Competitiveness Review

The Central American Competitiveness Initiative

Niels Ketelhöhn Roberto Artavia Ronald Arce Victor Umaña

The Central American Competitiveness Initiative

Niels Ketelhöhn
INCAE Business School, Managua, Nicaragua
Roberto Artavia
Fundación AVINA, San José, Costa Rica, and
Ronald Arce and Victor Umaña
INCAE Business School, Alajuela, Costa Rica

Received 2 July 2015
Revised 26 July 2015
Accepted 27 July 2015

Abstract

Purpose – This paper is a historical account of the process by which Michael Porter and INCAE Business School put together a regional competitiveness strategy for Central America that was officially adopted by the governments of five participating countries, and implemented through a series of Presidential Summits that occurred between 1995 and 1999. The paper provides a unique case study on the adoption of the concepts put forth by Porter in his book "The Competitive Advantage of Nations" (1990) at the highest level of government. The study arrives at a series of practical implications for policy makers that are particularly relevant for the implementation of supra-national regional strategies.

Design/methodology/approach – The authors conduct an extensive literature review of 190 policy papers produced by INCAE Business School, that are used to recreate the historical evolution of the regional competitiveness strategy. The effect of Porter's intervention is also assessed by comparing the main economic indicators of each participating country with those of 2005-2010. One of the authors was the main protagonist in the successful implementation of the strategy, and the paper relies partially on his accounts of events.

Findings – This study describes how economic policy in Central America was profoundly influenced by Michael Porter's thinking in the second half of the 1990s. These policy changes promoted international competition of Central American clusters and firms, and opened the region for international investment and tourism. The region experienced important increases in its economic integration, its international trade, foreign direct investment and tourist arrivals. Gross domestic product growth was accelerated in Honduras and Nicaragua.

Research limitations/implications – Like all case studies, this study has limits related to the generalizability of its conclusions. Additionally, it is not possible to determine the precise nature of the relation between the implementation of the regional economic strategy, and the impact on economic growth, integration, FDI attraction and exports.

Practical implications – The paper has several practical implications that relate to the design of regional economic strategies. First, it identifies policy areas that are more effective as part of regional strategies, and distinguishes them from those that should be resolved at the national level. Second, it suggests a process that can facilitate execution. Finally, it provides an example of the coordinating role that can be assumed by an academic institution such as INCAE.

Originality/value – The Central American Competitiveness Initiative provides a unique setting to study the implementation of competitiveness policy for several reasons. First, in all countries in Central America, Michael Porter's diamond framework (1990) and cluster theory were officially adopted at the highest level of government. Second, in addition to their individual competitiveness strategies, all countries adopted a regional strategy for cooperation and economic integration. Finally, the Central

Competitiveness Review
Vol. 25 No. 5, 2015
pp. 555-570

1059-5422
DOI 10.1108/CR-07-2015-0065

American Competitiveness Initiative was founded on one of the first competitiveness think tanks of the world.

Keywords Competitiveness, Central America, Regional economic cooperation, Regional competitiveness strategy, Regional coordination

Paper type Case study

Introduction

The theory put forth in the Competitiveness Advantage of Nations (Porter, 1990) quickly became a conceptual basis for government economic strategies across the world, for countries, states, cities and regions. The ubiquity of the application of Michael Porter's theory has been well-documented (Lindqvist *et al.*, 2003). Porter's theory sparked an intense debate among academics and practitioners, which Ketels (2013) captures in a thorough review of this literature. Opponents of the cluster theory recognize its popularity, but criticize its empirics and overemphasized benefits (Martin and Sunley, 2003). Additionally, Duranton (2011) questions the capacity of policy makers to effectively implement cluster-based strategies, as they would need to solve complex intra-cluster coordination problems.

The first criticism has been addressed in the literature of economic geography. Ketelhöhn (2006) and Delgado *et al.* (2014) carry out econometric studies using large data sets and find positive effects of cluster externalities on patent production and entrepreneurship, respectively, which are listed among the benefits of clusters by Porter (1998). Generally, statistical rigor has increased in more recent work surrounding clusters (Delgado *et al.*, 2011, 2012).

The second criticism on cluster theory has recently received more attention by a body of work that relates to the determinants of successful cluster policy implementation. Lindqvist *et al.* (2003) conduct a large scale survey of cluster initiatives, suggest a typology of cluster initiatives, study their evolution pattern and identify the determinants of successful implementation. They report that most cluster initiatives were found to have a positive effect on competitiveness and growth. Among the most relevant factors influencing success, they list the initial strength of the cluster, the national setting, the type of funding, the process by which funding is obtained, the nature of the facilitator and the process of consultation of the underlying framework. Additionally, the effectiveness of cluster efforts has been documented by Falck *et al.* (2010) and Martin and Sunley (2011).

Extant research has focused on cluster initiatives that use the country (Wilson *et al.*, 2014) or the subnational region (Gutiérrez-Martínez *et al.*, 2015) as geographic units of analysis. This paper focuses on the supra-national region and conducts a historical account of the Central American Competitiveness Initiative. Between 1996 and 1999, the governments of Guatemala, Honduras, El Salvador, Nicaragua and Costa Rica used the diamond framework and cluster theory to redefine the essence of their economic strategies. These nations also developed a regional integration strategy to cooperate in those areas that would raise the productivity of all firms in the region. Prof. Michael Porter directly participated in the implementation process that involved a series of summits that were attended by 11 different Presidents, their cabinets and the leaders of key clusters.

