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## International Transboundary Collaboration: A Policy-Oriented Conceptual Framework

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# INTERNATIONAL TRANSBOUNDARY COLLABORATION: A POLICY-ORIENTED CONCEPTUAL FRAMEWORK

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## ABSTRACT:

This paper presents a relatively simple framework for understanding the changing functions of international boundaries and the rationale behind the concept of (international) transboundary collaboration (TBC). The paper also presents an outline of a template for standardizing studies of border regions throughout the world. If implemented on a large enough scale these comparative studies will help us to answer some of the questions commonly asked by practitioners such as: What conditions seem to be most conducive to successful transboundary collaboration? and, What kinds of policies and institutions have been effective in terms of contributing to successful transboundary collaboration?

The major themes that emerge here are:

- In recent years the functions of international boundaries have changed dramatically, generally becoming more open and presenting fewer barriers to cross boundary activity and the development of border regions.
- The development of adjoining border regions partially depends on their ability to successfully regionalize decision making across international boundaries. However, analyzing transboundary relationships in a fragmented, discipline-centered context is likely to ignore the multi-faceted nature of the process and the contradictions that can arise between them. Therefore, an interdisciplinary, systems-type approach to border studies is necessary to understand the nature of this complex and often perplexing phenomenon.

## Introduction.<sup>1</sup>

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<sup>1</sup> The author is indebted to many colleagues for input into this paper including: Joachim Blatter, Paul Ganster and Alan Sweedler.

As the number of international boundaries and border regions<sup>2</sup> multiply and/or are transformed by changing local and/or international political and economic circumstances, the need for understanding them in a public policy context has grown accordingly. Nevertheless, despite a growing interest in borderlands and a corresponding growth in the literature in this area in recent years, most academic work has been directed at specific geographic regions (e.g., the U.S.-Mexico border region) and/or specific functional areas (e.g., transboundary environmental collaboration). Very little attention has been focused on the theory of transboundary collaboration, especially the type of “theory” that can be helpful to the practitioners who are charged with managing concrete projects in a transboundary setting.<sup>3</sup>

The main objective of this paper is to present a relatively simple framework for practitioners and researchers that can provide a framework for understanding the changing functions of international boundaries and the rationale behind the concept of (international) transboundary collaboration (TBC). This endeavor grew out of the author’s frustrations trying to effectively condense the enormous amount of information available on the U.S.-Mexican border region into fifteen or twenty minute briefings for legislators and decision-makers who lacked first-hand knowledge of the region. Hopefully, this framework will: synthesize the essence of the transboundary relationship; help organize the vast amounts of information that can be used to describe and analyze that relationship, and lead to a better understanding of the need for and the nature of transboundary collaboration.

A second objective is to outline a template for generating standardized studies of different border regions so that borderlands scholars can begin to answer some of the questions frequently asked by practitioners. Such questions include, but are not limited to: What conditions seem to be most conducive to successful transboundary collaboration? and, What kinds of policies have been effective throughout world in terms of contributing to successful transboundary collaboration?

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- The development of adjoining border regions partially depends on their ability to successfully regionalize decision making across international boundaries. However, analyzing transboundary relationships in a fragmented, discipline-centered context is likely to ignore the multi faceted nature of the process and the contradictions that can arise between them. Therefore, an interdisciplinary, systems-type approach to border studies is necessary to understand the nature of this complex and often perplexing phenomenon.<sup>4</sup>

The essay is divided into three sections. In the first, we identify the major elements of a conceptual framework for analyzing and understanding the changing functions of international boundaries and transboundary collaborative relationships. In the second section, we present a template for organizing collaborative studies in border regions. The approach is multidisciplinary and can be of assistance in identifying those factors likely to stimulate -- and those which are likely to hinder -- transboundary collaboration in specific regions. Additionally, this type of study, if carried out in large enough numbers, could generate interesting hypotheses which could be

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<sup>2</sup> The terms “boundary” and “border” can be used interchangeably. In actual practice, “border” is more commonly used than “boundary,” at least in English. However, in order to avoid confusion we will use the former term to mean a line that fixes the limit of a nation’s territory, thereby referring exclusively to its international character. The region adjoining a boundary will be referred to as a “border-region,” consisting of two (or more) sub-regions: one on each side of the boundary. Later on we will introduce the concept of macro and micro border regions to designate the entire border region abutting the length of an international boundary (e.g., the entire U.S.-Mexican border-region) and a (local) border-region (e.g., the San Diego-Tijuana border-region).

