

South-South and Triangular Cooperation in the Mexican Higher Education System

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Abstract

Academic collaboration in Mexico mainly follows a traditional pattern of North-South cooperation (primarily with the United States as well as some central European Union countries). Higher Education Institutions have also developed South-South cooperation in Latin and Central America and some are now exploring new opportunities in Asia, essentially with China, Japan and Korea. While there are fewer alternative schemes for student mobility, scientific exchanges or joint degrees, innovative opportunities have emerged. It is important to consolidate such initiatives in light of the Trump administration's position on migration that could negatively impact the current Mexican internationalisation model for higher education and research.

Key words: Higher education; academic collaboration; South-South cooperation; Mexico

La collaboration académique au Mexique suit principalement le schéma traditionnel d'une coopération nord-sud (principalement avec les Etats-Unis et quelques pays majeurs de l'Union Européenne). Les institutions d'enseignement supérieur ont aussi développé des coopérations sud-sud en Amérique centrale et latine, et certaines poursuivent aujourd'hui de nouvelles opportunités en Asie, essentiellement avec la Chine, le Japon et la Corée. Bien qu'il y ait peu d'alternatives à la mobilité étudiante, aux échanges scientifiques ou aux diplômes communs, des approches novatrices émergent. Il est important de renforcer de telles initiatives étant

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donné la position du gouvernement de Trump sur l'immigration qui pourrait avoir un impact négatif sur le modèle actuel d'internationalisation de l'enseignement supérieur et de la recherche au Mexique.

Introduction

Throughout the twentieth century, Mexican universities were involved in academic exchange with foreign institutions. They recruited Mexican professors with qualifications from other countries and incorporated them into their cohort of foreign scientists in situations of forced or voluntary migration. In the 1970s, the National Council for Science and Technology (CONACYT in Spanish) launched a programme offering scholarships for study abroad with the aim of strengthening capacity in postgraduate education and research. The North American Free Trade Agreement (NAFTA) between Mexico, the United States (US) and Canada (Barrow, Didou and Mallea, 2003) and the country's admission to the Organization for Economic Co-operation and Development (OECD) in 1994, entrenched outgoing student mobility as the central tenet of Mexico's higher education internationalisation policy. Over time, there has been a shift from internationalisation with an outward focus to an *in situ*, more comprehensive programme.

Nonetheless, in geographical terms, internationalisation mainly follows the traditional pattern of North-South cooperation (principally with the US and some central European Union (EU) countries, including Spain, Germany and France). However, the Mexican government's desire for the country to become a leader in higher education in Latin America and among developing countries as well as the need to comply with the numerous international and multilateral agreements it has signed creates openings for South-South cooperation (SSC) and triangular cooperation (TC).

In the university context, SSC programmes have enabled capacity development and knowledge circulation via networks and exchange of both academics and students. On bi- and multilateral as well as sub- and interregional scales, their achievements have depended on the geostrategic context and historical factors, the organisation of disciplinary areas, the identification of scientific topics of mutual interest, the availability of financial resources and the reputation of the academics involved.

This article identifies the organisations (governmental and non-governmental), Higher Education Institutions (HEIs) and networks at home and abroad that have promoted SSC in general and in the specific context of higher education and science. Our hypothesis is that, where favourable conditions existed at the global and national level, HEIs built networks and international knowledge chains in unconventional geographical spaces, based on shared disciplinary interests (for instance, agriculture or

health sciences). Within this framework, some countries served as poles of attraction. The article notes the importance of not only the commitments assumed by the partners to such agreements, but also the existence of core groups of academics that are able, due to their antecedents and their connections, to foster SSC and TC. In a context where the authorities and major players demonstrate a low level of commitment to these types of academic cooperation, individuals and small scientific teams play a major role in ensuring the success of such initiatives.