Central America is a unique setting to study competitiveness initiatives, because no one institution had formal jurisdiction over the entire space encompassed by the strategy. The need for country cooperation provides a unique view on the practical implications for policy makers involved in cluster initiatives that transcend national borders.

This paper also relates to the literature on regional trade, in which the central question explores the effects of regional trade agreements (RTAs) on members and non-member countries. One side of this debate argues that RTAs can have welfare-enhancing effects for member countries when domestic production is replaced by imported products from more efficient sources (Viner, 1950; Lipsey, 1960; Kemp and Wan, 1976). The alternative perspective is that non-member imports are displaced by less efficient products from RTA partners, diminishing welfare (trade diversion).

Empirical evidence suggests that trade diversion is not a dominant effect of RTAs, but that it is more common in some industries (Freund and Ornelas, 2010; Baier and Bergstrand, 2009). Despite the risks of trade diversion, most countries in the world have embraced RTAs since the latter half of the twentieth century, and RTAs have become a common instrument of international cooperation (Mansfield and Milner, 2014; WTO, 2011; Schiff and Winters, 2003). The trade literature identifies positive effects from RTAs, including economies of scale, foreign direct investment (FDI) attraction, diversification, competition in domestic markets and income growth (Francois and Reinert, 1997; Frankel and Wei, 1998; Trejos, 2005).

This account of the Central American Competitiveness Initiative, which eventually led to the negotiation of the Free Trade Agreement between Central America and the United States of America (DR-CAFTA), informs these distinct strands of the literature. Specifically, this paper describes the institutional setup in which regional trade-promoting policies were enacted to foster the economic integration. Furthermore, the paper describes the process by which Central American countries coordinated policies in areas beyond trade, such as transport infrastructure, logistics, energy, disaster management and tourism.

The remainder of this paper is organized in four sections. The next section describes the methodology. The following section provides a brief economic history of Central America before 1995. The next two sections describe the process by which the Central American Competitiveness Initiative was developed, and summarize its impact on the region. The final section provides lessons for policy makers.

Methodology

This paper uses an in-depth case study approach to understand the effect on the Central American economies of the theoretical framework postulated in The Competitive Advantage of Nations (Porter, 1990). We conduct a comprehensive review of 190 policy papers produced by CLACDS, the think tank that was created at INCAE Business School to develop the regional strategy and help in the implementation of the Central American Competitiveness Initiative. CLACDS published 59 cluster policy papers between 1995 and 1999, of which 2 were on Guatemala, 10 on Honduras, 4 on El Salvador, 6 of Nicaragua, 15 on Costa Rica and 22 on clusters that spanned beyond the borders of a single country. CLACDS also produced 131 papers on the strategies to improve business climate in Central America, composed of 12 papers on Guatemala, 9 on Honduras, 9 on El Salvador, 13 on Nicaragua, 19 on Costa Rica and 69 that encompassed the entire region.

These papers describe in detail the process by which Porter's theories were institutionalized in the region. We then conduct a natural experiment, in which we compare the performance of each country in the region in gross domestic product (GDP)/capita, economic growth, trade, FDI inflows and tourism before and after Porter's intervention. These differences cannot be fully attributed to the new strategy, but many direct linkages are traceable and evident.

Additionally, Dr Roberto Artavia, one of the authors of this paper, was the Rector of INCAE Business School between 1999 and 2007 and the Director of CLACDS from its foundation in 1995 until 1999. This study relies partially on his notes and accounts of the events.

Central America before the Competitiveness Initiative

In the 1960s, Central America adopted a regional import substitution strategy geared toward reducing exposure to price fluctuations of traditional exports (coffee, sugar, beef, cocoa and bananas) and dependence on imports of manufactured goods. This strategy, known as the Central American Common Market (CACM), sought to promote the development of local manufacturing industries by providing Central American firms with regional monopolistic markets, protection from foreign imports, tax incentives and subsidized inputs. This model assumed that a regional protected monopoly would allow champion firms to achieve minimum efficiency scale during their nascent years, and hence become internationally competitive in the long run. These monopolistic industries were assigned to the five participating countries by a regional institution called ICAITI, following a set of rules designed to keep industrial balance among participating nations. A series of infrastructure projects were implemented to support regional integration, including the construction of the Inter-American Highway that connects all capital cities in Central America, except Tegucigalpa (Porter and Ketelhöhn, 2002).

CACM was successful in fostering regional trade and promoting the development basic manufacturing industries. Regional trade as a proportion of total trade increased from 7 per cent to 26 per cent from 1960 to 1970 (Nelson, 1983). Manufacturing value added rose from 14 per cent of GDP to 18 per cent from 1960 to 1975 (Weeks, 1999).

Despite advances in trade and the development of a manufacturing base, CACM came to an end in the 1970s. The allocation of industries followed a political rationale, which caused the artificial geographic dispersion of firms that would otherwise have co-located. Hence, the manufacturing base of the region was submitted to anti-clustering pressure from ICAITI, which negatively affected the natural externalities of emerging clusters. Disputes among member countries were intense, reaching a pinnacle in 1967, when Costa Rica allowed the construction and operation of a second tire manufacturing facility against the ruling of ICAITI. Additionally, regional free trade impacted tax revenues of all countries that were forced to import inferior manufacturing goods from their CACM neighbors. The "soccer-war" of 1969 between Honduras and El Salvador, and the subsequent withdrawal of Honduras from CACM in 1970, marked the beginning of the decline of the regional market (Porter and Ketelhöhn, 2002).