<sup>3</sup> One major exception to this is the volume by Ratti and Reichman (1993) Another contribution in his area was produced by the LACE (Linakage Assistance and Cooperation for the European Border Regions) Project (see Association of European Border Regions, 1997); however, this work relates almost exclusively to the cross-boundary institutional framework developed within the European Union. The website of this organization is: **Error! Bookmark not defined.**

<sup>4</sup> For an example of this type of approach, see Clement et al, 1998.

researched in more depth and eventually generate empirically-based policy recommendations. In the third and final section we discuss some of the limitations, applications and extensions of this approach.

## **I. A Policy-Oriented, Conceptual Framework of Transboundary Collaboration.**

### *Introduction.*

In this section we present a conceptual framework which is designed to aid practitioners and academics in both understanding the dynamics of transboundary collaboration (i.e., the "drivers" of the system) generally, and in analyzing studies of specific regions based on the template presented in section II of this paper.

### *Boundaries and Border Regions: Characteristics: The "Problematique" of Border Regions.*

#### A. Characteristics of International Boundaries.

1. They serve as dividing lines between national jurisdictions (i.e., legal, economic and administrative). In this sense they set the territorial and jurisdictional limits of nation states and hence of "national sovereignty."
2. They can serve as "barriers" and/or as "points of contact and integration" between the peoples and systems of the two (or more) countries, depending on the degree of "openness" between them. On relatively closed international boundaries the "barrier effect" will prevail while on relatively open boundaries the "integration effect" will tend to be dominant. (See Hansen, 1996, with respect to these concepts on the U.S.-Mexican boundary.)
3. They can be "internal" or "external." Internal boundaries refer to those between member countries within an economic union where formal barriers of all kinds are virtually non-existent. External boundaries refer to those boundaries between member and non-member countries where barriers to entry/exit are significant. In the case of external boundaries they serve as (imperfect) filters for attempting to control and/or regulate what flows from one jurisdiction to another (linkages). Thus, the interests of border-regions can markedly differ from that of nation states which tend to view international boundaries as delineating the geographical limits of national sovereignty while border regions tend to view them as barriers to all types of intercourse with neighbors from "the other side."
4. They can be settled and defined, or disputed and undefined. (See the website of the International boundaries Research Unit, **Error! Bookmark not defined.**, for an organization that specializes in this area.)
5. They arbitrarily assign the limits of national jurisdictional responsibility for a vast array of transborder public policy issues which "spill over" from one side to the other, including: air basins, underground aquifers, ocean waters, resources, public health, police/fire and natural disasters such as earthquakes, floods and other "acts of God." .
6. They seldom coincide with natural boundaries (e.g., high mountain ranges or large bodies of water) thereby artificially dividing "natural regions" as viewed from economic-geographic-environmental and/or historic-ethnic perspectives. In this sense international boundaries frequently disrupt normal social and economic transactions while creating additional political jurisdictions, further complicating the issues of fragmentation of governance.<sup>5</sup>

The emerging New Economy -- characterized by increased "openness" (i.e., lower tariffs and fewer barriers to

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<sup>5</sup> Other typologies of "borders" exist. See Martinez, 1994; Friedman, 1996 and Zuñiga, 1998.

commerce in the context of rapid technological innovation, leading to increased globalization<sup>6</sup>) has diminished, but not totally eliminated, the barrier impact of economic borders, but political borders still remain, impeding the regionalization of decision making. The New Economy, characterized in the 1980s and 90s by market-oriented, "supply-side economics," based on conservative ideology, has also meant a diminished role for central governments in achieving full employment and economic growth. Thus "devolution" of powers has meant that local/regional governments are increasingly forced to accept more responsibility for the economic development of their own jurisdictions. Consequently, (international) transboundary collaboration (TBC) between local governments, businesses and Non-Governmental Organizations (NGOs) has expanded in many areas of the world in an attempt to regionalize decision making across international (and intra-national) boundaries in order to reduce conflict and improve prosperity and the general quality of life.

Despite this general tendency towards more open borders, many borders have become more closed in the post Cold War era--especially those between the former Soviet Bloc countries -- due primarily to ethnic/nationalist conflict.

