Comment/Commentaire

A CRITIQUE OF THE NEOCLASSICAL MIGRATION MODEL AS A NORMATIVE APPROACH TO CANADIAN REGIONAL POLICY: A COMMENT

S. E. Drugge
Department of Economics
University of Alberta
Edmonton, Alberta
T6G 2H4

Introduction

Recent articles by Courchene and Melvin [6] and Savoie [10] in this Journal join the continuing debate regarding those policies best suited to alleviate Canada's regional disparities of income and employment.[1] The purpose of this paper is to identify the differing theoretical constructs implicit in the arguments of the major participants in the debate. Thus, variations in policy recommendations are not seen to originate from piecemeal differences in theoretical emphasis, but are due to the adoption of differing underlying theoretical constructs.

Identification of these differing theoretical approaches may indicate through positive rather than normative analysis which models are truly representative of the Canadian case, thereby providing a more rational basis for formulating Canadian regional policy.

Labour Mobility and Regional Disparities

Courchene and Melvin [6] place emphasis, first, upon the trade-offs between regional security and adjustment, indicating that much of the adjustment process is to be viewed in terms of spatial mobility of

---

[1] This debate is also evident in papers contributed by Polèse [9] and Courchene [5] in *Canadian Public Policy*, and in Michael Bradfield's review of the Macdonald Commission's Report on regional disparities in this *Journal* [4].

labour, and, second, upon interindustry mobility of firms (winners and losers). This analytical framework suggests that government policy should aid in, rather than discourage, factor spatial mobility through refraining from policies producing transfer dependency.

In this neoclassical framework of competitive markets (in an economic environment where effective full-employment policies have been adopted nationally) such mobility would produce increased productivity for Canada as workers abandon low productivity employment; Canadian global efficiency would also be increased due to a reduction in regional unemployment rates, and importantly, factor price equalization would reduce interregional income disparities.

The first counter-arguments against the conclusions drawn from this model concern the presence of competitive markets. As Boadway and Flatters [2] point out, market imperfections can produce economic rents; rents may produce excessive migration, with the result that migrants are taking jobs with lower productivity than those that they are leaving.

Bradfield [4:134] argues that imperfections related to regional monopsonistic labour markets may exist, so that workers may be induced by low wages in these regions to migrate to locations where their productivity is lower. Inducements to migration in conditions of these market imperfections may therefore produce a misallocation of Canadian labour and other resources.

Implicit adoption by Savoie [10] and Polèse [9] of the Keynesian, as opposed to the neoclassical, migration model represents a wholesale departure in selection of theoretical constructs in the debate. The Keynesian model, in addition to regional differences in wage rates, also includes independent variables associated with the effects on mobility of differing regional unemployment rates and the relative income and investment effects of migration on sending and receiving regions.[2] In the static version of this model, the reduced income in the sending region due to loss of employed (or unemployed) workers may succeed in forcing wages down in the sending region as a result of declining derived demand for labour.

The investment and knowledge effects on capacity levels in the receiving region cited by Savoie [10:75] and Polèse [9:522-23] introduce a dynamic version of the Keynesian migration model and as such represent a second stage of departure from the neoclassical model. In this theoretical construct technological efficiency effects associated

with modern plants and education can cause the marginal product, and hence wage rates of labour, to grow at a greater rate in the labour-receiving region, thereby exacerbating regional income differentials.

The Neoclassical Model, Technology, and Regional Disparities

Courchene and Melvin indicate that regional differences in production functions may contribute to income disparities; however, neither they nor their protagonists have demonstrated that this hypothesis, if applied to the neoclassical migration model, may produce increased regional income disparities. If differing efficiencies of technology or specific values of capital intensity and elasticities of factor substitution exist between regions, then, as Batra and Scully [1] and Drugge [7] have demonstrated, interregional equalization of capital/labour ratios arising from labour mobility may in fact produce greater differences in interregional wage rates.[3] Essentially this analysis demonstrates that if a region's efficiency of technology exceeds that of another, both labour and capital migrate to the high wage and interest rate region, preventing factor equalization from occuring [11]. Indeed, this version of the neoclassical migration model calls into serious question the efficacy of Courchene and Melvin's fundamental policy stance, since increased labour mobility may result in greater regional income disparities.