In the 1970s, civil wars erupted in Guatemala, El Salvador and Nicaragua. In Nicaragua, the Sandinistas-led revolution managed to remove President Somoza from office and took over in 1979. Soviet and Cuban influence became more evident throughout the region. As Central America became one of the main theaters of the Cold War, government priorities shifted toward safety, military affairs and geopolitics. Major natural disasters, particularly the Managua earthquake of 1972, disrupted trade in the region. The combined effect of war, natural disasters, trade conflicts and the worldwide recession of 1979 led to the collapse of the CACM in 1979-1980.

During the 1980s, Central American nations had to endure the consequences of continued guerilla activity in El Salvador and Guatemala, inflated defense budgets and large debt levels (Devlin and French-Davis 1995). The import substitution model was gradually abandoned by each country, as economic growth slowed, poverty increased and social indicators deteriorated. The 1980s became eventually known as "the lost decade", except in Costa Rica, where the US Government invested heavily in redefining the growth model to one based on export promotion.

In the early 1990s, throughout Central America, peace was reached and democratic elections were held (INCAE-HIID, 1999). In all countries, the economic strategy was changed to one that emphasized the attraction of FDI, trade liberalization, deregulation and the reduction of public spending. State-owned enterprises were privatized, export processing zones were created and extra-RTAs were signed. Peace encouraged tourism, and the special tax incentives attracted apparel and light manufacturing operations. As a result, during the first half of the 1990s, Central America underwent a period of economic growth, averaging 4.7 per cent across all member countries from 1990 to 1995. El Salvador and Costa Rica led the region with 6.3 per cent and 5.5 per cent growth in that same period, respectively.

The Central American Competitiveness Initiative

The Central American Competitiveness Initiative was the regional economic strategy officially adopted by the five nations of the region in the second half of the 1990s, conceptually based on the ideas of Porter's (1990) "Competitive Advantage of Nations". The development of this strategy spanned from January 1995 to September 1999, was personally led by Prof. Michael Porter and involved 11[1] Presidents and Heads of State from seven countries, their cabinets and the leaders of the private sector.

On January 31, 1995, Michael E. Porter made his first presentation in Central America at INCAE Business School's campus in Costa Rica. The audience included:

- President Alvaro Arzú, from Guatemala;
- Prime Minister Manuel Esquivel, from Belize;
- President Armando Calderón Sol, from El Salvador;
- President Carlos Roberto Reyna, from Honduras;
- President Violeta Barrios de Chamorro, from Nicaragua;
- President José M. Figueres Olsen, from Costa Rica; and
- President Ernesto Pérez Balladares, from Panama.

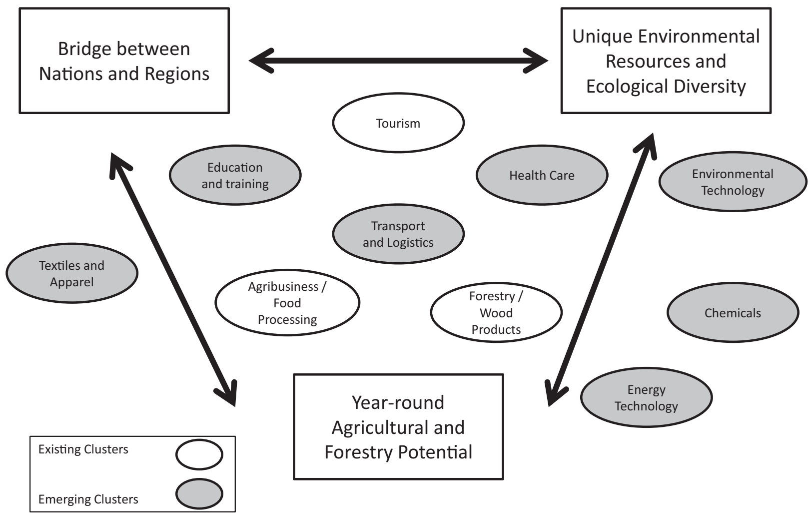
This first event was also attended by 400 business leaders and government officials, including ministers of trade and finance, chairpersons and CEOs of major corporations – local and multinationals – and dozens of directors of industry associations from each country in the region. The main topic on the agenda was the framework of the Competitive Advantage of Nations (1990) and other essential concepts that would become the foundation of a Regional Competitiveness Initiative. A joint team composed of INCAE Faculty, Harvard research personnel and Harvard doctoral students was deployed in the region. Led by Prof. Porter, this team carried out research that defined the region's key competitive advantages, listed the main productive clusters of the region and identified the main constraints for their continued development.

A second conference was held in October of 1995 at Harvard, where Presidents Calderón Sol, Reyna and Figueres met with their economic cabinets and representatives of the other three Central American governments. The regional positioning framework shown in Figure 1 was proposed to the Presidents.

This working session resulted in the selection of three priority areas of the region's business climate that were to be studied for policy changes: regional logistics infrastructure, investment attraction capabilities and customs operations. The selection was made from a list of potential candidate areas shown in Figure 2. Hence, the Presidents officially launched the region-wide competitiveness initiative that was to be led by Prof. Porter and executed locally by INCAE Business School.