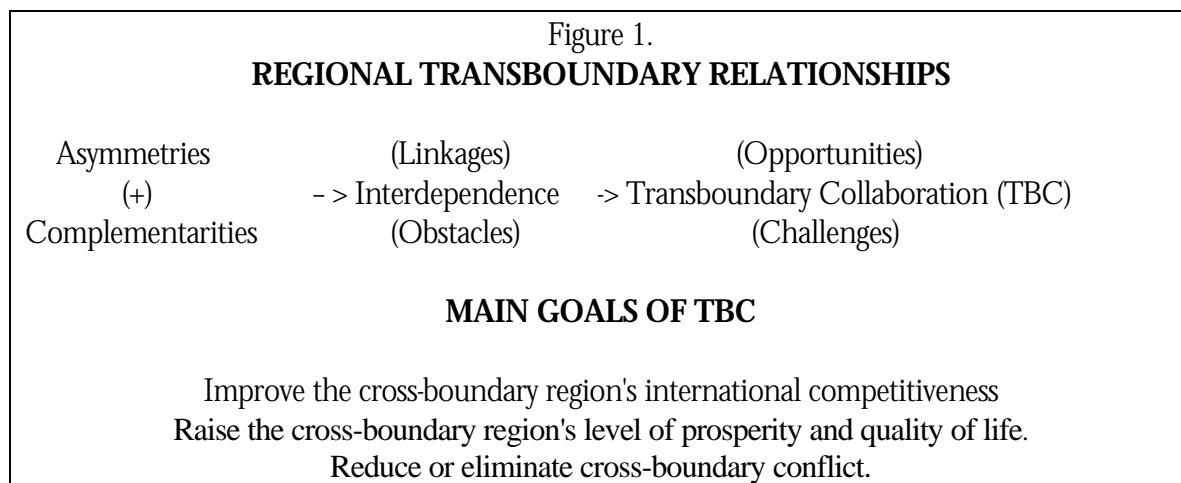
#### B. Defining Transboundary Regions: Two Options.

Regions adjoining international boundaries may consist of two or more sub-regions and can be defined in two ways:

1. by including the administrative jurisdictions adjacent the international boundary (i.e., the states and/or counties closest to the boundary), and/or
2. by measuring the intensity of transborder interaction (i.e., transborder linkages/flows).

While the former is certainly the most convenient -- in the sense that demographic and economic data scaled to administrative jurisdictions (e.g., counties or municipalities) is usually available -- the latter is functionally the most desirable in terms of understanding the true nature of the cross-boundary relationships.

#### C. Characteristics of Regions Partitioned by International Boundaries. (Figure 1. illustrates the main components of this complex framework.)



<sup>6</sup> Globalization in the sense we are using it here refers to "...the widening and deepening of international flows of trade, finance and information in a single, integrated global market." (United Nations Development Programme 1997, p.82) The time period in which this market has developed is generally taken to be the Post World War II period; however, its roots go back much further and there is evidence that elementary forms of globalization were present in the earlier centuries.

1. The two (or more) sub-regions adjacent to international boundaries, particularly those on external boundaries, are likely to be *asymmetrical* in terms of one or more of the following areas:
  - geographically, with respect to resources, topography and the built environment
  - demographically with respect to age structure, growth rates, size, ethnicity and density per unit of land
  - economically with respect to factor endowment (available inputs) and output structure, as well as long term growth rates and the general level of development,
  - politically with respect to centralization-decentralization, organization of governmental functions, legal systems and a variety of common practices
  - culturally, with respect to history, ethnicity, language and customs
2. The economies of the two (or more) neighboring sub-regions are frequently *complementary* with respect to the structure and cost of both inputs (characteristics of the labor force, natural resources, capital, entrepreneurship) as well as outputs (what is produced in terms of both goods and services). Geographic and economic asymmetries can give rise to transboundary commerce and formal and informal networks for exploiting potentially profitable business opportunities while political and cultural asymmetries can serve as *obstacles* to transboundary collaboration (see below).
3. Adjoining border regions characterized by "openness" are also usually *interdependent*, generating a wide variety of "*linkages*" or "cross-boundary flows," which can be identified and classified as follows:
  - tangible goods flows, including: raw materials, intermediate, capital and final goods, usually in response to market conditions,
  - human flows including: a) those who primarily wish to "do business" (selling and/or buying goods and/or services) in response to market conditions, and b) those involved in formal or informal networks,<sup>7</sup> and c) those primarily responding to non-market relations (e.g., visiting family and/or participating in a variety of cultural events),
  - resource/environmental flows, including: issues of water supply and quality, air pollution, bioresources and hazardous & industrial wastes, and
  - embedded in these flows, is an on-going, sometimes invisible, process of transboundary cultural and technological diffusion and adaptation.
  - linkages/flows can either be "legal" or "illegal" while the volume and nature of these flows are influenced by prevailing market conditions and government imposed regulations in the respective countries.
4. Additionally there are *obstacles* that can limit cross border interdependence. Such obstacles can be defined in this context as structural characteristics that tend to block/impede cross border activity and/or cooperation. They can be identified and classified as:
  - Cultural, linguistic and historical cross-boundary differences which impede effective interaction
  - Institutional-systemic cross-boundary differences that can make communication and collaborative decision making difficult, if not impossible because of: a) the absence of a cross boundary counterpart institution due to differences in function and/or organization, b) differences in decision-making processes, and c) security measures limiting what can actually pass the boundary or add to the time needed to do so, and d) national government restrictions on the entry/exit of persons and tangible goods for economic and/or non-economic motives.