Legal and Operational Framework for SSC and TC in Mexico

SSC is “initiated, organized and managed by developing countries themselves; often, Governments play a lead role, with active participation from the public- and private-sector institutions, non-governmental organizations and individuals. It involves different and evolving forms, including the sharing of knowledge and experience, training, technology transfer, financial and monetary cooperation and in-kind contributions” (UNOSSC, 2016). On the other hand, TC is defined as the partnership “between two or more developing countries along with a third partner, typically a traditional resource partner and/or multilateral organization” (FAO, 2015). In 2012, Mexico was classified as a middle- to high-income country, and was a participant as well as a leader in SSC, at least in Latin America and the Caribbean (LAC). The country was party to 25 bilateral South-South horizontal cooperation projects and a bidder for 107 in LAC (SEGIB, 2014, matrix II.1). With regard to TC, the 2007-2013 Mexico-European Union Strategic Partnership for the Creation of a Common Higher Education Area linked Mexican HEIs to European universities and regarded the country as a key intermediary with the rest of the LAC (Sotillo and Bendelac, 2013).

This positioning reflects Mexico’s international prominence; the country is involved in the United Nations System, the OECD – as an observer in the Development Assistance Committee (DAC), the “Group of 20” (G-20), the Asia-Pacific Economic Cooperation Forum (APEC) and the Organization of American States (OAS). It participates in forums and multilateral organisations throughout Ibero-America or LAC including summits of the Organization of Ibero-American States (OEI), the Economic Commission for Latin America and the Caribbean (CEPAL) and the Community of Latin American and Caribbean States (CELAC) (Official Journal of the Federation, 2014). Mexico is also a member of MIKTA alongside Indonesia, Korea, Turkey and Australia.

The Mexican government enacted the Law on International Cooperation for Development in April 2011 to formalise its engagement in SSC and TC. The Mexican Agency for International Cooperation for Development (AMEXCID) a decentralised office of the Ministry of Foreign Affairs (SRE)

was tasked with the responsibility of coordinating SSC and TC initiatives in strategic areas, including those under the purview of universities. SSC takes the form of exchange of knowledge and experience, training, technology transfer, financial and in kind contributions, and identified good practice.

While the AMEXCID is responsible for the development of SSC or TC public policy initiatives, its website provides little data on programmes involving universities, with the exception of the Platform for Academic and Student Mobility of Pacific Alliance between Colombia, Peru, Chile, and México. The AMEXCID runs mobility programmes for inbound students at specialisation, masters and doctorate levels and provides financial aid for postdoctoral research placements for students from the Asia-Pacific region, the Middle East and Africa. However, quantitative data on these programmes is not available. Likewise, there is a shortage of information on the joint commissions for scientific and technical cooperation with either national or foreign partners which the AMEXCID coordinates (AMEXCID, 2012) as well as Memoranda of Understanding and bi- or multilateral agreements.

The fruits of university cooperation agreements, subsumed within general frameworks of action are thus, not easy to identify. In 2014, 3.1 percent of the AMEXCID global budget (288.6 MMD) was assigned to technical cooperation and 7.4 percent was set aside for Mexican government fellowships for foreign students interested in studying for a specialisation, master's degree or doctorate (AMEXCID, 2014). This was an increase from 2013, when technical cooperation and fellowships for foreign students received 1.8 percent and 3.6 percent of the budget, respectively. In that year, of the 255 approved initiatives, 15 fell under the Secretary of Public Education (SEP) but we ignore them if they concern higher education or compulsory education. The AMEXCID also channeled 3,348 scholarships, 2,314 to LAC citizens, 263 to North Americans, 534 to Europeans, 183 to Asians and 53 to scholars from Africa and the Middle East.

SSC and TC in the Higher Education Field

There is a paucity of research on SSC and TC in Mexico as a means of internationalisation of universities and the few studies that have been conducted mainly focus on academic mobility programmes (for the Pacific Alliance, Ramírez, 2014; Morales, 2015; for the Council of Universities in Central America (CSUCA in Spanish) and ANUIES, Marmolejo and Dettmer, 2006).¹

Data produced by the National Association of University and Higher Edu-

1. This program, sponsored by the Higher Council of Central American Universities (CSUCA) and ANUIES, is considered good SSC practice by AMEXCID.

