

Cultural Barriers to the Location of Producer Services: The Montreal-Toronto Rivalry and the Limits of Urban Polarization

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The impact of cultural variables on the location of (office-based) service establishments can be significant, making the office location problem different from the plant location problem. The main reason for the difference is that many services, unlike goods, are "embodied"—that is, these services cannot be transported independently of the person that produces them. This in turn limits the degree to which economic integration (or reductions in the friction of space) can cause the spatial concentration of activity. The emphasis of this note is on tradable producer services. In view of the growing interest in the services trade and of certain preconceived ideas about the integration of the global economy (the Canada-U.S. Free Trade Agreement, European integration, and so forth), a few notes of caution are necessary.

Our treatment of the subject remains largely conceptual, proposing an analytical template through which to examine the impact of cultural variables on office location. We begin by formulating a simple cost function for producer services establishments and then explain how the service production process differs from that of manufacturing, making services particularly sensitive to cultural barriers. Looking at Canada, we then attempt to define the role of cultural variables in the shift of producer services from Montreal to Toronto and also to show

how such variables place upper bounds on the polarization of the Canadian urban system. The term *culture* is employed here in its anthropological sense: the combined set of codes, values, shared experiences, and behaviour patterns that distinguish one society from another.

Location of Producer Services: A Cost Function Framework

The type of establishment considered here enjoys a high degree of locational flexibility. Its output is tradable; inputs needed to produce this output are available at multiple locations and can be transported. It is well documented that significant trade in services occurs across regional and national boundaries (see, for example, Beyers and Alvine 1985; Coffey and Polèse 1987a, 1987b; Gilmer 1990; Harrington 1989; Harrington et al. 1991; Polèse 1982). Examples of tradable producer services include: legal counsel, accounting, advertising, management consulting, engineering and technical consulting, and computer services. The concept of the "producer services establishment" includes all spatially distinct units (offices) that produce tradable business services, including the head offices of primary or manufacturing sector firms.

As noted in our previous work (Coffey and Polèse 1987a, 1987b), the *interurban* office location problem may be summarized by a simple cost function for producer services establishments. This cost function is composed of three principal elements. On the input side, there is (1) the cost of highly skilled professional and managerial labour (L), broken down into wages and recruitment costs, the latter including the opportunity costs associated with manpower search and turnover; and (2) the cost of purchasing the necessary complementary information-intensive services from other establishments (I), along with the associated communications costs. On the output side, there is (3) the communications (travel, telecommunications, and such) costs involved in "delivering" the final "product" to the client. Possibilities for factor substitution exist between L and I ; an establishment may produce its service with a varying mix of internally engaged labour inputs and complementary services purchased from external establishments.

The cost function framework described above considers only those factors whose scarcity value varies significantly over space between cities.¹ It implicitly assumes that demand is infinitely elastic and

1. Thus, the cost of clerical labour is not included because it is considered to be a ubiquitous resource. Office rental costs are not a significant factor in *interurban* location decisions. Land in Toronto cannot be substituted for land in Montreal.

that the unit prices of outputs do not vary significantly across locations. The location decision thus becomes a cost minimization problem.² Producer services establishments will choose the location that minimizes the total per unit cost of producing their respective services.

The Production Process for Goods and Services

To understand how cultural variables affect the variables in the above cost function, one must examine more closely the production process for producer services. But first let us briefly consider the case of goods production.

Cultural Content of Goods

The physical production and assembly of most goods (whether automobiles, micro chips, or radios) do not require a labour force that possesses any particular cultural skills; technical competence, basic education, diligence, and dexterity are required, however. Nor does the better part of the labour force need any particular knowledge of foreign markets or of the tastes and preferences of the firm's clients. Indeed, it is not essential that the labour force come into contact with outside clients. In goods manufacturing in general, the physical production process can be separated from the research, design, marketing, and distribution stages (which fall under the broad heading of producer services). The latter stages can be left to other firms or establishments. In summary, the labour (L) involved in the production of most goods need not interact with foreign clients or demonstrate any knowledge of the language and customs of other peoples. Productivity and efficiency are, in general, unrelated to cross-cultural considerations.