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<sup>7</sup> The concept of the network economy covers a lot of conceptual territory and transcends the traditional spheres of economic transactions where goods and services are traded (only) for money. Complex modern economies are held together by many kinds of collaborative networks including those which involve transportation, communications and information and whose successful operation are essential to national-regional development. The main question pursued here is whether the recent trend towards the removal of old borders implies the elimination of all related impediments.

### *Implications For Border-Regional Development: Transboundary Collaboration.*

As noted above, transborder relationships are usually characterized by *Asymmetries*, *Complementarities*, *Linkages*, and *Obstacles* which, in turn, present:

- *Opportunities* (situations, which, if properly acted on, could raise prosperity and/or QOL levels and/or reduce conflict in the border context), and
- *Challenges* (situations, which, if not properly acted on, could lower prosperity and/or QOL levels and/or increase conflict in the border context).

In order to properly manage such situations some sort of Transboundary Collaboration (TBC) is usually required. The main goals of TBC are to raise the level of international competitiveness, prosperity and QOL and reduce or even eliminate cross-boundary conflicts in the transboundary region. TBC has (at least) two main features

- The provision of physical infrastructure (from border crossing facilities and highways & bridges to facilities for private and public air, rail and sea transportation).
- A management framework/capacity built on informal or formal relationships in order to successfully take advantage of the opportunities and confront the challenges

The challenge is to adequately regionalize decision making in the two sub-regions that are divided by an international boundary. Not only must border regions do everything that every other region must do in terms of regionalizing their decision making, but they must do so in collaboration with a whole host of organizations on "the other side," which may be economically, politically, legally and culturally organized very differently. This not only increases the number of decision makers but also increases the heterogeneity of the decision-making body and complexity of the decision-making process.

From an economic perspective there are three basic concepts that militate for the concept of transborder cooperation: economies of scale, externalities and transaction costs.

The concept of "economies of scale" in this context is usually associated with the creation of the physical infrastructure facilities needed to facilitate the development process. That is, the construction of bridges, highways and port facilities frequently are only feasible if financed by all parties deriving the benefits (i.e., the positive externalities) they generate. And even if only one side were able to finance the construction of, say, a regional airport, some of the benefits would accrue automatically to "the other side" in the form of increased access and lower travel costs. The same can be said for the provision of social infrastructure (i.e., educational and health services as well as police and fire protection). Similarly, regional marketing efforts to promote the region's exports and transborder tourism as well extol the region's virtues as a retirement haven or "good place to invest and do business" can frequently be done cheaper and more effectively in concert. Lobbying efforts in the two nations' capitals or before transnational governmental bodies (e.g., the EU in Brussels) can frequently be much more effectively if done collaboratively.

There are also "negative externalities" that must be taken into account and managed in the transboundary context. Thus, for example, transmittable diseases as well as air and water pollution present on one side of the border can "spill over" to the other side in many ways, raising health costs and lowering the quality of life. Transborder collaboration can result in better management of such problems, increasing the quality of life on both sides of the border.