cation Institutions (ANUIES in Spanish) and other sources (CONACYT) provide some insight into the development of SSC and TC in Mexico. Focusing on student mobility, scientific exchanges, agreements and joint programmes, these data show that South-South or triangular scientific exchanges are characterised by:

1. A low level of SSC. In 2014, of the 4,825 CONACYT postgraduate scholarship holders, only 1.4 percent studied in South America and 0.68 percent in Asia. Moreover, Africa “does not appear to be a destination region” for Mexican students (Patlani 2014:50). In contrast, 63.8 percent headed for the EU and 29.3 percent to the US.
2. The LAC is the primary region of origin for incoming students. In 2015, 79 percent of the 2,446 foreign CONACYT scholarship holders enrolled in an accredited postgraduate course hailed from this region (principally Colombia, Cuba, and Ecuador), while 2.6 percent came from Asia (India and China) and 0.85% from Africa (11 from Iran and 10 from Egypt) (Sánchez, 2015). Taking into account all levels of higher education and types of mobility, 37 percent of incoming students came from Europe, 28 percent from South America, 18 percent from North America, 7 percent from Asia and 2 percent from Oceania. Patlani (*op. cit.*, p. 51) notes that, “Africa does not reach a significant percentage (just 30 students), confirming the scant interest that Mexico holds for this region and... that Africa holds for our country”.
3. Growing interest among Mexican HEIs in offering English as a language of teaching and learning both to improve the linguistic competencies of their own students and to become more attractive to foreign students. Several public HEIs (Guanajuato, Coahuila, and Aguascalientes) offer degrees or subjects taught in English. Other universities are teaching Chinese, Japanese or Korean in a more systematic fashion in order to respond to demand from companies from these countries that are operating in their region (for example, Nissan). The Chinese agency for the teaching of Chinese, Hanban has opened five Confucius Institutes in México, four located in universities, since 2004.
4. A pattern of dependence on institutions from the North to educate national scientific elites. In January 2017, 26 percent of the international academics (Mexicans and foreign-born that graduated abroad) that were members of the National System of Researchers (SNI), the country’s most highly-recognised researchers, graduated in the US, Spain, France, Germany and the United Kingdom (UK). Very few had studied in Asia or other LAC countries and none in Africa.
5. The LAC as well as Spain is an important recruitment ground for foreign scientists. In 2013, of the 2,385 SNI members born abroad, 38.5 percent were from the LAC, 4.8 percent from Asia (overwhelmingly

India, China and Japan) and only 1.1 percent from Africa, chiefly the Maghreb.

6. Cooperation agreements are mainly oriented toward Europe and some LAC countries. Of CONACYT's 37 bilateral agreements in 2016, 19 were concluded with European institutions, 10 in Latin America (Argentina, Brazil, Chile, Colombia, Cuba, Peru and Venezuela), seven in Asia (India, People's Republic of China, Korea, Japan and Vietnam), one in the US and none in Africa. Although CONACYT does not have a unit dedicated to SSC or TC, it issued a joint call with India offering placements for researchers in the fields of water, biotechnology, seismology and solar energy with the aim of creating disciplinary networks.
7. A bias towards Europe in terms of joint programmes and co-tutoring. Although Mexico has no national register of these types of certification, an exploratory study indicated that the principal partners are Spanish, French and German institutions, followed by Latin American ones. Some Asian institutions have cooperated with their Mexican counterparts, but there are few formal agreements (Didou and Fazio, 2014).

Under the auspices of government organisations or associations, SSC mainly fosters the international circulation of researchers and students. Mexico's positioning within this cooperative framework is relevant in LAC, and is emerging in Asia, but is virtually non-existent in Africa. In relation to LAC, the overlap of different strata of scientific migrants (political exiles from the 1970s and 1980s and, more recently, economic refugees with different career paths and degrees of recognition within their disciplines) strengthens networks to sustain transgenerational mobility and frame shared research projects. Support programmes financed by both sender and receiver countries played an important role in increasing SSC. Students' interactions with senior academics in the countries where they are placed as well as the cultural and financial interest shown by countries such as China and Japan in Mexican society and the offer of English courses in non-Anglophone countries, were also key factors.