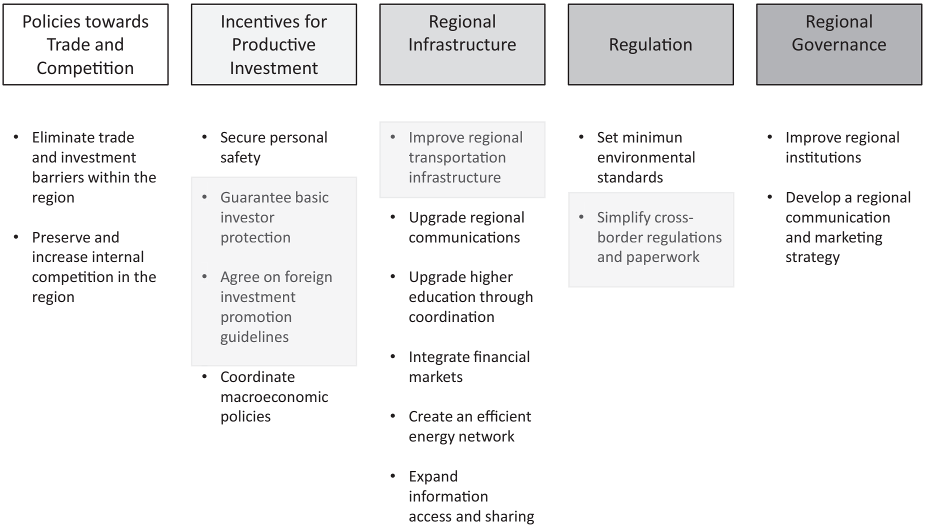
Presidents Figueres, of Costa Rica, and Calderón Sol, of El Salvador, became the early leaders of the Initiative, convening their peers, meeting privately with Prof. Porter and INCAE authorities and seeking funds from the Central American Bank for Economic Integration (CABEI). The end of their presidential mandates left a vacuum of regional leadership and enthusiasm for the Initiative.

After the first two Presidential Summits, national elections were held in El Salvador, Honduras, Nicaragua and Costa Rica. Incoming Presidents continued to participate, including:



Source: Porter and Ketelhöhn (2013)

Figure 1.
Central America: emerging and existing clusters



Source: Porter and Ketelhöhn (2013)

Figure 2.
Priority action areas to improve regional competitiveness

- President Francisco Flores, from El Salvador;
- President Carlos R. Flores, from Honduras;
- President Arnoldo Alemán, from Nicaragua; and
- President Miguel A. Rodríguez, from Costa Rica.

Having participated in the first meeting, Belize, which was part of the British Commonwealth, withdrew from the process. Panama participated on a sporadic basis, depending on the topics of the agenda of individual events.

A third conference took place at INCAE's Campus in Nicaragua in June of 1996, with the presence of the Presidents of El Salvador, Nicaragua and Costa Rica. Research efforts had yielded concrete proposals to enhance the region's competitiveness in the three selected topics, calling for both national and regional actions. As Prof. Porter stated then, "these efforts are regional in impact but need to be executed at national level".

To ensure implementation, National Competitiveness Committees were created, each led by a government figure, but mixed – public–private – in their composition. Additionally, at the regional level, two nationals of each country – one from the private sector and one from the public sector – represented their nation in the Regional Competitiveness Committee. An academic coordinator from INCAE Business School was named to each of these instances.

In Guatemala, President Arzú appointed his Vice President – Luis Flores – and two of his key advisors to lead the competitiveness process. Guatemala became the first country to create a permanent institution to promote competitiveness – the National Competitiveness Program (PRONAMCOM) – an institution housed within its Ministry of Economics. In Costa Rica, two special government committees were create to promote the development of the tourism and electronics clusters, respectively, that met on a monthly basis with President Figueres. In El Salvador, the national committee decided to hire a private consulting firm – Monitor – to develop cluster development strategies.

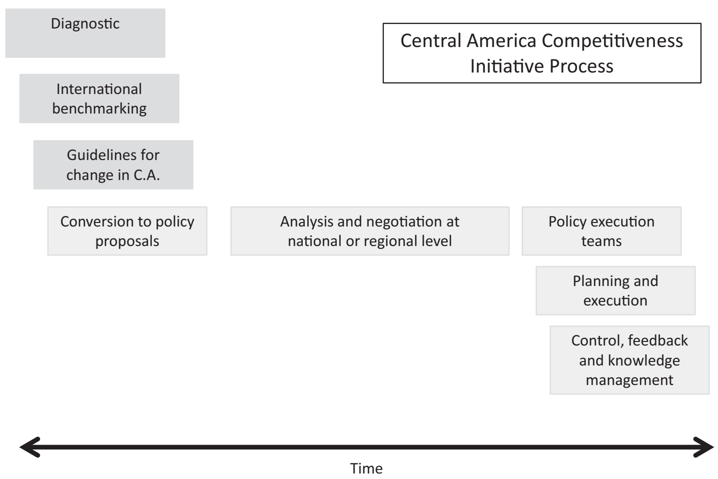
The Latin American Center for Competitiveness and Sustainable Development (CLACDS) was founded in this third meeting of the Central American Presidents. All Presidents petitioned funds to CABEI. The effort was also financially supported by Fundación Avina, a philanthropic organization founded by Dr Stephan Schmidheiny[2].