Finally, "transaction costs" (i.e., the additional costs -- over and above normal production and distribution costs -

- associated with buying/selling including gathering information on market conditions, negotiating, writing and enforcing agreements) in cross border situations are likely to be high in comparison with expected profits, thus discouraging economic activity. That is, faced with a lack of information regarding market conditions, legal constraints, common business practices, language and culture "on the other side," entrepreneurs are reluctant to do business there, even though it would otherwise be regarded as part of the local (regional) market area. High transaction costs can also inhibit the realization of economies of scale in the production of private goods by limiting the size of the market.

It follows therefore that transborder consultation-coordination mechanisms must be formed in order to realize potential economies of scale, manage spillover effects and lower transaction costs. In other words, decision making must be "regionalized" even in regions divided by an international boundary.

#### *The Dynamics of Transboundary Collaboration.*

In a *static* sense, it is widely recognized that successful transboundary collaboration is a function of a myriad of factors including: demographic characteristics (ranging from culture and language to population growth rates and density); levels of economic development; national economic and political decision-making patterns; and legal/administrative systems and competencies as well as cross-border communications and infrastructure. The historic legacy of transborder conflict may also play an important role in conditioning transboundary collaborative efforts. Finally, an important determinant is likely to be the transnational institutional context, which can vary significantly, from economic and political union as in contemporary Europe or a free trade area as in North America, to simple membership in the international the global economy, subject only to the rules of the World Trade Organization).

In a *dynamic* sense there may be observable and predictable patterns as transborder relationships evolve over time. One such pattern may be the progression from local "informal, non-binding transborder relationships" to formal, non-binding," to formal, binding relationships enforced by transborder institutions established by international treaty. Many other patterns may be common and new work now being developed will lead us to a better understanding of these. (see Blatter, 1997)

The existence of such mechanisms does not imply anything *a priori* about the nature of the transborder relationship, which can range from "peaceful coexistence" to "partners in development." Additionally, it must be noted that in addition to cooperation there will be a strong element of *competition* between the two regions that must be accepted from the outset.<sup>8</sup>

In those areas where transborder collaboration has begun to flourish each transborder region seems to have adopted its own unique approach to such endeavors, building on its own history, culture, resources, capacities and position vis-à-vis their own "niche" in the national and international context. Some approaches to TBC seem to have been more successful than others; nonetheless, it is difficult to measure success in such matters.<sup>9</sup>

#### *Benefits and Costs of Transboundary Collaboration.*

Clearly there will be benefits and costs resulting from the process of transborder collaboration and only when the benefits are perceived as greater than the costs for each sub-region will there be a willingness for each to participate. The exact nature and division of these benefits and costs will depend on the circumstances inherent

<sup>8</sup> Some competition can be minimized if complementaries can be identified and made operational in a "cross-border industrial strategy." Such a strategy, based on the comparative advantages of each region could increase economic activity on both sides of the border by attracting investment to the region with the goal of carrying out part of the production on one side of the border based on its comparative advantage and part on the other, again based on its comparative advantage. This has been tried on the U.S.-Mexico border, particularly between San Diego, California and Tijuana, Baja California.

<sup>9</sup> Two approaches immediately come to mind: One, would be to measure "input" (i.e., number/quality of on-going transborder processes initiated) while the other would be to concentrate on "output" (i.e., an index of economic prosperity and QOL or specific transborder actions carried out). Of course, a combination of the two could also be utilized.

in each region; however, there are a few observations that can be made at the conceptual level.

First, TBC implies a higher level of economic, political and social integration between the two (or more sub-regions). Such integration across an international boundary usually results in some loss of national sovereignty (i.e., security), the need to associate with (undesirable) "foreigners" and the usual risks associated with any new venture (e.g., the risk of investing resources in a process that could fail at any time).

Second, in pursuing the objectives of TBC (i.e., conflict reduction as well as higher levels of international competitiveness, prosperity and quality of life) each sub-region is opening itself to new social, political and economic forces. These new forces are likely to benefit one side of the boundary more than the other(s). Additionally, some sectors of each sub-regional community are likely to benefit while others will be hurt. There are always winners and losers in such integration and the benefits and losses are not likely to be evenly distributed.

Finally, the complex nature of these relationships implies that irrespective of the outcome of TBC, the process itself will result in a loss of hegemony by central governments to sub-national actors -- a consequence that can be viewed from a variety of perspectives, either negatively or positively, but perhaps always with some anxiety. The omnipresent danger, of course, is that the process of TBC can, under certain circumstances, result in the fragmentation of the nation state.