Other drivers of SSC and particularly TC programmes have been cooperation agencies set up by foreign governments, diplomatic services provided by embassies and philanthropic foundations, principally North American and Asian. Since the 1950s, the Rockefeller Foundation (in Agriculture, Jiménez Velázquez, 1990), and the MacArthur and Kellogg Foundations (in Health, Ruelas, 1991) have funded research teams, disciplinary areas and even centres to promote the sharing of skills and knowledge in key developmental areas, such as food self-sufficiency. The International Maize and Wheat Improvement Center (CIMMYT in

Spanish) officially inaugurated in Mexico in 1966 during the Green Revolution has its origins in a cooperation agreement signed in 1943 between the Mexican Government and the Rockefeller Foundation to improve agricultural production. Today, the CIMMYT is involved in projects with 20 African countries and has offices in Ethiopia, Kenya and Zimbabwe as well as an alliance with Mozambique. In Asia, it has offices in Australia, China, India, Nepal, Iran, Turkey, Pakistan, Kazakhstan and Bangladesh and in LAC it has a regional office in Colombia and alliances with Brazil and Bolivia.

Foreign foundations have also supported South-South mobility, mainly for socially vulnerable groups (women and/or indigenous people). The Ford Foundation's International Fellowship Program (IFP) awarded scholarships to indigenous postgraduate students at overseas universities in the same linguistic zone, enabling them to study in Spain, Chile and Costa Rica (Navarrete, 2013). Korean, Chinese and Japanese foundations funded research projects, virtual or innovative language teaching, disciplinary networks and events focusing on Mexico and the rest of Latin America. Calls by European bilateral cooperation agencies (DAAD in Germany and AECID in Spain) and the EU for research and exchange programmes facilitated the creation of networks within a TC framework.

Research bodies specialising in development issues turned to TC as a means to organise fieldwork in a participative and comparative manner. From 2008 to 2011, the Institute for Research and Development (IRD), a French research organisation with branch offices in LAC, Africa and Asia funded the Afrodesc initiative between Mexico, France and the Caribbean involving one Colombian, three Mexican and three French universities. The Autonomous University of Barcelona created the Latin African and Latin American Research Groups network (GRAAL) for public health in order to address North-South research domination and the lack of transversal cooperation between LAC. Mexico participated through ECOSUR, a quality research centre located in Chiapas, a state with one of the country's lowest levels of human development.

A comparison of the models adopted by national and foreign bodies to structure SSC and TC reveals that Mexico favours the use of instruments to support the individual mobility of students and scientists as a first step prior to the creation of networks and teams to work on topics of shared interest.

In contrast, external donors first establish support mechanisms (financial and/or organisational) in priority areas and topics, then call for proposals and initiate the selection and administrative procedures necessary to run them. While one model seeks to improve individual academic competencies via international mobility, the other aims to develop insti-

tutional capacity through cooperation. In both, scientific teams carry out projects including research on developmental issues (health, agriculture, environment, energy, food) or social and economic problems (poverty and vulnerability, discrimination, gender) in collaboration with foreign colleagues interested in the same topics but approaching them from different backgrounds.

Mexican Institutional Cores and Networks in Latin America, Asia and Africa

Given that SSC promotes horizontality and self-management of projects at different levels, it is important to identify the Mexican HEIs and networks that have cooperation projects with countries in Latin America, Asia, and Africa as a result of their disciplinary specialisation. The focus here is on institutional cores that launch cooperation initiatives. They bring together specialists from regional blocs to foster agreements, foreign academics' visits to Mexico and from Mexico abroad, student exchange, events and publications. The level and continuity of the network activities and the institutional capacity achieved differ according to regional context.