Location Theory and Regional Disparities

Courchene and Melvin place a heavy emphasis on location theory as applied to labour's spatial mobility in achieving a reduction in regional income and employment disparities. Their analysis of capital mobility related to plant location is stilted, however, as they assume that no difference exists in the spatial mobility of money and real capital, and therefore do not recognize the need for, or specify the major independent variables involved in, the latter spatial decision. Notably these authors recommend that industrial winners and losers are to be identified by the marketplace rather than through government decisions, thus presuming that the high degree of mobility inherent in capital will produce optimum allocations between industries. Since optimum

---

[2]Courchene and Melvin's model is an amended version of the neoclassical model, as it does include consideration of interregional differences in unemployment rates as affecting labour mobility. For a detailed discussion of the neoclassical and Keynesian migration models see Hart [8].

[3]Bradfield [3:253] argues that these models are only correct if interregional production functions do vary; if so, the underlying question is why technology is not interregionally transferable. In answer to this latter point, the embodied technology contained in superior nonrenewable natural resources is immobile, and real capital's spatial organization, and therefore the technology embodied in it, is subject to market location forces, which represents a departure from the perfectly competitive market model.

spatial location of the winners will depend upon market-based forces (as is true in determining the optimum spatial location of labour), what sense can be made of their statement that if regional differences exist in production functions then government policy need go no further than "to ensure that all regions have access to the most up-to-date technologies?" [5:64]. In fact the spatial mobility of real capital is not frictionless, and therefore the significant difference between simple access and actual installation of embodied technologies contained in the new capital goods of the "winners" involves spatially-based market forces as surely as is true of optimal labour location. Thus if all regions are given equal access to "winning" firms possessing up-to-date technologies, the high-income regions may successfully attract a disproportionate number, if a least-cost/maximum-demand location exists in their jurisdictions.

Summary and Conclusions

The salient problem in formulating effective regional policies in the Canadian case should not be viewed as arising from differences in emphasis or in philosophy derived from some agreed-upon theoretical structure. In fact, the central issue is attaining agreement as to which theoretical structures most closely conform to the Canadian case.

In specific terms, the neoclassical migration model appears too narrowly based, given current theoretical developments in labour and plant location analysis. In a more general sense, a fuller exploitation of the neoclassical model's theoretical implications can be used to demonstrate the destabilizing effects of factor mobility on regional income disparities.

To provide a more positive analytical context it is therefore necessary to determine whether the neoclassical, static or dynamic Keynesian migration model provides a superior empirical description of the Canadian case. Do regional differences in technology exist, and if so, are they of economic as well as of statistical significance? What are the important independent variables that determine the plant location of primary manufacturing industries relative to their regional primary industry counterparts; and what are the major determinants of the location of specific types of secondary manufacturing industries in the Canadian case?

Failure to carry out this positive analytical approach will no doubt produce further informative policy debates of a normative nature but may result in forestalling a more positively based and therefore more effective regional policy program for Canada.

References

1. Batra, R. and Gerald W. Scully. "Technical Progress, Economic Growth, and the North-South Wage Differential", *Journal of Regional Science*, 12:3 (1972), 375-386.
2. Boadway, R. and Frank Flatters. "Efficiency and Equalization Payments in a Federal System of Government: A Synthesis and Extension of Recent Results", *The Canadian Journal of Economics*, 15:4 (1982), 613-633.
3. Bradfield, Michael. "Necessary and Sufficient Conditions to Explain Equilibrium Regional Wage Differentials", *The Journal of Regional Science*, 16:2 (1976), 247-255.
4. Bradfield, Michael. "Review Essay: Macdonald Royal Commission Report", *Canadian Journal of Regional Science*, 9:1 (1986), 125-137.
5. Courchene, T. "A Market Perspective on Regional Disparities", *Canadian Public Policy*, 7:4 (1981), 506-518.
6. Courchene, T. and James Melvin. "Canadian Regional Policy: Lessons from the Past and Prospects for the Future", *Canadian Journal of Regional Science*, 9:1 (1986), 49-67.
7. Drugge, S. E. "Factor Mobility, the Elasticity of Substitution and Interregional Wage Differentials", *The Annals of Regional Science*, 19:3 (1985), 34-39.
8. Hart, R. A. "Interregional Economic Migration: Some Theoretical Considerations (Part I)", *Journal of Regional Science*, 15:2 (1975), 127-138.
9. Polèse, M. "Regional Disparity, Migration and Economic Adjustment: A Reappraisal", *Canadian Public Policy*, 7:4 (1981), 519-525.
10. Savoie, Donald J. "Courchene and Regional Development: Beyond the Neoclassical Approach", *Canadian Journal of Regional Science*, 9:1 (1986), 69-77.
11. Scully, Gerald W. "The North-South Manufacturing Wage Differential, 1869-1919", *Journal of Regional Science*, 11:2 (1971), 235-252.