The culture-specific content of most goods is low. A micro chip is a micro chip anywhere in the world, as are many products, especially intermediate components such as transistors, textiles, and ball bearings. The production location decision in most of these cases is based on cost minimization, independent of cross-cultural factors. Standardized goods production has become increasingly "footloose" as transportation, communications costs, and trade barriers continue to fall. Because the type of labour force required is present in many locations, mobility is not a major concern since substitutes are generally

2. This is a significant limitation but one that the model shares with Weberian industrial location analysis.

available. As in the classical Weberian formulation of the plant location decision, it is the "pure" price of a standard labour input at point *i* that becomes the determining factor.

Cultural Content of Producer Services

The culture-specific content of producer services is generally high but varies greatly from one service to another. Advertising, for example, may have a high culture-specific content, but for credit card billings, at the other extreme, it may be low, comparable to that of standardized manufactured goods. The two extremes recall the "front office/back office" distinction found in the producer services and office location literature (for example, Moss and Dunau 1986; Nelson 1986). The concern here is with front-office activities or "high-order" producer services.

In generic terms, the output of producer services is information, delivered in a multitude of forms: advice, data, reports, hints, commands, and so forth. Information, whether financial advice or management tips, must be delivered in a form that is comprehensible and useful to the client.³ This means that the producer of the service must learn the cultural "code" of the client, or that the client must learn that of the producer (Maggi 1989). The producer of the service cannot in general avoid contact with the customer, be it person to person or via mail or telecommunications. At a minimum, this means sharing a common verbal or written language. Often, it will involve a shared set of cultural codes needed to decipher and interpret information.

In the case of producer services, the production process cannot be easily separated from other stages. The people producing information will often also have to be involved in its delivery. Indeed, it is an axiom of research on producer services that the production of the product involves an intense interaction between producer and consumer (Gershuny and Miles 1983)—that is, the producer must have more than a mere passing acquaintance with his or her client. For example, in designing an advertising campaign for chocolate bars in Brazil, the producers of that campaign must have an intimate knowledge of that country and its culture. The efforts needed to establish a feeling of mutual trust and comprehension also are made easier if cultural values are shared at the outset. In the parlance of economists, much of this

3. In the absence of cultural considerations, the communications costs (C) associated with the transport of written information or of electronically transmitted verbal information will primarily be a function of distance and the technological characteristics of the transport modes employed.

aspect could be placed under the broad heading of "transaction costs" (Rugman 1987).

Because the product cannot, in general, be "disembodied" (traded separately) from the person (or persons) who produce it,⁴ some economists have stated that there really is no such thing as trade in services, only factor flows, capital, or labour (Grubel 1986). Be that as it may, the result is not only that producer services are culturally unstandardized, but also that the market served by any establishment will in part be determined by the labour force attributes of the latter. If labour (L) changes or moves, the capacity of the establishment to serve distinct markets will be modified. The importance of face-to-face contacts, when added to cultural barriers, means that out-of-region firms will often respond by establishing local affiliates (in the same manner that manufacturers establish a local plant in response to tariff barriers), thereby creating a more dispersed pattern of producer services establishments than normally would have been the case.⁵

This behaviour will not necessarily be observed, however, in the case of high-order services. As suggested in the literature on foreign direct investment (FDI), a company may find it profitable to engage in FDI (foreign in the sense of out-of-region) if it possesses a specific advantage that it is able to internalize, and if internalization is more profitable than selling (externalizing) the advantage via licensing or other arrangements (Dunning 1981; Rugman 1981). Rugman et al. (1990) refer to firm-specific factors, which define proprietary knowledge held by the firm and whose value must compensate for the additional costs (of information, for example) associated with doing business in another region or country. Firm-specific factors include specific product

