



## Monitor of Chinese Infrastructure in Latin America and the Caribbean 2023

July 2023  
Enrique Dussel Peters<sup>1</sup>

The current fourth annual version of the *Monitor of Chinese Infrastructure in Latin America and the Caribbean*—hereinafter referred to as the *Monitor*—is contextualized within a complex international environment considering specific aspects related to infrastructure in Latin America and the Caribbean (LAC) and linked to the People’s Republic of China. These aspects are briefly analyzed in the first section of the *Monitor*, while the more substantive part of the document deals with China’s infrastructure projects in LAC for the period 2005-2022 using the database prepared by the Latin American and Caribbean Academic Network on China (Red ALC-China); it includes variables such as the number of infrastructure projects by year and period, project amounts, employment generated, destination country in LAC, as well as other characteristics linked to the ownership and geographic origin of the Chinese company that has carried out each project.<sup>2</sup>

As in previous versions of the *Monitor*, readers and analysts are invited to take advantage of the databank used and conduct more in-depth analyses by country and/or company, with emphasis on employment according to the location in China of the company carrying out infrastructure projects in LAC, for example. We also invite you to review previous versions of the *Monitor* in which the results are compared with other statistical sources. In order to allow a brief and agile analysis, the same aspects are not repeated in each version of the *Monitor*.

### 1. Conceptual Framework and International Context of China’s Infrastructure Projects in LAC

For the *Monitor*, a clear definition of the infrastructure projects that were actually carried out (and not just announced) has been fundamental from its first version: “*An infrastructure project is understood as a service between a client and a supplier through a contract—usually the result of a bidding process, although the process can be by direct designation—*

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<sup>1</sup> The document benefited from the valuable assistance of Ximena Álvarez Razo, Erick Hernández Camarena, Salvador Ramos Trueba, Daniela Rosas Luna and Alma Sevilla Ríos; the coordination of these efforts was carried out by Leire González Alarcón. The author is solely responsible for the content.

<sup>2</sup> The document in Spanish, Chinese and English, as well as information on each of China’s infrastructure projects in LAC up to 2022, are available on the LAC-China Network portal: <https://www.redalc-china.org/monitor>.



*in which the ownership belongs to the client*” (Dussel Peters 2021:2). The definition of infrastructure projects entails their differentiation with outward foreign direct investment (or OFDI), regardless of their financing. The results of the *Monitor of Chinese OFDI in Latin America and the Caribbean 2023* are complementary to those presented here.

Six aspects seem to us important for understanding the performance of Chinese infrastructure in LAC that will be covered in the following chapter.

First, the significant oscillations in global economic growth and in the economies of LAC in the last five years. According to the IMF (2023), after the drastic drop in the region’s GDP of -6.8% in 2020, it rebounds to 7% in 2021, declines to 4% in 2022 and is estimated to drop again to 1.6% of GDP in 2023; this performance is identical for the region’s major economies.

Second, also in light of international anti-inflationary measures and in all LAC countries, international interest rates increased rapidly during 2021-2023, generating budgetary pressures to service their external and domestic debt; among the effects are a significant reduction of indebted economies in public financing to address climate change, infrastructure projects and the social budget (CCSI 2023; UNCTAD 2022/a). As a result, the fiscal margin for financing infrastructure projects has been significantly reduced, in addition to the increase in the cost of financing for new projects (CCSI 2023; UNCTAD 2022/b/c).

Third. The ability to build knowledge for contract negotiation in infrastructure projects has been recognized as a critical aspect for developing countries with respect to multinational companies (Sauvant, Tsang and Wells 2023). Nowadays, it is increasingly complex to be able to make changes in the contracts originally signed (due to the existence of international arbitration and investor-state dispute settlement). The proper definition of contracts—which affect areas such as financing, technologies, prices, construction, labor and environmental commitments and contract termination—requires significant technical, updated and international knowledge that the public sector rarely manages to accumulate. The sum of the experiences of the public sector with national and international institutions and consultants is fundamental for the creation of international groups that will negotiate with the companies responsible for the infrastructure projects; monitoring the implementation of contracts is no less important (Sauvant, Tsang and Wells 2023:2).

Fourth, and also as a result of the effects of the COVID-19 pandemic, developing countries will require significant budgets, particularly in infrastructure, to weather future crises; ports and the digital economy are some of the items highlighted in this point (UNCTAD 2022/b/c).