Latin America

The main zones in which Mexico participates in SSC and TC programmes are LAC and, particularly, Central America (Figueroa Fisher, 2016). Mexican HEIs offer a temporary home to numerous academics and researchers from the Southern Cone, Central America, Cuba and Haiti. Their shared historical-cultural matrix and Mexico's active promotion of regional integration have resulted in a decades-long flow of ideas and people across the region. The pool of expertise on the region is considerable and educational opportunities are numerous. CONACYT noted that 22 masters and 24 doctoral courses in various branches of Latin American Studies were offered at public and private universities and research centres in 2015. Moreover, 14 HEIs were home to one or more centres conducting research in fields of special interest to the region.

In addition to the Platform for Academic and Student Mobility of Pacific Alliance, the AMEXCID offers postgraduate scholarships in the sciences and engineering from the Organisation of American States (OAS) (with a quota of 17 percent for Central Americans), a programme specifically for Haiti, and another for Mesoamerica, which support the exchange of knowledge and experience in some sectors (among them Education). This programme fits with the Mexican orientation towards Central America to foster development capacity and address joint problems such as illegal migration or local/transnational mafias (for instance, "maras").

Within this framework of potential opportunities, there are asymme-

tries in the flows of outgoing and incoming scholars. Furthermore, despite its complex system of quality assurance, Mexico fails to attract foreign students from LAC countries such as Brazil and Ecuador that have ambitious scholarship programmes for postgraduate students and academics but are more interested in sending them to the United States, Portugal, Spain and France. Experiences of successful collaboration have essentially promoted short-term internationalisation, based on temporary mobility at undergraduate level.

Asia and the Pacific Basin

Mexico was a pioneer in the LAC in launching public research and training programmes devoted to Asia. With funding from UNESCO and the Mexican Government, in 1964, the College of Mexico (COLMEX) created the Center for Oriental Studies (the forerunner of the current Center for Asian and African Studies (CEAA)). The National Autonomous University of Mexico (UNAM), the largest in the country, established a similar centre in 1966 (Toledo, 1997). During the 1990s and 2000s, both public and private universities inaugurated centres, departments or research and/or academic programmes focused on countries in Asia (Japan, Korea, China, India) or its sub-regions (Pacific Basin, Asia-Pacific). Thanks to this institutional scaffolding, Mexico is an attractive destination for scientists and professionals in research, diplomacy and business in the LAC.

The Universities of Colima, Baja California Sur, Guadalajara, Veracruz and Michoacán, and the Monterrey Institute of Technology and Higher Studies (ITESM) Guadalajara Campus are home to centres for studies for the forum, Asia-Pacific Economic Cooperation (APEC) and together make up the Mexican Consortium of APEC Studies Centers (CONMEX-CA), established in 2003 as the national branch of the international consortium (Falck, 2004, p. 2).

The research centres and the APEC centres bring together specialised academic staff that conducts studies from an historical, international relations or economics perspective. Academics at other institutions like the Metropolitan Autonomous University (UAM), and the College of Michoacán focus their research on countries throughout the region. The National Autonomous University of Mexico (UNAM) recently hosted a seminar for centres, groups and individual specialists working on Asia to create a collective network.

Table 1. Centres and Programmes on Asia in Mexico, 2015

Institution	Organisational Structure	Date of establishment	Levels	Journal
Public				
College of Mexico	Center for Asian and African Studies*	1964	Master's and PhD	Estudios de Asia y África
UNAM	Institute of Philological Studies		Diploma in Asia and Pacific Studies	
	China México Study Center (Faculty of Economics)	2006		
University of Guadalajara	Dept. of Pacific Studies	1990	Master's in Social Sciences with terminal in international and Pacific Studies	México y la Cuenca del Pacífico
Universidad de Colima	University Center for Pacific Basin Studies and Research	1989	Doctorate	Portes
Veracruz University	China-Veracruz Center for Studies	2009		
Autonomous University of Nuevo León	Center for Asian Studies	2006	Diplomas and qualifications	Boletín Asia en Breve
Autonomous University of Nayarit	Korean Studies Program	2013	Undergraduate degree	
Private				
ITESM-Guadalajara	Center for Asian Studies	2004	Master's and diplomas	
ITAM	Asia-Pacific Studies Program (Department of International Relations)			
Asia-Pacific University of Culiacán, Sinaloa		2002	Master's in Overseas Trade with Asia-Pacific, diplomas and undergraduate degrees	
Autonomous University of Guadalajara	Center for Asian and Latin American Studies			