4. The amount and quality of information transmittable by mail, by courier, or by electronic means (in other words, that can in part be disembodied) remain relatively limited. The more sensitive and the more unstandardized the information to be transmitted, the greater is the need for frequent face-to-face contact between producer and consumer. Thus, the production and delivery of producer services require that labour cross international (or internal) boundaries. This makes services particularly sensitive to institutional barriers. Any national or regional (state/provincial) legislation that makes it more difficult for a resident of one region to function in another region will indirectly constitute a barrier to trade in services. In the case of international trade, this raises the issue of immigration controls, residency requirements, work permits, and so forth. For nations with federal systems such as Canada, internal barriers may similarly exist for professional licensing, professional associations or unions, and cross-state/province recognition of degrees and diplomas.
5. In international trade, this raises the question of "the right of establishment" (the right to direct "foreign" investment), perhaps the most contentious issue in the current GATT (General Agreement on Tariffs and Trade) round on service trade. Within federations, severe limits sometimes exist to the right of establishment, the most obvious case being the restrictions on interstate banking in the United States, which in turn largely explain the relative dispersal of banking institutions in that country.

lines (life insurance, for example). Subsidiaries are by definition set up to serve local “foreign” markets. In the case of a service industry, both the intrafirm transfer of proprietary knowledge and market delivery involve trade in services. Because the intrafirm transfer of proprietary knowledge also will be sensitive to cultural barriers, such barriers will raise the cost of FDI. If the additional communications costs involved in internal transfers of proprietary know-how do not compensate for the gains from lower communications costs (to markets), firms will abstain from FDI, leading to a greater dispersal of firms but not necessarily of establishments.

Cultural Barriers and Spatial Competition

In returning to the cost function, using a hypothetical case, consider two culturally distinct but economically integrated regions i and j , where j is twice as populous as i , but where the two are similar in other important ways: land mass, income per capita, and size of the largest metropolis, among other things. The sole barriers to interaction between the two regions are cultural; otherwise, goods, services, and factors are able to flow freely between the two. Also assume that each region has its own predominant language.⁶ Let k be the combined economic space of i and j , where $k = i + j$. Finally, imagine two producer services establishments, S_i and S_j , located respectively in the two regions,⁷ supplying comparable tradable producer services. Both attempt to compete over the entire economic space k . If k is to be served, S_i will face higher unit costs than S_j . Why is this so?

If S_i wishes to serve the entire economic space k , it must be able to transmit its service in a form that is comprehensible to clients in j . This obviously will raise communications costs, C , especially those involving delivery of the final product. It will take more time and more trips to convey the same message. If the opportunity cost of labour is high (as it is likely to be), then the extra cost to the establishment S_i can be considerable.⁸ The extra cost to S_i of the acquisition of complementary information-intensive service inputs (I) will depend on the relative importance (in its cost function) of I inputs originating in region j .

6. To bring the example closer to home, assume that i = Quebec and j = Ontario.
7. More specifically, we may assume that each establishment is located in the chief metropolis of its respective region. In the case of Canada, we would be talking of Montreal and Toronto.
8. It is reasonable to assume that the people involved in most business trips and meetings are fairly high in the corporate hierarchy and thus the opportunity cost of their time also will be high.

The most significant impact will be on so-called recruitment costs (r). This variable defines the non-wage scarcity value of a particular labour resource, L —for example, speakers of language j in region i , following from the potential or perceived mobility of L .⁹ L is mobile; residence is, in part, a matter of choice and such choices are sensitive to cultural preferences and affinities. We may reasonably assume that persons of culture i prefer i -type regions and that persons of culture j prefer j -type regions.¹⁰ We also may assume that the greater the cultural distance between regions i and j , the greater will be the reluctance of their respective inhabitants to resettle in the other region, and thus the higher the associated value of (r) for L sharing the cultural attributes of the other region.