Fifth, Chinese companies’ overseas employment fell by -28.37% by October 2022 from the previous year; the total number of Chinese workers working overseas accumulated 551,000 by October 2022 (Mofcom 2023). The performance reflects for 2022 a significant downward



trend, beyond the continued technological development of Chinese companies specializing in infrastructure.<sup>3</sup>

Sixth, LAC's infrastructure challenges are enormous. In previous versions of the *Monitor* (Dussel Peters 2021) it was highlighted based on sources such as the Economic Commission for Latin America and the Caribbean (ECLAC) that LAC should invest around 5% of GDP—and up to 6.2% according to the same source—in infrastructure, although it was barely 2% for the most recent period 2015-2019 (Dussel Peters 2021). Other recent studies (Brichetti et al. 2021) estimate that the COVID-19 pandemic and other regional and international events resulted in LAC investment in water and sanitation being 1.8% of GDP during 2008-2018 and should represent 3.12% of GDP, i.e., until 2030 the infrastructure gap in the region is very significant and amounts to around US\$2,220,740 million, especially in the areas of roads (33.26% of the total), energy generation and transmission (21.95%), access to sanitation and water (16.08%) and access to telecommunications (13.22%). Fifty-nine percent of the budget should be allocated to new infrastructure and 41% to maintaining existing infrastructure (Brichetti et al. 2021).<sup>4</sup>

## **2. Main results of Chinese infrastructure projects up to 2022**

The 228 infrastructure projects carried out by China in LAC accumulated \$104,185 million dollars during 2005-2022 and generated more than 721,000 jobs; on average, each project generated 3,164 jobs and \$457 million dollars, indicating that in general these are large-scale projects. Table 1 shows, additionally, that in 2021 and 2022 the number of projects was unchanged, although with a significant downward trend in the amount of projects and employment generated: in 2022, for example, the amount per project in LAC was only \$206 million dollars and generated 291 jobs on average, well below historical averages. However, the 2020-2022 period—particularly in view of the performance in 2022—continues to reflect the significant growth of Chinese infrastructure projects in LAC with 90 projects that accounted for 39.47% of the projects during 2005-2022, as well as 36.89% of the amount and 24.47% of the employment generated. Based on the analysis in the previous section, it is expected that in the short term the dynamics of China's infrastructure projects in LAC will

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<sup>3</sup> Moreira's (2023) analysis is a valuable contribution for understanding the technological scaling of Chinese companies in infrastructure that are focused specifically on telecommunications equipment.

<sup>4</sup> ECLAC itself (Salazar-Xirinachs 2023; Sánchez et al. 2017) and the IDB (Mendes Constante et al. 2023) have highlighted the enormous potential of infrastructure projects in LAC, both to meet the 2030 Agenda for Sustainable Development and for their positive social and economic effects.



be less dynamic than in previous periods due to the above-described international and regional macroeconomic aspects.

Table 1  
Latin America and the Caribbean: Chinese infrastructure projects (2005-2022)

	Number of infrastructure projects (1)	Amount (million of US\$) (2)	Employment (number of employees) (3)	Amount (2) / project (1)	Amount / employment (2) / (3)	Employment (3) / project (1)	Projects (1), share	Amount (2), share	Employment (3), share
2005-2009	10	1,533	21,367	153	0.07	2,137	4.39	1.47	2.96
2010-2014	43	25,423	168,524	591	0.15	3,919	18.86	24.40	23.36
2015-2019	85	38,799	355,043	456	0.11	4,177	37.28	37.24	49.21
2020-2022	90	38,430	176,536	427	0.22	1,962	39.47	36.89	24.47
2005-2022	228	104,185	721,470	457	0.14	3,164	100.00	100.00	100.00
2018	15	3,535	21,753	236	0.16	1,450	6.58	3.39	3.02
2019	41	20,297	253,586	495	0.08	6,185	17.98	19.48	35.15
2020	30	24,611	147,556	820	0.17	4,919	13.16	23.62	20.45
2021	30	7,626	20,244	254	0.38	675	13.16	7.32	2.81
2022	30	6,193	8,736	206	0.71	291	13.16	5.94	1.21

Source: own elaboration based on *Monitor*.