APEC Studies Centers				
UMSNH	Institute of Economic and Business Research			
ITESM-Guadalajara				
Autonomous University of Baja California Sur				
University of Colima				
University of Guadalajara				
University of Veracruz				

Source: Websites for each centre

Mexico's rich capacity in terms of academic specialists and their participation/leadership in international networks², has resulted in the country producing a significant portion of the books, articles, expert reports and journals in Spanish on historical, economic, social and current developments in Asia that are produced in LAC. It is one of the most active countries in the framework of regional SSC with Asia, alongside Brazil, Peru and, more recently, Colombia.

On the other hand, a cursory examination of the projects and agreements in general reveals disparities in academic and scientific cooperation depending on the parties involved. Although China, Japan and, to a lesser extent, India have shown some interest – which is growing in accordance with these countries' increased foreign investment in Mexico, this is not the case for other countries (including Vietnam, Laos, Myanmar, Cambodia, the Philippines, and Indonesia). To diversify and scale up university and scientific SSC and TC, it is essential to identify areas of common interest, institutional capacity and reciprocal interests of individuals for shared research. It is vital to evaluate the achievements of inter-institutional, bilateral and regional collaboration programmes as well as the diplomatic initiatives undertaken by countries such as Malaysia, Taiwan or Thailand

2. Notably the Latin American Association for Asian and African Studies (ALADAA) based at the Ibero-American University in Mexico City; the Latin American Asia-Pacific Studies Network (REDALAP), initially operating under the auspices of the Latin American Economic System but thereafter the Inter-American Development Bank, the Ibero-American Network for Research in East-Asia Studies (REDIAO) based at the Autonomous University of Madrid; the Conferences on Asia-Latin-America-Europe Triangulation held by the Spanish Casa Asia and financed by the Korea Foundation; and the Latin America Asia-Pacific Observatory, sponsored by CEPAL, ALADI and CAF.

to foster cooperation and the mobility of students and academics with Mexico.

In the case of Asia, the formal forerunners of SSC and TC date back to the 1960s, but have been invigorated over the past decade by the scientific diplomacy of Asian-Pacific governments and Chinese investment. While HEIs have mainly concluded agreements with national epicentres, the overall context is promising; national public policies and those of their partners and cooperation agencies are generating stronger opportunities and more diversified and innovative approaches to regional cooperation.

Finally, it is worth noting that Mexican research on China and growing interest among students in learning about that country are linked to their assumed pragmatic value attributed to national policies on SSC and TC (Illán, 2011) and the historical economistic nature of research on Asia in Mexico (Toledo, *op cit*). This explains the increasingly active role of private HEIs in this field. The ITESM, a private institution related to business groups, was the first Mexican educational establishment to open offices in Shanghai and Beijing. In 2011, the University of Veracruz opened a Center for Mexican Studies in Chongqing to promote language learning, international exchange and bilateral commercial flows (Bermúdez, 2011). In 2012, the UNAM created the Center for Mexican Studies in China in collaboration with the Beijing University of Foreign Studies. In 2014, the Autonomous University of Nuevo Leon (UANL) opened a branch office in Shanghai. Moving in the opposite direction, in 2015, the University of Fudan in China announced the creation of a Research Center for Studies on China and Latin America at the ITESM.

Africa

Few centres and networks in Mexico specialise in African Studies. The College of Mexico's CEAA has an African studies area and offers languages programmes; it is the most visible and institutionalised core for the production of knowledge on this continent and the training of specialists. The faculty comprises of nine researchers and language teachers with specialisations in the region. The Center for Economic Research and Teaching (CIDE in Spanish), in collaboration with the ITESM, Santa Fe Campus, the College of Mexico and the UNAM Faculty of Political and Social Sciences, organises an Arab week in Mexico. Researchers from a number of private and public Mexican HEIs (COLMEX, CIDE, University of the Americas at Puebla, Ibero-American University, University of Monterrey, Latin American Faculty of Social Sciences (Flacso in Spanish), UNAM, and UAM) belong to an interdisciplinary network for research on Latin America and the Arab World (RIMAAL). The Latin American Council for the Social Sciences (CLACSO), a non-governmental academic association based in