## **II. A Template for Organizing Border-Regional Studies**

Existing studies of border regions differ widely with respect to objectives, methods, scope and the general approach. The existing literature on border regions therefore consists of a set of heterogeneous studies designed to achieve widely different objectives. This section outlines an approach to border studies that will:

- Identify those factors contributing to the problematic of specific border regions as well as describe their main characteristics in a systematic way. In this sense the template can be utilized to identify and analyze the main elements of the conceptual framework sketched out in the previous section of this paper.
- Provide a systematic, multidisciplinary approach to border-regional studies that can be utilized by academics and practitioners everywhere. As noted above, if these relatively standardized, comparative studies are carried out in sufficient number they can be utilized to generate hypotheses and eventually, policy-relevant theories regarding transboundary collaboration and border-regional development.

### *Defining the Relevant Region to be Studied: Macro and Micro Border-Regions.*

"Macro border-regions" differ significantly with respect to size and geographical space. For example, the U.S.-Mexican border-region is quite large, covering some 3,326 kilometers from East to West, while the Hungarian-Slovenian border region is relatively small, with an international boundary of 102 kilometers. Furthermore, along many boundaries there are several "micro border-regions," characterized by a relatively high degree of (actual or potential) interaction. Along the U.S.-Mexican boundary there are some twenty "twin-city, micro border regions," ranging from Brownsville-Matamoros in the East to San Diego-Tijuana in the West. The case can be made that in the case of the U.S.-Mexican border-region, despite many similarities between those urban areas and their respective hinterlands, so much heterogeneity exists between them that lumping them into a single region to be studied would likely conceal more than it would reveal. Therefore, the relevant unit for border-regional studies, while difficult to determine on an *a priori* basis, should be the local (micro) regional characterized by a relatively high degree of transborder interaction, actual or potential. Alternatively, for data gathering purposes, those administrative units adjacent to the international boundary exhibiting intensive cross-boundary activity should be the relevant unit to be studied. Thus, in the case of the U.S.-Mexican border region the relevant

unit of study could be the twin city, urban zones and their hinterlands (e.g., the County of San Diego and the Municipality of Tijuana) or the region defined by the ten counties of Southern California and the five municipalities of Baja California which taken together exhibit a relatively integrated region in terms of economic activity, infrastructure and environmental interconnectedness and cultural interaction.

### *A Collaborative Multidisciplinary Approach to Border-Regional Studies.*

In this section we outline a template for collaborative, micro border-region studies consisting of three parts: a) a suggested process for organizing the study, b) a detailed overview of the topics to be included in the study, and c) a brief discussion of how to interpret the findings. The studies are “collaborative” in the sense that academics from each sub-region of the border (e.g., San Diego and Tijuana) will carry out parallel studies, detailing the conditions prevailing on each side of the border, using the same (or similar) objectives, methods and scope.

**The Process.** There are many ways to organize such a study, however, the following process can be helpful in terms of facilitating the study and transboundary collaboration at the same time.<sup>10</sup>

- It is suggested that from the outset the process consist of two working groups (one from each side of the border) consisting of academic specialists familiar with the subjects noted below as well as practitioners familiar with public policy and the border region. If this is not possible, then clearly one working group with representatives from both sides of the border will certainly get the job done.
- One (or two) persons from each side of the border should be designated to organize the working group(s), edit the various sections of the final report and write an (common) introduction and a (common) final section summarizing the main findings of each group and providing recommendations for future studies and public policy.
- Workshops should be employed for a) homogenizing (to the extent possible) the objectives, scope and exact nature of each section of the study by comparing outlines and eventually drafts of each section, and b) for presenting the final section reports to the other members of the bi-national team with the objective of providing feedback to the authors. Workshops between academics and practitioners can be very helpful to all participants in terms of discussing data sources, ideas, developing additional transboundary collaborative works and developing an on-going dialogue between academics and practitioners.<sup>11</sup>
- A conference, perhaps on each side of the border, marking the completion of the study should be organized in order to present the main findings to regional policy makers, private sector leaders and concerned non-governmental organizations. Such conferences can be important events, if properly organized, leading to new phases of collaboration among the agencies participating in the conference. The conference can also be utilized to publicize publication of the study through a press conference for media on both sides of the border.