Table 2 provides an analysis of China's infrastructure projects in LAC by country and subregion up to 2022. It stands out that the diversification of China's infrastructure projects in LAC emphasized in previous versions of the *Monitor*—considering the predominance of Brazil—, has intensified in 2022 and during 2020-2022 (Table 2). For 2020-2022, Mexico became the top recipient of infrastructure projects from China (with 9 projects in 2022) and Bolivia the top recipient based on the amount of projects in 2022 (with \$2.704 billion). For the 2020-2022 period Argentina was the top recipient by project amount (with 37.63% of the LAC total), followed by Brazil (16.06%), Chile (13.71%) and Mexico (10.13%). Employment generation per project also varies significantly by country for 2020-2022: in Peru it was 271 jobs, in Mexico 959 and it increased to 4,756 jobs per project on average for Brazil; Brazil captured 43.11% of the employment generated by Chinese infrastructure projects in 2020-2022. The decline of Chinese infrastructure projects in Venezuela has been noticeable since 2017.



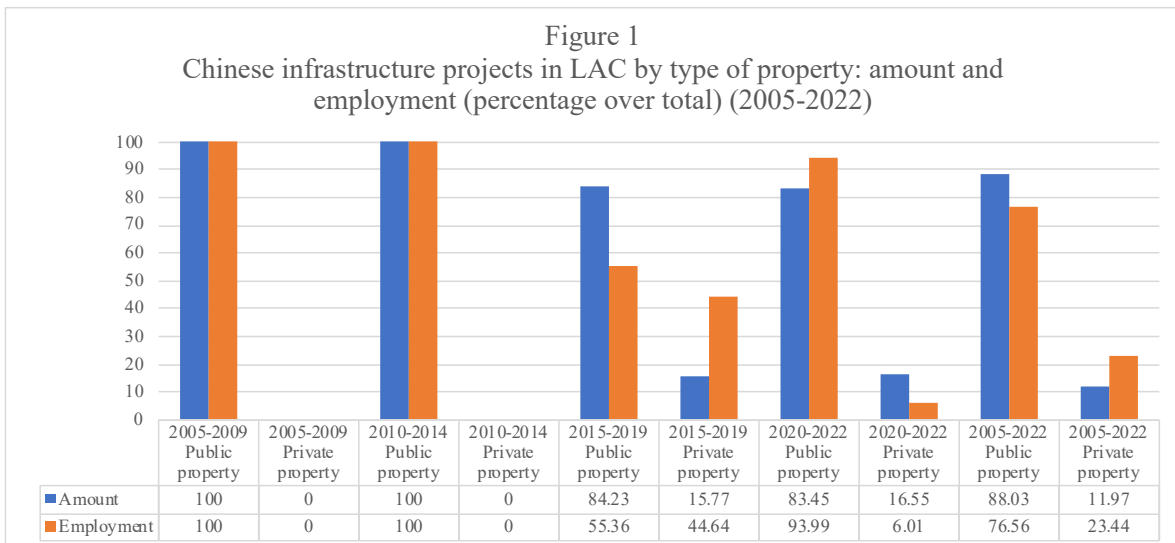
Table 2  
Latin America and the Caribbean: Chinese infrastructure projects by main countries and group of countries (2005- 2022)

