a disincentive for the unemployed to move to parts of the country where job prospects are better. Labour mobility also still faces internal barriers among provinces. Our assessment of equalisation applies similarly to all such federal programs.

The problem of inefficient migrations results from the provinces appropriating the rent of certain resources, including oil, to redistribute it based on political considerations. This result follows from the fact that provinces do not price their services at their true value. All manner of resources give rise to rents by virtue of their localisation or of other characteristics. Land is more expensive in cities and prosperous regions than in peripheral areas. Sunny Florida brings their landowners rents that are higher than the coastal land of the Gaspé. Equalisation in those circumstances would imply that provinces are entitled to levy rents on natural resources when the price is high to share them with the rest of the population. Should this statist principle hold, it would apply to farm land, to urban land, to mines, to water (hydroelectricity), and so on. That the price movements of resources give rise to large transfers from consumers to corporations when prices are high (oil in 1979-85 and 2004-07), from corporations to consumers when prices are low (1991-99), in no way implies that such wealth should be redistributed by the State. Because Alberta oil belongs to the province, does it imply that its government should appropriate 100% of its rent and drive out investors who would exploit it? In a free society, there is no such thing as a fair share of a resource to be redistributed to the population at large. Only an efficient or inefficient taxation regime exits.

Another implication of equalisation is as follows: Does federalism mean that the duty of the central authority is to correct inefficiencies introduced by decentralised governments? Such a view runs counter to conventional economic analysis. The latter rather teaches that the provinces' responsibility is to adopt policies that are efficient or not. Interprovincial competition then insures that consequences, good or bad, are in large part assumed by local people as a result of population movements.

The Economic Theory of Federalism Revisited

The economic theory of federalism teaches that in an integrated economy, decentralised governments' mistakes are rapidly revealed. People (and capital and goods and services) victimised by a lagging economy can respond to the inefficiencies of their local government by choosing to move out or by importing goods and services from other regions. Local and provincial governments' ability to abuse their tax and regulatory powers is curtailed by intergovernmental competition.

The logic analysed in this text does not invalidate the traditional theory of federalism, but it does set time and other limits to its action. As local victims of inefficient policies are driven away, and as fewer immigrants from outside the province, including from abroad, flow in to the now less buoyant local economy, the burden of provincial policies is capitalised into lower land prices in that province. Real per capita income in that province converges towards the national level. The mobility underlying the indifference principle impacts on the growth of the unfortunate province, but not on the standards of living of its inhabitants.

To the extent that their relative real income per capita is not affected by the failures of their provincial government, local, less mobile people do not bear the full cost of such policies. While marginal for the national economy as a whole because of the relatively small size of a region, this cost is nonetheless spread to all regions of the federation by the action of the indifference principle and the underlying mobility. While this cost translates into a non optimal population distribution, the local median voter is not induced to resist as vigorously policies that hurt him/her. In an integrated economy, regional parochialism can be a profitable ideology. This may also explain why the empirical record is mixed on the contribution of federalism to containing government growth (Borcherding and Lee, 2006; Grossman and West, 1994)

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Conclusion

In this paper, we formulate an economic theory with the supporting evidence that explains how interregional adjustments in an integrated economy take the form of people mobility rather than price changes. We have shown that mobility is high in the integrated economies of the U.S., Great Britain, France and Canada. For their part, prices and wages are not affected by differential growth rates, except for the price of land, a fixed resource. This adjustment process continues until real per capita income is equalised across all regions and until people are indifferent between all locations. One implication is that the level of equalisation payments received by each region should be similar, most likely zero. A second implication is that local people do not bear the full cost of provincial policies. It follows that competitive federalism is not as powerful as traditionally taught in containing government growth.

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