**Contents of the Study.** Micro border-regional studies, as conceived here, should consist of nine sections organized according to the following list of subjects. Each section should be organized in terms of an essay (with maps, tables, and graphs, where appropriate) written for concerned lay people, not other academics. Sections 1 and 9 should be written by the project organizers while sections 2-8 (one for each side) should be written by individual authors, subject to the feedback provided by the other participants in the workshops. All participants should be familiar with the conceptual framework presented above and should be urged to organize their essays with an eye to their being interpreted via that framework.

Each section should begin with an introduction which briefly informs the reader of the subject matter of

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<sup>10</sup> The study, *San Diego-Tijuana in Transition* (see Clement and Zepeda, 1993) was based on an earlier version of this approach.

<sup>11</sup> The workshops started in 1992 during the generation of the study, *San Diego-Tijuana in Transition*, lasted through 1998. These seminars, publicized through electronic mail and printed announcements, were called “The Californias in Transition.” Participants included academics, private and public sector officials and researchers on both sides of the California-Baja California boundary.

that section and how it will be organized. The final section should clearly summarize the major findings (including important challenges and opportunities), note gaps in the available data on the region and identify areas where further study might be needed. In most countries the information required should be available from secondary sources and there will be no need to carry out surveys or do interviews.<sup>12</sup>

The approximate number of pages for each section is indicated in brackets next to the section heading and it is estimated that the entire study should not exceed 100 - 150 pages (35,000 - 50,000 words), depending on font size, line spacing and format.

### Section Headings and Guidelines

1. Introduction to the Study and the Macro Border Region. [3-4 pages] An overview of both sides of the entire border region containing the most important elements of each of the categories listed below. The objective here is to establish the context of the micro-region to be studied in more detail.
2. Geography, Climate, Resources & Infrastructure.[5-6 pages]
  - maps of both sides of the region in the national context
  - available GIS and applications
  - overview of the main geographic characteristics of the border region in the context of the nation including: topography, climate, natural resources, natural barriers,
  - land use, population density, rural land tenure and urbanization patterns
  - level of physical infrastructure development including transportation links and corridors, water supplies, energy generation and importation as well as major infrastructure gaps
3. Demography & Culture/Language [4-5 pages]
  - population size, rates of growth and sources of growth (natural and from immigration)
  - main ethnic/cultural groups including size and rates of growth
  - age structure
  - labor force participation rates (overall, male and female)
  - health and education characteristics of the population
4. History, Sovereignty & Security [5-7 pages]
  - brief overview of national and regional history with special attention to shifting boundaries, ethnic/national conflicts in the region and between regional/national groups in neighboring countries
  - the changing location and functions of the international boundary in recent times
  - the current situation with respect to
    - intraregional conflicts and rivalries (in the one country only)
    - conflicts and rivalries between the region and the larger nation
    - cross-boundary conflicts and rivalries
5. Economics [6-8 pages]
  - gross regional product (size, per capita, distribution, rates of growth) [1980-present]
  - employment (and output?) by sector (two digit, for region & country) [1980-present]
  - unemployment & underemployment rates (1990s by year), regional and national
  - inflation rates (1990s by year), regional and national
  - 10 leading exports and imports (current)

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<sup>12</sup> In addition to this study based on secondary data another type of study, based on the opinions of public and private sector leaders can be carried out in order to better comprehend the perceptions of local decision makers on both sides of the international boundary.

- major trading partners (by exports and imports, current)
- foreign investment in region (value, in which sectors)
- 5 main countries investing in region
- estimates of local, informal transboundary transactions (informal wholesale and retail expenditures not included in export/import figures)
- estimated size of informal sector in border region (?)
- qualitative/quantitative illegal flows of aliens, arms, drugs, wild life, etc.
- estimates of numbers and earnings of commuter workers
- existence of regional models (I/O or other) and/or economic development plans

6. Environment & Quality of Life [4-6 pages]

- water quality and supply problems
- hazardous and industrial problems
- air pollution
- bioresource issues
- national & transboundary environmental management practices

7. Governance & Planning Systems (4-6 pages)

- brief overview of transnational governance (e.g., the EU or NAFTA) including:
  - basic treaties
  - basic institutions and their competencies
  - region/border-oriented policy instruments and programs
- brief overview of the nation's governmental structure/system
  - constitution: unitary state or federation
  - revenue distribution
  - structure and political power of municipalities
  - public-private relationship (e.g., Statist - France, Corporativist - Austria, Pluralistic - United States)

8. Transboundary Collaboration [6-8 pages]

- brief overview of the history of transboundary cooperation (informal and formal)
- main institutions and areas of current collaboration
- major accomplishments and problems

9. Summary of Findings and Policy Recommendations [10 - 15 pages]

- summary of main findings of each essay on each side
- synthesis of main findings and discrepancies between them, if any
- interpretation of findings and implications for understanding the “problematique” of the border region (see below).