	2005-2009	2010-2014	2015-2019	2020-2022	2005-2022	2018	2019	2020	2021	2022
<b>TOTAL</b>										
Number of infrastructure projects (1)	10	43	85	90	228	15	41	30	30	30
Amount (million of \$US) (2)	1,533	25,423	38,799	38,430	104,185	3,535	20,297	24,611	7,626	6,193
Employment (number of employees) (3)	21,367	168,524	355,043	176,536	721,470	21,753	253,586	147,556	20,244	8,736
Amount (2) / project (1)	153	591	456	427	457	236	495	820	254	206
Amount / employment (2) / (3)	0.072	0.151	0.109	0.218	0.144	0.163	0.080	0.167	0.377	0.709
Employment (3) / project (1)	2,137	3,919	4,177	1,962	3,164	1,450	6,185	4,919	675	291
<b>Argentina</b>										
Number of infrastructure projects (1)	0	2	17	10	29	3	6	7	3	0
Amount (million of \$US) (2)	0	3,090	9,040	14,461	26,591	1,275	790	14,318	143	0
Employment (number of employees) (3)	0	4,540	27,229	42,030	73,799	4,119	4,400	41,730	300	0
Amount (2) / project (1)	--	1,545	532	1,446	917	425	132	2,045	48	--
Amount / employment (2) / (3)	--	0.681	0.332	0.344	0.360	0.310	0.180	0.343	0.477	--
Employment (3) / project (1)	--	2,270	1,602	4,203	2,545	1,373	733	5,961	100	--
<b>Bolivia</b>										
Number of infrastructure projects (1)	1	7	8	7	23	1	2	1	1	5
Amount (million of \$US) (2)	44	1,479	3,737	3,167	8,427	188	655	253	210	2,704
Employment (number of employees) (3)	0	3,241	34,130	4,100	41,471	2,210	6,800	400	1,000	2,700
Amount (2) / project (1)	44	211	467	452	366	188	327	253	210	541
Amount / employment (2) / (3)	--	0.456	0.109	0.772	0.203	0.085	0.096	0.633	0.210	1.001
Employment (3) / project (1)	--	463	4,266	586	1,803	2,210	3,400	400	1,000	540
<b>Brazil</b>										
Number of infrastructure projects (1)	2	4	11	16	33	4	3	5	8	3
Amount (million of \$US) (2)	669	2,020	7,322	6,173	16,184	1,156	2,764	5,100	954	119
Employment (number of employees) (3)	7,350	57,726	43,411	76,098	184,585	3,804	18,303	66,372	6,726	3,000
Amount (2) / project (1)	335	505	666	386	490	289	921	1,020	119	40
Amount / employment (2) / (3)	0.091	0.035	0.169	0.081	0.088	0.304	0.151	0.077	0.142	0.040
Employment (3) / project (1)	3,675	14,432	3,946	4,756	5,593	951	6,101	13,274	841	1,000
<b>Chile</b>										
Number of infrastructure projects (1)	0	0	5	10	15	1	2	3	3	4
Amount (million of \$US) (2)	0	0	737	5,268	6,005	8	509	473	3,851	944
Employment (number of employees) (3)	0	0	5,905	6,140	12,045	209	4,826	1,837	3,068	1,235
Amount (2) / project (1)	--	--	147	527	400	8	255	158	1,284	236
Amount / employment (2) / (3)	--	--	0.125	0.858	0.499	0.039	0.106	0.257	1.255	0.764
Employment (3) / project (1)	--	--	1,181	614	803	209	2,413	612	1,023	309
<b>Colombia</b>										
Number of infrastructure projects (1)	0	0	3	7	10	1	2	2	5	0
Amount (million of \$US) (2)	0	0	5,163	1,966	7,129	652	4,511	1,417	549	0
Employment (number of employees) (3)	0	0	26,742	16,437	43,179	9,624	17,118	14,100	2,337	0
Amount (2) / project (1)	--	--	1,721	281	713	652	2,256	709	110	--
Amount / employment (2) / (3)	--	--	0.193	0.120	0.165	0.068	0.264	0.100	0.235	--
Employment (3) / project (1)	--	--	8,914	2,348	4,318	9,624	8,559	7,050	467	--
<b>Ecuador</b>										
Number of infrastructure projects (1)	0	10	9	2	21	0	4	0	0	2
Amount (million of \$US) (2)	0	5,393	3,162	222	8,777	0	2,234	0	0	222
Employment (number of employees) (3)	0	64,774	17,552	1,091	83,477	0	5,873	0	0	1,091
Amount (2) / project (1)	--	539	351	111	418	--	559	--	--	111
Amount / employment (2) / (3)	--	0.083	0.180	0.204	0.105	--	0.380	--	--	0.204
Employment (3) / project (1)	--	6,477	1,950	546	3,972	--	1,468	--	--	546
<b>Jamaica</b>										
Number of infrastructure projects (1)	1	4	1	1	7	0	1	1	0	0
Amount (million of \$US) (2)	65	1,289	353	134	1,841	0	353	134	0	0
Employment (number of employees) (3)	3,000	9,060	20,000	1,505	33,565	0	20,000	1,505	0	0
Amount (2) / project (1)	65	322	353	134	263	--	353	134	--	--
Amount / employment (2) / (3)	0.022	0.142	0.018	0.089	0.055	--	0.018	0.089	--	--
Employment (3) / project (1)	3,000	2,265	20,000	1,505	4,795	--	20,000	1,505	--	--
<b>Mexico</b>										
Number of infrastructure projects (1)	0	0	10	23	33	2	7	9	5	9
Amount (million of \$US) (2)	0	0	2,137	3,894	6,031	12	2,117	2,853	231	810
Employment (number of employees) (3)	0	0	143,794	22,051	165,845	20	143,717	21,612	279	160
Amount (2) / project (1)	--	--	214	169	183	6	302	317	46	90
Amount / employment (2) / (3)	--	--	0.015	0.177	0.036	0.605	0.015	0.132	0.827	5.065
Employment (3) / project (1)	--	--	14,379	959	5,026	10	20,531	2,401	56	18
<b>Peru</b>										
Number of infrastructure projects (1)	0	0	7	5	12	1	5	0	2	3
Amount (million of \$US) (2)	0	0	698	222	921	45	559	0	57	165
Employment (number of employees) (3)	0	0	5,215	1,354	6,569	12	5,039	0	1,034	320
Amount (2) / project (1)	--	--	100	44	77	45	112	--	29	55
Amount / employment (2) / (3)	--	--	0.134	0.164	0.140	3.725	0.111	--	0.055	0.517
Employment (3) / project (1)	--	--	745	271	547	12	1,008	--	517	107
<b>Venezuela</b>										
Number of infrastructure projects (1)	2	6	3	0	11	0	2	0	0	0
Amount (million of \$US) (2)	478	5,446	3,290	0	9,214	0	3,100	0	0	0
Employment (number of employees) (3)	10,196	3,650	2,690	0	16,536	0	2,390	0	0	0
Amount (2) / project (1)	239	908	1,097	--	838	--	1,550	--	--	--
Amount / employment (2) / (3)	0.047	1.492	1.223	--	0.557	--	1.297	--	--	--
Employment (3) / project (1)	5,098	608	897	--	1,503	--	1,195	--	--	--
<b>Central America</b>										
Number of infrastructure projects (1)	0	2	4	3	9	1	3	0	2	1
Amount (million of \$US) (2)	0	925	2,582	1,462	4,969	109	2,473	0	1,453	9
Employment (number of employees) (3)	0	11,442	4,055	4,500	19,997	355	3,700	0	4,500	0
Amount (2) / project (1)	--	463	646	487	552	109	824	--	726	9
Amount / employment (2) / (3)	--	0.081	0.637	0.325	0.248	0.307	0.668	--	0.323	--
Employment (3) / project (1)	--	5,721	1,014	1,500	2,222	355	1,233	--	2,250	--