Argentina with regional scope, fosters South-South cooperation between its members and, within this framework, links its Mexican partners (69 in 2015) with 29 networks and research centres in Africa and seven in the Middle East through scholarship programmes, seminars and other academic activities. In 2008, it ran a bi-regional cooperation programme between Latin America and Africa and another for trilateral academic cooperation between Asia, Africa and Latin America (Buffa, 2008:348). In 2015, it announced the entry of two members (Lebanon and Palestine) and the possible incorporation of research centres in Morocco, Tunisia, Senegal, India, South Africa, China, Japan, the Philippines, Korea and Vietnam.

In 2017, the UNAM announced its interest in strengthening its research capacity on Africa. In January 2017, the AMEXCID launched a programme, "Exporting Mexican technical expertise to Africa". It focuses on food sustainability, health, agriculture, evaluation of policies for poverty alleviation, water technology and the environment in Kenya, South Africa, Palestine, Namibia, Egypt, Ghana, Iran, Malawi, and Ethiopia. Three research centres and universities (UNAM, University of Guadalajara, CYMMIT) and other governmental and non-governmental bodies have come on board (AMEXCID, 2017).

The institutional dispersion of the few academics specialising in Africa and the fact that they are based in centres covering a wide range of economic or international issues makes it difficult to identify them. A register of who is who, and who does what and where³ would make it possible to design and support bilateral or multilateral programmes for strategic SSC and TC cooperation between Mexico and Africa. Given the current lack of information, it is also not possible to offer a systematic diagnosis of the situation and the barriers and opportunities.

In sum, in Latin America, Central America and the Caribbean, the development of SSC and TC inside the region and in Asia is inseparable from Mexico's regional leadership. That not the case in relation to Africa, where there is currently very little cooperation; Brazil and Colombia (linked to the historical phenomenon of slavery) and Cuba (for geo-strategic and political reasons) are much more proactive on this continent. Mexican SSC and TC initiatives are essentially linked to the regional/subject specialisations of HEI and networks; that is, within area studies or discipline-specific research. Academic projects frequently rely on resources from European or US foundations, foreign agencies, non-governmental organisations (NGOs) or research centres, which, consequently, determine the collaborative agenda.

3. See, as an attempt to constitute an academic pool of specialists, the programme of the colloquium organised in January 2014 by UAM-Iztapalapa "Asia and Africa: an historical perspective" : <http://www.h-mexico.unam.mx/node/13103>

Some Findings on SSC and TC in the Field of Higher Education

Active SSC and TC counterparts on the Mexican side are essentially public universities plus a small number of private institutions, although cooperation agencies such as the Japan International Cooperation Agency (JICA) and the Korea Foundation occasionally involve technological institutions. All these organisations support cooperative initiatives, principally in regions with outward foreign direct investment and overseas suppliers and companies.

In isolated cases, some South-South cooperation agreements link non-conventional HEIs as intercultural universities with their foreign counterparts on social or commercial topics (for instance, between the University of Malaysia and the Intercultural University of Mexico State for the resuscitation of indigenous knowledge in the medical sciences or in linguistics). Nevertheless, in general, SSC and TC favour traditional universities with strong experience of internationalisation rather than promoting innovative inclusion of the more recent crop.

From a research perspective, SSC and TC experiences in higher education and science need to be systematically compiled. From a political perspective, a pending issue is that of securing the means to ensure that the programmes endure, pursuing lines of continuity that will enable them to become more relevant for institutional consolidation strategies. For the time being, SSC and TC represent a ‘plus’ for universities that have already accumulated strong capacity for international projection rather than functioning as an alternative option for cooperation, with its own logic and spaces. This situation, together with a level of financial insecurity, limits their effectiveness (OECD, 2011). Another issue concerns the consolidation of approaches to cooperation that will make it possible to implement alternative internationalisation activities as part of academic co-consolidation projects. In line with this objective, it will be important to address the institutional problematics of endo-colonialism, mainly in relation to academic evaluation mechanisms and budgets and financial resources. In Mexico, it is much easier to access funds for scientific research and exchange programmes with developed countries than for SSC and TC.