The third summit marked the beginning of a series of policy development processes led by the regional and national committees, which followed the logic shown in Figure 3. For each priority area chosen by the Presidents, a regional diagnostic was conducted that included benchmarks from countries known for their good practices. The lessons from the diagnostic were incorporated into a policy proposal.

These guidelines became policy and investment recommendations presented by the national and regional committees to the governments. A taskforce was appointed to drive and control execution. INCAE would participate in capturing the lessons and generating knowledge to improve future processes.

Over the following three years, conferences were held on a variety of subjects related to competitiveness in every country in the region, engaging their governments, industry representatives, think tanks and academia. Additionally, each National Competitiveness Committee met on a monthly basis, and the Regional Competitiveness Committees met on a quarterly basis.

Selected clusters held specific meetings to advance their own competitiveness agendas. Cluster processes required, on average, six meetings: one to establish the basic diagnostic, one to analyze existing benchmarks, one to select action priorities, two or three to create specific policies or investment projects and one to present the proposals to the authorities. Meetings varied in size, but they were usually attended by 20 to 150 leaders. All meetings were coordinated by INCAE and Harvard Faculty. Some clusters



Source: INCAE-HIID (1999)

Figure 3.
Central American Competitiveness Initiative process

were engaged following a regional perspective, because their geographic span transcended that of the countries. These clusters benefited significantly from having a common regional agenda, and included tourism, coffee, sugar, beef and dairy products. Other clusters were activated at the national level, including mini-vegetables in Guatemala, textile and assembly in Honduras and El Salvador, peanuts and vegetable oils in Nicaragua, electronics and sustainable tourism in Costa Rica and international logistics and shipping services in Panama (INCAE-HIID, 1999).

In addition to the original three priority action areas, others were subsequently selected by the regional committee. A similar process was applied to areas of energy policy and integration, small and medium-sized enterprise development and technical training (INCAE-HIID, 1999). Altogether more than 450 meetings were held under the umbrella of the Central American Competitive Initiative. Successful implementation of policies relied on local authorities. Policy areas that raised the productivity of firms located throughout Central America tended to be implemented at a faster pace than those benefiting firms from a single country. Hence, investments and policy changes related to regional transportation infrastructure, customs, electricity connectivity and natural disaster assistance were among the most efficient processes. Conversely, immigration issues and FDI attraction programs were eventually resolved at the national level.

Some of the efforts and initiatives became larger than the process that originated them. For example, the logistical corridor proposal (SIECA and CLACDS, 1999) later became the IADB's "Puebla to Panama Plan", an investment which included the construction of highways, the integration of the countries' energy grids and the modernization of the border passes throughout the region with funding in excess of US$3 billion, and meant to promote economic and social integration across the Mesoamerican platform.

A final Presidential Summit was held at INCAE Business School in Costa Rica in September of 1999. Present were the six Presidents of the countries of the region, plus the President of Ecuador, who wished to better understand the process. Prof. Porter presented the main impacts, conclusions and changes in the region as a result of the Competitiveness Initiative. Four other speakers complemented Professor Porter's analysis: Dr. Roberto Artavia, President of INCAE Business School and the Director of CLACDS; Mr Danilo Siekavizza, representing the business sector and the Regional Competitiveness Committee; President Miguel A. Rodríguez of Costa Rica, for the Presidents of the region; and Professor Jeffrey Sachs, for HIID, who presented the macro components of the process.

Impact of the Central American Competitiveness Initiative

Over 44 months – between January of 1995 and September of 1999 – the Competitiveness Initiative impacted each individual Central American nation and the region as a whole. Hundreds of investments – public and private – that originated the competitiveness process resulted in productivity gains, employment, growing trade and enhanced cluster and/or national competitiveness.

A permanent institutional capacity was created that changed the mentality and understanding of economic growth for an entire generation of government and business leaders, independently of their political and ideological backgrounds. INCAE Business School created a think tank – the Latin American Center for Competitiveness and

Sustainable Development – devoted to competitiveness. The school trained at Harvard many members of its faculty in topics of competitiveness, including three of its Deans and the last two Presidents of the institution, and became a knowledge center for competitiveness for the Latin American region, providing a base for the continuity of the original effort by Prof. Porter. Nine books were published on competitiveness in Central America and more than 214 working papers were written.

Hundreds of business, government and industry association leaders learned and applied common frameworks, which allowed them to communicate across sectorial borders more effectively, to find common ground for their proposals and negotiations. Since the start of the Central American Competitiveness Initiative, all major political campaigns in the region have included significant programs on competitiveness, business climate and cluster development.

The Central American Competitiveness Initiative was successful. The region has not reached the desired levels of competitiveness, but without this initiative, the region would be further from its development goals today, and without the capacity to face the challenges of demanding global context. After the period of accelerated growth of the early 1990s, growth levels stabilized, reaching an average of 3.3 per cent between 2005 and 2010. Table I shows that Costa Rica and Guatemala led regional GDP growth with 4.6 per cent and 3.7 per cent, respectively, during that period. Trade became more important as a proportion of GDP, increasing from 39.7 per cent in 1995 to 59.5 per cent in 2010, as the number of trade agreements signed by member countries rose from 2 to 16. Exports grew from US$11.6 billion in 1995 to US$40.5 billion in 2010. FDI inflows augmented tenfold from a yearly average of US$392 million during 1990-1994 to US$4,132 million during 2005-2009. Trade composition changed, shifting away from traditional agriculture (coffee, bananas, sugar and beef) toward non-traditional agricultural exports, manufacturing, textiles and some electronic assembly.