Source: own elaboration based on *Monitor*.



Figure 1 reflects the relevance of public ownership of the companies that carry out infrastructure projects in LAC: during 2005-2022 they concentrated 88.03% of the amount of projects and 76.56% of the employment generated. Although Chinese private companies significantly increased their participation in both variables during 2015-2019, in the most recent period of 2020-2022, SOEs resumed their “omnipresence”. In other words, in this category, the generalized diversification of infrastructure projects is not verified and the participation of the public sector is notably higher than those of Chinese FDI outflows in LAC (Dussel Peters 2023).



The process of diversification of China’s infrastructure projects in LAC by country is even more notable from a sectoral perspective. Table 3 shows that while the energy sector accounted for 60% of infrastructure projects in 2005-2009, 79.32% of their amount and 84.46% of their employment, its share fell to 20%, 26.17% and 12.29% in 2020-2022 (Table 3). This remarkable re-composition of infrastructure projects has as a counterpart the growth of the telecommunications sector and, particularly, of transportation, whose share is close to 10% according to its amount in 2005-2009 and became by far the main sector during 2020-2022, with 63.33%, 62.86% and 84.37% of the projects, their amount and employment. The transportation sector is by far the main generator of employment generating on average 2,613 jobs per project during 2020-2022; for the same period telecommunications accounted for \$1.1 million dollars in employment and was almost seven times lower for transportation.