Establishment S_i has three options if it wishes to service region j . It may (1) hire j -based labour, thus incurring higher recruitment costs¹¹; (2) invest in the training and education of its labour force so that it becomes operational in j region markets; or (3) purchase service inputs, I , from region j , which are then re-exported to region j . The latter will rarely be a long-term solution, although it may allow S_i to gain a toehold in region j . Solutions 1 and 2 involve higher costs for S_i in j markets than for its j -based competitor beyond any considerations of physical distance. The same holds true, of course, for S_j producers on i markets. It follows that spatial competition is reduced and that S_i and S_j , because of cultural barriers, will enjoy a certain level of protection in their home markets.

The principal impact of cultural barriers on the location decision process of producer services manifests itself not in the form of communications costs but rather in its impact on labour mobility—called here recruitment costs. This factor also ultimately prevents a

9. A simple reason why the scarcity value of culturally specific labour will often not be reflected correctly in the wage rate is that it is generally socially unacceptable for this to occur. It is difficult to imagine an employer paying two similar (with the exception of their respective cultural characteristics) employees very different wage rates on the basis of, for example, one being French speaking and the other being English speaking. In Quebec, the probability of losing an anglophone employee (through emigration) is much higher than the probability of losing a French one, but this will not necessarily be reflected in the wage rate. French speakers are much less likely (almost 20 times less, according to some estimates) to move to English-speaking provinces than their fellow anglophone Quebecers of similar social and economic characteristics (Termote and Gauvreau 1988).
10. In a recent survey of anglophone-operated business services establishments in the Ottawa region, “language” was given as the main factor inhibiting businesses from moving to the Quebec (Hull) side of the provincial boundary (Coffey 1991). Although this result clearly includes factors other than the residential preferences of those interviewed, it does confirm the interference of “cultural” aspects in what should be a purely economic profit-maximization decision. We can only surmise that cultural variables indirectly affect price variables.
11. The extra cost (recruitment cost) of attracting j -based labour to region i will be a function of the cultural distance separating regions i and j .

national space economy from becoming totally polarized, a point to which we now turn.

Cultural Barriers and Urban Hierarchies

In our hypothetical example in which region j has twice the population of region i , if we allow for the possibility of significant externalities other than pure urbanization economies¹² (scale economies, localization economies, and such), S_j will realize per unit production costs lower than those of S_i , above and beyond the effects posited above. Our cost function does not incorporate externalities, but the evidence clearly suggests that they exert a strong (cumulative), centralizing influence on the producer services sector. In Canada as in other nations, producer services are by far the most spatially concentrated economic sector, being found disproportionately at the summit of the urban hierarchy (Beyers 1988; Coffey and McRae 1989; Illeris 1989; Marshall 1988). Were it not for the friction of space and national boundaries, one might possibly expect all high-order producer services firms to agglomerate eventually in one super world-city. But we suggest that no such superagglomeration will occur, even under conditions of much reduced friction of space and increased economic integration.

Head offices define the upper bounds of urban systems. In a dynamic system, head offices are simply the organizational end-result of small firms that have grown to become large multi-establishment firms. Barring a foreign takeover on the way up, the composition of management and professional staff will reflect the cultural origins of the firm. It is the preferences of this labour pool (L) that will largely guide the decision on where to locate the head office. A head office, because of the weight of recruitment costs, will not move beyond the major urban pole of the cultural space to which it belongs. The importance of recruitment costs in the head office location decision is increased because the cost of "delivering" the final product generally carries relatively less weight, as head offices "sell" their output to an institutionally protected, in-firm market. Market proximity (minimization of delivery costs) will have only a marginal impact on the head office location decision. Even if 80 percent of a large Canadian firm's sales and assets (plants, other offices, and so forth) are located in the southern United States, it will not move its head

office functions to a southern U.S. city, although this would certainly reduce its delivery costs. Those who staff, manage, and control the head office prefer to live in Toronto, for example, and to hire people who share their "Canadian" values. Recruiting the same mix of L inputs in Dallas, for example, would be prohibitive. In another example, a large francophone Swiss firm may move its head office from a small town to Geneva, but it will not move up the "national" urban hierarchy to Zurich in German-speaking Switzerland. The greater the cultural barriers within a given economic space (national or regional) and the more sensitive managerial and professional classes are to such barriers, the less likely it becomes that head office functions will agglomerate in a single national metropolis.