Other specific impacts of the Central American Initiative

Impact on free trade. One of the key proposals of the Central American Initiative was to provide Central America with equal access to the US market to that achieved by Mexico through the North America Free Trade Agreement (González, 1997). In 2003, the USA proposed free trade with the Central American nations in a meeting in El Salvador. Ambassador Robert Zoellick, chief negotiator of the Central America and Dominican Republic Free Trade Agreement with the USA, said in a meeting at INCAE Business School that the Central American Competitiveness Initiative had been an important incentive for the USA to present the trade agreement, since it:

> […] had shown the ability of the countries of the region to work together, to raise their standards, and to compete based on productivity and technology rather than cheap labor and poor environmental practices.

After the implementation of the so-called "open-regionalism paradigm" of 2000, when the market access commitments of several free trade agreements started to kick-in, extra regional imports started to grow at a higher rate than intraregional imports (9.1 per cent vs 8.1 per cent, respectively, for the 2000-2010). Extra-regional exports grew at a 6.6 per cent annual rate over the same period. These results were a consequence of CACM's unilateral reduction of the common external tariff and the region's efforts to expand the network of free trade agreements.

Table I. Central America: selected economic indicators

	Costa Rica		El Salvador		Guatemala		Honduras		Nicaragua		CA	
	1995	2010	1995	2010	1995	2010	1995	2010	1995	2010	1995	2010
GDP per capita (US$) (1)	3,370	7,773	1,653	3,444	1,468	2,882	699	2,078	889	1,535	1,609	3,604
GDP growth (average 1990-1995; 2005-2010) (1) (%)	5.5	4.6	6.2	1.4	4.3	3.7	3.5	3.6	1.8	2.5	4.7	3.3
Exports of goods and services (US$ millions) (1)	4,402	13,855	2,056	5,553	2,823	10,668	1,709	7,248	666	3,210	11,656	40,533
Trade coefficient (%)	47.6	62.2	36.7	58.7	33.9	53.9	56.0	62.9	35.6	67.5	39.7	59.5
FDI inflows (US$ millions, average 1990-1994; 2005-2009) (1)	222	1,530	12	715	88	696	41	796	29	394	392	4,132
Number of trade agreements (1995/2015) (2)	2	14	2	10	2	10	2	11	2	9	2	16
Number of tourist arrivals (millions) (3, 4)	0.79	2.1	0.24	1.15	0.56	1.22	0.22	0.86	0.28	1.01	2.08	6.34

Source: (1) World Bank Group (2015a); (2) Organization of American States (2015); (3) Inman and Segura (1999); (4) Consejo Centroamericano de Turismo (2015)

Emergency assistance in the aftermath of Hurricane Mitch. Central America is prone to suffer significant and frequent natural disasters. In November of 1998, the region was affected severely by Hurricane Mitch, a Category 5 hurricane that caused intense flooding. Nicaragua and Honduras were particularly affected, where water courses, both natural and man-made, changed course and ran through the cities, destroying public, private and productive infrastructure. The Central America Competitiveness Initiative incorporated as part of the regional strategy, the logistics plan to distribute aid to the victims and the reconstruction of basic infrastructure (INCAE-HIID, 1998). Because a continued forum of regional decision makers was in place, coordinated action among regional actors was possible. The crisis was used to leapfrog technology generations. Cellular telephones, for example, made a big leap forward, replacing old, damaged and, by then obsolete, fixed telephone lines.

Impact on measurement of global competitiveness. There were many impacts of the Central American Initiative which transcended the region. INCAE Business School represented the World Economic Forum (WEF) in the region and managed, with the help of Harvard's Institute for Strategy and Competitiveness and Harvard's Institute for International Development (HIID, since replaced by Harvard's Center for International Development), to get WEF to include the Central American nations in its annual competitiveness rankings.

From this process, Michael E. Porter and Jeffrey Sachs were invited by WEF to develop a new version of the annual competitiveness index. The result was an index with two components: a "macro competitiveness index" centered on the macroeconomic and institutional aspects – developed by Sachs and his team – and a microeconomic competitiveness index centered on the business climate, business competitiveness and a country's capacity for innovation. These two indices were published in this separate form for three years until in 2003, the WEF integrated them and published them as a single competitiveness index including the most significant elements of each, a framework which continues to be used worldwide to evaluate competitiveness.

Conclusion

The publication of Porter's (1990) Competitive Advantage of Nations had a strong impact on Central America in several ways. First, the diamond framework and cluster theory were officially incorporated into the individual economic strategies of five nations: Guatemala, El Salvador, Honduras, Nicaragua and Costa Rica. Second, Michael Porter's competitiveness framework provided in the mid-1990s a different perspective with which to address regional economic integration. It was the conceptual basis of the Central American Competitiveness Initiative, a regional strategy that defined the competitive positioning of the region, identified the set of existing and emerging clusters with most potential and determined priority action areas in which intra-country cooperation was needed to improve a common regional diamond. Third, the strategy resulted in the foundation of CLACDS, one of the first think tanks in the world devoted to the development of competitiveness policy. Finally, the Central American Competitiveness Initiative changed the debate between the private sector and government, from one that focused on protection and taxes to one that sought to improve the business climate and increase productivity.