Cuadro 3  
América Latina y el Caribe: proyectos de infraestructura chinos por sector (2005-2022)

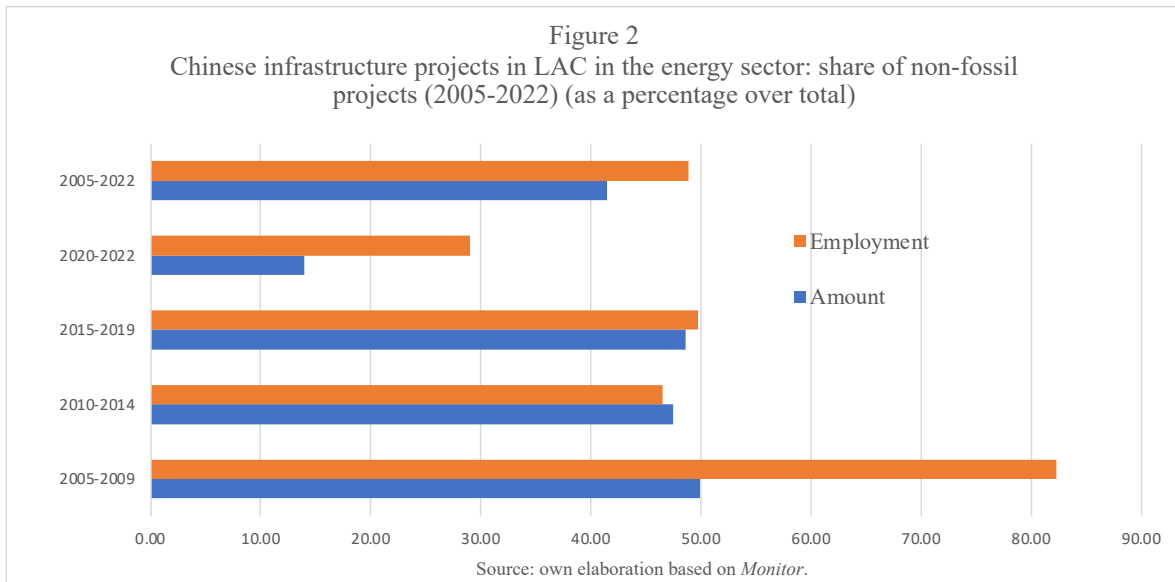
	Number of infrastructure projects (1)	Amount (million of \$US) (2)	Employment (number of employees) (3)	Amount (2) / project (1)	Amount / employment (2) / (3)	Employment (3) / project (1)
2005-2009	10	1,533	21,367	153	0.072	2,137
Energy	6	1,216	18,046	203	0.067	3,008
Telecommunication	0	0	0	--	--	--
Transport	1	65	3,000	65	0.022	3,000
Other	3	252	321	84	0.785	107
2010-2014	43	25,423	168,524	591	0.151	3,919
Energy	19	16,758	115,900	882	0.145	6,100
Telecommunication	1	302	78	302	3.872	78
Transport	10	5,601	26,317	560	0.213	2,632
Other	13	2,763	26,229	213	0.105	2,018
2015-2019	85	38,799	355,043	456	0.109	4,177
Energy	34	23,141	101,645	681	0.228	2,990
Telecommunication	9	867	7,900	96	0.110	878
Transport	22	9,540	81,436	434	0.117	3,702
Other	20	5,250	164,062	263	0.032	8,203
2020-2022	90	38,430	176,536	427	0.218	1,962
Energy	18	10,058	21,694	559	0.464	1,205
Telecommunication	3	3,011	2,700	1,004	1.115	900
Transport	57	24,158	148,951	424	0.162	2,613
Other	12	1,202	3,191	100	0.377	266
2005-2022	228	104,185	721,470	457	0.144	3,164
Energy	77	51,173	257,285	665	0.199	3,341
Telecommunication	13	4,180	10,678	322	0.391	821
Transport	90	39,364	259,704	437	0.152	2,886
Other	48	9,467	193,803	197	0.049	4,038

Source: own elaboration based on *Monitor*.

The *Monitor*'s databank allows for countless detailed analyses, for example, the possibility to look deeper into the case of infrastructure projects in the energy sector. Thus, of the 77 energy projects, 48 are non-fossil energy (including hydroelectric, solar and wind power complexes), 27 are fossil energy and one is nuclear energy; by 2005-2022, Chinese non-fossil energy infrastructure projects accounted for 41.48% of the amount and 48.83% of the employment in the energy sector (Figure 2). Two aspects are significant under this heading: a) the average amount of fossil energy infrastructure projects during 2005-2022 was \$1,033



million dollars and \$442 million dollars for non-fossil energy projects and, b) for the same period the employment generated per fossil project was 4,540 jobs and only 2,617 for non-fossil energy projects.