A head office, in turn, acts as a magnet for producer services firms. It has been well documented that there is a high level of locational correspondence between producer services firms and the head offices of major corporations, which are important purchasers of such services (Wheeler 1988). The desire to minimize the communications costs involved in acquiring information-intensive services means that head offices will generally prefer to purchase from sources nearby (Marshall 1982; 1985). For independent producer services establishments, often the cost of delivering the "product" to the head office "client" is the determining element in the cost function. One of the earliest studies of the producer services sector coined the phrase "corporate headquarters complex" (Conservation of Human Resources Project 1977). The notion of a "complex of corporate activities" (composed of head offices, high-order producer services establishments, and high-order financial services) is now widely accepted.

To the extent that cultural barriers raise communications costs (C), they will tend to reinforce the corporate complex surrounding "national" head offices. When cultural barriers to trade exist, the propensity of producer services establishments, including head offices, to purchase their information-intensive inputs (I) locally will increase. By the same token, cultural barriers will raise the "delivery" costs for outside firms wishing to sell locally and will act as a protective barrier for local establishments. As long as cultural barriers exist, trade will never be totally free in the producer services sector.

12. Recall that we posited that the size of the first-ranking city in each region is comparable, at least at the outset, which thus excludes the possibility of pure urbanization economies linked to urban size.

Explaining the Shift in Producer Services from Montreal to Toronto

Few Western nations possess clearly defined internal cultural boundaries. The Canadian case is interesting not only because the country has two languages but also because the two "regions" concerned are becoming increasingly distinct in linguistic terms. Over the last three decades, the province of Quebec has become increasingly francophone through outmigration (of anglophones) and legislation (French was pronounced *the* official language in 1975). At the same time, the rest of Canada has become more and more anglophone, mainly through the assimilation of French speakers (Commissioner for Official Languages 1989). Montreal has lived through what may be called a cultural revolution. In 1960, it was a city dominated by an anglophone business elite, where English was largely accepted as the language of daily life. Thirty years later, the situation is reversed (Levine 1990). A language barrier was introduced (or rather reinforced) where there was none before.

During the same period, Canada's urban hierarchy underwent a fundamental change. Montreal, traditionally Canada's first city (although Toronto had been a close second for some time), was finally and decisively surpassed by its old rival. The change in relative positions was dramatic. Since the 1950s, Montreal's relative position in terms of producer services employment has fallen sharply. Indeed, today its weight is about half that of Toronto (Polèse 1990). Such changes are rare within well-established urban hierarchies.

In light of the preceding discussion, what do these changes mean? Consider, first, head office establishments. For Montreal-based head offices controlled and staffed by anglophones, associated recruitment costs have risen sharply over the past three decades. We may assume that, increasingly, skilled anglophone labour (L^a) prefer *ceteris paribus* to live in Toronto rather than Montreal. An important shift in head offices occurred during this period (Semple 1987). To the extent that L^a was replaced by skilled francophone L (because of prohibitive L^a recruitment costs), we would also expect communications costs to rise for contacts outside Quebec, creating an additional impetus for Canada-wide firms to move their "national" head office operations elsewhere. In many cases, the remaining Montreal-based office will have been transformed into a regional branch office serving Quebec.