Interpreting the Findings. One of the main purposes for presenting the conceptual framework in Part 1 of this paper was to provide a vehicle for assisting in the interpretation of studies generated by this template. The main logic of that framework is that the existence of *asymmetries* and *complementarities* between the two (or more) sub-regions give rise to actual and potential transboundary *linkages* that frequently are partially or completely blocked by certain *obstacles*. These linkages and their respective obstacles, present *challenges* and *opportunities* which if properly addressed can lead to higher levels of prosperity and quality of life while reducing conflict in the region (the basic goals of transboundary collaboration).

Clearly such a study cannot be expected to exhaustively treat all the issues confronting the region, however, if properly carried out, most of them can be identified and the need for further studies can be identified. The workshops to be carried out in conjunction with the individual studies can be used to stimulate discussion between the participants, both academics and practitioners, and these discussions can be extremely useful in identifying issues, framing policy responses and stimulating synergies. The new economic environment requires

partnerships of all kinds; public-private; public-academic; private-academic and public-private-academic in order to fully mobilize the region's resources in a concerted manner.

### **3. Conclusions and Recommendations.**

The conceptual framework and accompanying template for border-regional studies presented here represent only one of many possible approaches for understanding and studying border regions. Perhaps one of the main contributions of this presentation will be to stimulate other approaches that will better capture the essence of the issues academics and practitioners are attempting to understand and, over time, deal with in terms of public policy.

*Limitations of the Framework & Template.* One of the main limitations to the conceptual framework is the lack of precise definition of the relevant region, however, this deficiency seems to be endemic to regional science in general, and not just this particular approach. Another limitation is that the terms utilized are not commonly employed when discussing border-regional development. More familiar terms might resonate better with those who are viewing the framework the first time.

The classification system utilized in the template also has its limitations. First, there are many different ways of classifying the type of information utilized by academics and practitioners in need of the understanding the associated with border-regional development. Again, this is only one way of arranging that information. Hopefully, this exercise will evoke discussions of modifications to this classification system (or new ones) that will serve us better. Second, many topics could have been inserted in two or more sections in the template. Such ambiguities were usually resolved by the author asking himself, What discipline tends to study this sort of phenomenon most? Given the author's lack of knowledge of the domain of all the relevant disciplines, it is likely that many mistakes were made. Hopefully, fuller discussion of the template will correct these deficiencies. Finally, given the fact that this approach to border-regional studies is in its infancy, there are, unfortunately, no models to distribute to those who would employ this template in specific border regions. It is hoped that financing can be obtained in order to carry out two or three studies that could be used to test the feasibility of the classification system in a variety of border-regions and these, in turn, could be used as models for further studies.

*Expected Uses & Applications.* The approach to border-region studies sketched out above, if adopted and utilized by a number of research institutions, could, over time, yield a sample of border studies that could in turn be utilized for a number of objectives including:

- creating typologies of international boundaries and border regions, based on a variety of factors (e.g., open vs. closed boundaries; urban, high density cross boundary regions; rural vs. low density cross boundary regions),
- generating and/or testing hypotheses with respect to a) to the changing functions of international boundaries, b) those conditions and policies contributing to successful transboundary collaboration, c) those conditions contributing the "development" of border-regions (i.e., increasing the region's competitiveness, prosperity and quality of life while decreasing cross-border conflict),
- serving as the basis for more detailed studies of particular aspects of border-regional problems (e.g., in depth studies of transboundary collaboration in environmental and/or public health areas),
- utilization as text materials for graduate and undergraduate courses/seminars in border-regional studies throughout the world for regular university students and practitioners.

International border-regional studies is an emerging, academic multidisciplinary specialization with strong ties to public policy analysis. In order to earn the respect of academic colleagues and links with the practitioners working in the area we must begin to generate the types of studies identified above. In this sense this essay should serve as an invitation to other borderlands scholars to enter into a dialogue about the methodological and empirical foundations of our work.

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