The following are two novel results of the *Monitor* with enormous potential for further development.

On the one hand, highlighting the geographic location of Chinese companies carrying out infrastructure projects in LAC, Table 4 shows that Beijing is by far the most important city in China for companies carrying out projects: during 2005-2022, 150 of 228 projects accounted for 85.27% of the amount and 73.35% of employment during the period; with slight fluctuations, this concentration has been maintained during the established periods. Guangdong province has become the second source of Chinese companies during 2020-2022, with 12.98% of the amount of infrastructure projects in LAC, followed by Shanghai; the rest of the Chinese provinces have seen their presence decrease. Future analyses could associate the companies that carry out Chinese infrastructure projects in LAC by country, ownership, sector and geographical origin of Chinese companies, of particular interest for aspects of territorial, environmental, social and economic policy in LAC.





Table 4  
Latin America and the Caribbean: Chinese infrastructure projects by geographic location (2005-2022)

	2005-2009	2010-2014	2015-2019	2020-2022	2005-2022
<b>Total</b>					
Number of infrastructure projects (1)	10	43	85	90	228
Amount (million of \$US) (2)	1,533	25,423	38,799	38,430	104,185
Employment (number of employees) (3)	21,367	168,524	355,043	176,536	721,470
Amount (2) / project (1)	153	591	456	427	457
Amount / employment (2) / (3)	0.072	0.151	0.109	0.218	0.144
Employment (3) / project (1)	2,137	3,919	4,177	1,962	3,164
<b>Beijing</b>					
Number of infrastructure projects (1)	8	38	52	52	150
Amount (million of \$US) (2)	1,325	23,253	31,804	32,458	88,839
Employment (number of employees) (3)	21,046	147,906	194,291	165,934	529,177
Amount (2) / project (1)	166	612	612	624	592
Amount / employment (2) / (3)	0.063	0.157	0.164	0.196	0.168
Employment (3) / project (1)	2,631	3,892	3,736	3,191	3,528
<b>Guangdong</b>					
Number of infrastructure projects (1)	0	0	7	12	19
Amount (million of \$US) (2)	0	0	193	4,990	5,182
Employment (number of employees) (3)	0	0	1,405	9,406	10,811
Amount (2) / project (1)	--	--	28	416	273
Amount / employment (2) / (3)	--	--	0	1	0
Employment (3) / project (1)	--	--	201	784	569
<b>Shanghai</b>					
Number of infrastructure projects (1)	2	1	7	4	14
Amount (million of \$US) (2)	208	150	2,563	247	3,168
Employment (number of employees) (3)	321	2,000	7,600	578	10,499
Amount (2) / project (1)	104	150	366	62	226
Amount / employment (2) / (3)	1	0	0	0	0
Employment (3) / project (1)	161	2,000	1,086	145	750
<b>Hubei</b>					
Number of infrastructure projects (1)	0	0	4		4
Amount (million of \$US) (2)	0	0	411		411
Employment (number of employees) (3)	0	0	5,000		5,000
Amount (2) / project (1)	--	--	103		103
Amount / employment (2) / (3)	--	--	0		0
Employment (3) / project (1)	--	--	1,250		1,250
<b>Other</b>					
Number of infrastructure projects (1)	0	4	15	22	41
Amount (million of \$US) (2)	0	2,020	3,828	735	6,583
Employment (number of employees) (3)	0	18,618	146,747	618	165,983
Amount (2) / project (1)	--	505	255	33	161
Amount / employment (2) / (3)	--	0	0	1	0
Employment (3) / project (1)	--	4,655	9,783	28	4,048

Source: own elaboration based on *Monitor*.



The following uses the *Monitor*'s company-level database to highlight two characteristics of China's infrastructure projects in LAC.

On the one hand, and according to the amount of projects during 2005-2022, the five main Chinese companies—China Communications Construction Company (CCCC), Power Construction Corporation of China (Powerchina), China Railway Construction Corporation (CRCC), China National Petroleum Corporation (CNPC) and China National Nuclear Corporation (CNNC)—present a very high concentration with respect to the total amount of Chinese infrastructure projects in LAC: their 73 projects accounted for 52.81% of the total during 2005-2022 and 65.34% in 2020-2022; CCCC alone accounted for 18.51% during 2020-2022. The expertise of the respective companies show, on the other hand, divergent average amounts per project during 2005-2022: CRCC of \$2,095 million and Powerchina of \$453 million. The issue is of the utmost relevance for China and LAC in terms of bilateral or regional negotiations on issues of common interest, such as technology transfer, relations with national or local suppliers and environmental issues, among many others.