To the extent that the net effect of the above is to reduce the number of head office functions in Montreal, it in turn reduces the internal demand for independent producer services. This "first-round"

impact explains much of the relative decline in producer services employment in Montreal. As in the case of head offices, the "francization" of local labour increases the costs for Montreal-based producer services establishments of serving non-Quebec markets. Thus, for Canada-wide markets both the labour recruitment costs and product delivery costs of Montreal-based producer services establishments will rise. The market of Montreal-based producer services establishments is then expected to shrink. In the end, the net effect will depend on the importance of external markets lost compared to internal markets gained through the increased protection of Quebec markets. The recent evolution of producer services employment in Montreal suggests that the former has been more important than the latter. But because of the cultural barriers protecting Quebec markets, Toronto will never polarize the Canadian urban in the same manner, say, that London polarizes the English system. The Montreal-Toronto shift must at one point come to a halt when the relative size of Montreal's producer services sector settles at a level concomitant with the size of its "natural" hinterland as defined by its cultural space.¹³

Conclusion

Culturally distinct geographic entities abound around the globe at both the intra- and international levels. Recent historical experience suggests that cultural differences are not likely to disappear. Indeed, quite the contrary seems to be occurring. Because of North America's relative cultural homogeneity and unique experience of acculturation of diverse populations (the ideal of the "melting pot"), such differences do not generally play an important role in regional analysis undertaken by North American scholars. The embodied nature of most producer services, however, elevates cultural factors to a more prominent role in locational decisions, as the relative weight of the producer services sector increases within national economies.

Although difficult to operationalize, the analysis of the effects of cultural barriers on the location of producer services (and other high-order office functions) represents an area of research that is both fertile and important. One of the major purposes of this note is to emphasize the necessity to add such considerations to the conceptual frameworks and models, admittedly still scarce, dealing with the

13. Recent evidence suggests that this new "equilibrium" level has been reached. The relative decline in producer services seems to have been arrested since 1990, although the evidence is still spotty (Coffey and Polèse 1993).

location of producer services. How can such issues be investigated in an empirical manner? Research on cultural barriers, their effects and their manifestations, is very difficult because of the intangible nature of the concepts and variables involved. In general, however, three avenues of research must be pursued in order to measure the effect or influence of a cultural barrier on the location of producer services. First, survey techniques can be used to measure the degree of importance that cultural factors such as language have had (or would potentially have) in influencing the locational decision of producer services establishments. This was the strategy used in Coffey (1991) in the context of the Ontario-Quebec border in Canada's Outaouais region. Second, survey techniques also can be used to identify the specific strategies employed by service establishments in order to function within a market area characterized by a set of different cultural attributes, as well as to develop estimates of the extra time or money spent in this context. Third, the question can be approached indirectly by examining the residential mobility patterns across cultural boundaries in the case of the professional labour force that forms the core of producer services establishments. All three avenues need to be pursued simultaneously.

Our analysis of the impact of cultural barriers on the location of producer services suggests that cities that are the major centres of culturally distinct geographic units (be they nations, states/provinces, autonomous republics, or whatever) will remain producer services centres even in the absence of all other barriers to trade. The degree of change that the economic integration of Europe, a long process begun in 1992, is expected to produce is probably exaggerated. Even if, on a conceptual level, integration is complete, in a Europe without legislative barriers the continuing presence of cultural differences will likely prevent totally "free" trade in producer services; in this respect, producer services are very different from goods. Unlike most other barriers, those of a cultural nature cannot be legislated away.

The recent experience of Canada, in which Toronto and Montreal have become the high-order service centres of two increasingly distinct cultural spaces (that of Toronto being much larger than that of Montreal), suggests that the impact of culture on the locational behaviour of producer services establishments can be quite dramatic. But Quebec's cultural distinctiveness imposes a clear (lower) limit on Montreal's decline as a business service centre, as well as an upper limit on Toronto's capacity to polarize the Canadian urban system. To the extent that cultural identity is not solely a matter of language (that is, that real cultural differences exist between English Canada and the United States), then we also may expect the Canada-U.S.

Free Trade Agreement to have much less impact on the integration of North American economic space than is sometimes feared.

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