Finally, SSC and TC need to be used more effectively to address the dominance of HE internationalisation in relation to the US. In 2014, the US was the destination of 51.8 percent of outgoing Mexican students, higher than the average percentage of LAC students (33 percent) and of global international students (19.5 percent) (UNESCO, 2016). A strategy is required to improve the scope and the efficiency of SSC and TC to provide solutions to excessive concentration and regional dependency, promoted by “malinchismo” as theorised by Samuel Ramos and Octavio Paz, since the 1930s. In light of this, it is important to take into account emerging

debates on the possibilities of “the South” and the “Global South” to overcome knowledge dependency and foster poles of disciplinary excellence in training and research by way of strategic investment in centres of excellence at national and macro regional levels.

Conclusion: Dealing with the Trump Administration and Seeking Alternatives

However, in 2017, the main urgency is no longer intellectual but political. Since the coming to power of Donald Trump in the US, Mexican HEIs have confronted renewed pressure in the form of new migration laws against terrorism. These decisions affect illegal residents and could cause return migration to Mexico due to personal reasons, the termination of scholarships, cancellation of resident permits and deportation orders. If the Trump administration scraps the *Dreamers Program*, which, during the Obama administration, enabled thousands of unauthorised immigrants who had been brought to the US at a young age, to attend schools and universities without the threat of deportation, Mexican HEIs will have to cope with a massive inflow of students of Mexican origin from the US.

On the other hand, uncertainty with regard to the future of the Continental Student and Academic Mobility Program “100 000 Strong in Americas” could result in Mexican HEIs targeting alternative opportunities to send their students abroad for temporary and long-term stays and to attract foreign ones. In 2014-15, Mexico sent 17,052 students to the US, putting it in 10th place in terms of country of origin for students in the US. In turn, it received 4,445 students from the US (Open Doors, 2016). To achieve more geographically dispersed student mobility, Mexican HEIs will have to build bridges for academic cooperation. This could involve enhancing traditional patterns of cooperation (with Spain, France and Germany) and boosting LAC initiatives with selected counterparts (Brazil, Argentina, Chile, Colombia, Costa Rica, and Cuba) on the basis of peer-to-peer exchanges or reinforcing cooperation with Asian and some Arab countries, in SSC and TC frameworks. For instance, in 2015, the CONACYT hosted the second Mexican-Turkish workshop on Science and Technology that aimed to identify bilateral research projects in Health, Nano-technologies and Energy (Monitor Universitario, 2015).

Academics and university students will probably not be the most important groups among the returnees; while the educational level of Mexican migrants is growing, it remains lower than those of citizens from other LAC countries. Nonetheless and notwithstanding a lack of information on the exact number and trends in student and academic return migration, it is evident that Mexican universities will have to deal very quickly with the impacts. The principal issues are organisational (reception conditions,

capacity to mentor students from low-income backgrounds), administrative (recognition of credits) and intercultural. Mexican universities are not well-versed in managing cultural diversity; this will render it difficult for them to meet the needs of young returnees, many of whom are more American than Mexican in cultural terms, and to inculcate a sense of patriotic or national belonging.

Massive protests marches against Trump's decisions, political discourses and individual university statements denouncing what is perceived as an outrage have been witnessed in Mexico as well as the US. In February 2017, the UNAM presented a seven-point action plan for the reception of deported or returnee Mexican students. The Union of Latin American Universities (UDUAL) convened a meeting of nine public and private Mexican universities to decide on a collective approach. Many challenges lie ahead in relation to institutional governance (Acosta et al., 2016), educational cooperation and capacity to learn significant lessons. At the same time, the situation offers opportunities for innovation and for exploring complementarities in order to move away from the current asymmetric cooperation and create new knowledge and more sustainable exchange networks.

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