This paper has several practical implications that relate to the design of regional economic strategies. It suggests that regional strategies are more effective in resolving policy areas that meet one of three criteria. First, economic strategies should pursue cooperation with neighboring countries when nations confront issues that benefit from scale, such as negotiating trade agreements, procuring financing for common projects and setting up emergency assistance teams for natural disasters.

Second, regional strategies are more effective when factor conditions of neighboring countries are heterogeneous and complementary. For example, El Salvador and Nicaragua lack access to a Caribbean port of their own, and must therefore rely on Honduras and Costa Rica for exports to Europe and the East Coast of the USA. Some clusters expand naturally beyond the borders of a single country, sharing key resources. The tourism cluster of Northwestern Costa Rica, with great natural settings, developed services and a modern international airport, borders with the Southwestern Nicaragua, which offers the colonial cities and lakes that Costa Rica lacks. The same type of externalities are present between Guatemala, Honduras and Southern Mexico within "Mayan Route", a combination of archeological and cultural resources shared by these three countries that can be jointly used to attract tourists to all three destinations.

Finally, regional strategies were easily implemented when the beneficiary firms of specific policies are located throughout the region rather than concentrated in a single nation. In Central America, policies geared toward the improvement of regional logistics, customs and trade were more rapidly implemented and accepted. For example, Costa Rican firms seeking to export to Guatemala became more competitive when Nicaraguan, Honduran and Salvadoran roads were improved. These policies were less controversial, because all firms in the region needed all roads, ports, borders and customs systems to be efficient in every member country.

Cooperation was less effective in action areas that did not meet these criteria. For instance, FDI policy, originally included as part of the Central American Competitive Initiative, became a series of independent national efforts. These efforts were successful, as shown previously in Table I; however, they were better implemented as part of national strategies, because countries perceived the attraction of investments as a zero-sum-game, in which member nations competed to attract the same investors. FDI efforts did not gain any benefits from scale, did not exploit the complementarity of national assets from neighboring countries and benefited only firms in a single country.

This case also implies that competitiveness strategies should provide a clear sense of priority regarding the areas of the diamond that will be improved through cooperation. The Central American Competitiveness Initiative became less effective when it evolved into the "Plan Puebla-Panamá", which increased the geographic scope to include parts of Mexico, Panama and Colombia, and attempted to regionalize topics such as AIDS prevention, educational policy and environmental policy. There were simply too many actors with too many issues.

Furthermore, this case shows the consequences of a certain type of funding structure. INCAE's involvement in the Central American Competitiveness Initiative was financed by CABEI and AVINA. Cluster representatives became used to the notion that INCAE′s contribution would continue to be "free". Once the initial funding ran out, the private sector was unwilling to source the necessary funds. Furthermore, the leaders of CABEI looked upon the Competitiveness Initiative as their project, and thus were reluctant to share the credit with other multilateral development banks.

Finally, this study has implications for the implementation of national strategies. Execution tended to be more successful with the involvement of the highest level of government authority. Competitiveness requires coordination, not only between governments and the private sector, but also among many agencies of government that will not necessarily act appropriately if a program is hosted within a single ministry. In the case of Central America, the involvement of the Presidents facilitated the implementation of the program. Countries in which permanent institutions were created, like Guatemala's PRONAMCOM, experienced more successful and sustained processes, than those that housed the program in temporary committees. This case also provides a clear example of the important role that can be played by academic institutions as neutral coordinating bodies.

Notes

1. Four of the countries held presidential elections during the years of work and the incoming Presidents continued to participate in the initiative, raising the number from 7 to 11.
2. Stephan Schmidheiny, Founder and first Chairman of the World Business Council for Sustainable Development, was a Swiss philanthropist who at the time had productive and philanthropic investments throughout Latin America.

References

Consejo Centroamerica de Turismo – Secretaría Técnica (2015), "Estadísticas", *Portal SICA*, available at: www.sica.int/cct/estadisticas.aspx?IdEnt=11 (accessed 8 June 2015).

Delgado, M., Ketels, C., Porter, M.E. and Stern, S. (2012), "The determinants of national competitiveness", NBER Working Paper No. 18249, National Bureau of Economics Research, Cambridge, MA.

Delgado, M., Porter, M.E. and Stern, S. (2014), "Clusters, convergence, and economic performance", *Research Policy*, Vol. 43 No. 10, pp. 1785-1799.

Devlin, R. and French-Davis, R. (1995), "The Great Latin American debt crisis: a decade of assymetric adjustment", *Revista de Economía Política*, Vol. 15 No. 3, pp. 177-142.

Duranton, G. (2011), "California dreamin': the feeble case for cluster policies", *Review of Economic Analysis*, Vol. 3 No. 1, pp. 3-45.

Falck, O., Heblich, S. and Kipar, S. (2010), "Industrial innovation: direct evidence from a cluster-oriented policy", *Regional Science and Urban Economics*, Vol. 40 No. 6, pp. 574-582.

Francois, J.F. and Reinert, K.A. (1997), *Applied Methods for Trade Policy Analysis*, Cambridge University Press, Cambridge.

Frankel, J.A. and Wei, S.-J. (1998), "Regionalization of world trade and currencies: economics and politics", in Frankel, J.A. (Ed.), *The Regionalization of the World Economy*, University of Chicago Press, Chicago, pp. 189-226.

González, A. (1997), *El acceso de los países Centroamericanos al mercado de Estados Unidos. Un análisis de paridad con el NAFTA y de otras opciones*, INCAE, Alajuela, Costa Rica.

Gutiérrez-Martínez, I., Duhamel, F., Luna-Reyes, L. and Pecazo-Vela, S. (2015), "The role of joint actions in the performance of IT cluster in México", *Competitiveness Review*, Vol. 25 No. 2, pp. 156-178.

INCAE, HIID (1998), "Estrategia para la Reconstrucción y Transformación de C. A. después del Huracán Mitch", working paper CEN 1101, Centro Latinoamericano de Competitividad y Desarrollo Sostenible de INCAE Business School, Alajuela, Costa Rica, April.

INCAE, HIID (1999), *Centroamérica en el Siglo XXI: Una agenda para la competitividad y el desarrollo sostenible; bases para la discusión sobre el futuro de la región*, INCAE, Alajuela, Costa Rica.

Ketelhöhn, N. (2006), "The role of clusters as sources of knowledge spillovers in the US semiconductor industry", *Journal of Economic Geography*, Vol. 6 No. 5, pp. 679-699.

Ketels, C. (2013), "Recent research on competitiveness and clusters: what are the implications for regional policy?", *Cambridge Journal of Regions, Economy and Society Advance*, Vol. 6 No. 2, pp. 269-284.

Lindqvist, G., Ketels, C. and Sölvell, Ö (2003), *The Cluster Initiative Greenbook*, Ivory Tower, Stockholm, Sweden.

Lipsey, R.G. (1960), "The theory of customs unions: a general survey", *The Economic Journal*, Vol. 70 No. 279, pp. 496-513.

Mansfield, E.D. and Milner, H.V. (2014), "The political economy of preferential trade agreements", in Dür, A. and Elsig, M. (Eds), *Trade Cooperation: The Purpose, Design and Effects of Preferential Trade Agreements*, Cambridge University Press, Cambridge, pp. 56-81.

Martin, R. and Sunley, P. (2003), "Deconstructing clusters: chaotic concept or policy panacea?", *Journal of Economic Geography*, Vol. 3 No. 1, pp. 5-35.

Martin, R. and Sunley, P. (2011), "Regional competitiveness: clusters or dynamic comparative advantage?" in Huggins, R., Izushi, H. (Eds), *Competition, Competitive Advantage and Clusters: The Ideas of Michael Porter*, Oxford University Press, Oxford, pp. 239-258.

Nelson, H. (1983), *Costa Rica: A Case Study*, The American University, Washington, DC.

Porter, M.E. (1990), *The Competitive Advantage of Nations*, The Free Press, New York, NY.

Porter, M.E. (1998), "Clusters and Competition: New Agendas for Companies, Governments, and Institutions", in *On Competition*, Harvard Business School Press, Boston, MA.

Porter, M.E. and Ketelhöhn, N. (2002), *Central America: Strategy for Economic Integration*, Harvard Business School Case, Boston, MA.

Schiff, M. and Winters, A. (2003), *Regional Integration and Development*, World Bank Publications, Washington, DC.

SIECA, CLACDS (1999), "EL CORREDOR LOGÍSTICO CENTROAMERICANO: Un Salto Cualitativo en la Dotación de Servicios al Comercio Exterior de la Región", working paper CEN 204, Centro Latinoamericano de Competitividad y Desarrollo Sostenible de INCAE Business School, Alajuela, Costa Rica.

Trejos, A. (2005), "Bilateral and regional free trade agreements, and their relationship with the WTO and the Doha Development Agenda", *Global Economy Journal*, Vol. 5 No. 4, pp. 1-11.

Viner, J. (1950), *The Customs Union Issue*, Oxford University Press, Oxford.

Weeks, J. (1999), "Trade liberalisation, market deregulation, and agricultural performance in Central America", *Journal of Development Studies*, Vol. 35 No. 5, pp. 48-75.

Wilson, T., Lindberg, L. and Graff, J. (2014), "The competitive advantage of nations 20 years later: the cases of Sweden, South Korea and the USA", *Competitiveness Review*, Vol. 24 No. 4, pp. 306-331.

World Bank Group (2015a), "World development indicators", available at: http://databank.worldbank.org/data/views/variableselection/selectvariables.aspx?source=world-development-indicators (accessed 10 June 2015).

Further reading

Dür, A. Baccini, L. and Elsig, M. (2014), "The design of international trade agreements: introducing a new dataset", *The Review of International Organizations*, Vol. 9 No. 3, pp. 353-375.

International Bank for Reconstruction and Development (1972), "Report of the industrial finance mission to Central America: the common market and its future – volume I", Report No. PI-7a, International Bank for Reconstruction and Development, Washington, DC.

SIECA (2013), "Estado de Situación de la Integración Económica Centroamericana", available at: www.sieca.int/PortalData/Documentos/2F0F8962-DE35-4610-8BA1-56EE8A404D35.pdf (accessed 8 June 2015).

Willmor, L. (1976), "Trade creation, trade diversion and effective protection in the Central American Common Market", *Journal of Development Studies*, Vol. 12 No. 4, pp. 396-414.

World Bank Group (2015b), "World Integrated Trade Solution (WITS)", available at: http://wits.worldbank.org/WITS/wits/AdvanceQuery/RawTradeData/QueryDefinition.aspx?Page=RawTradeData (accessed 4 June 2015).

Corresponding author
Niels Ketelhöhn can be contacted at: niels.ketelhohn@incae.edu