The concentration of employment generation by the top five Chinese companies carrying out infrastructure projects in LAC during 2005-2020 is even higher than the top five companies by amount, at 48.62% and 80.42% for 2020-2022; CCCC alone created 25.80% of employment in Chinese infrastructure projects in LAC in 2020-2022 (Figure 3). Discussions on the labor conditions of Chinese companies in LAC should start with this first small group of companies, considering their very high concentration of employment in LAC.

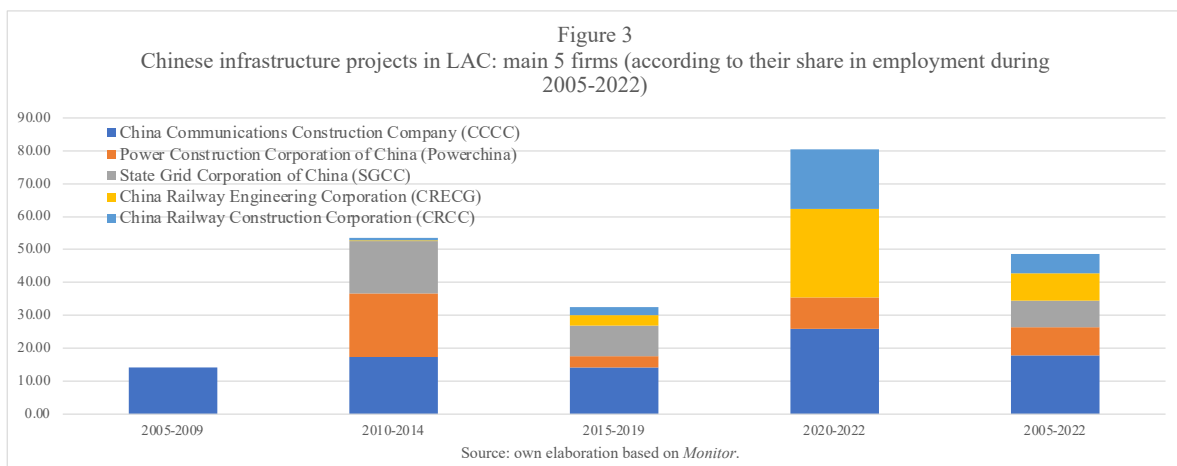




Table 5  
Latin America and the Caribbean: Main 5 Chinese infrastructure project firms (according to amount of the projects during 2005-2022)

	2005-2009	2010-2014	2015-2019	2020-2022	2005-2022
<b>TOTAL</b>					
Number of infrastructure projects (1)	10	43	85	90	228
Amount (million of \$US) (2)	1,533	25,423	38,799	38,430	104,185
Employment (number of employees) (3)	21,367	168,524	355,043	176,536	721,470
Amount (2) / project (1)	153	591	456	427	457
Amount / employment (2) / (3)	0.072	0.151	0.109	0.218	0.144
Employment (3) / project (1)	2,137	3,919	4,177	1,962	3,164
<b>China Communications Construction Company (CCCC)</b>					
Number of infrastructure projects (1)	1	6	9	12	28
Amount (million of \$US) (2)	65	1,863	6,804	7,112	15,844
Employment (number of employees) (3)	3,000	29,394	50,193	45,542	128,129
Amount (2) / project (1)	65	310	756	593	566
Amount / employment (2) / (3)	0.022	0.063	0.136	0.156	0.124
Employment (3) / project (1)	3,000	4,899	5,577	3,795	4,576
<b>Power Construction Corporation of China (Powerchina)</b>					
Number of infrastructure projects (1)	0	9	10	9	28
Amount (million of \$US) (2)	0	5,860	3,679	4,076	13,615
Employment (number of employees) (3)	0	32,240	12,034	17,047	61,321
Amount (2) / project (1)	--	651	368	453	486
Amount / employment (2) / (3)	--	0.182	0.306	0.239	0.222
Employment (3) / project (1)	--	3,582	1,203	1,894	2,190
<b>China Railway Construction Corporation (CRCC)</b>					
Number of infrastructure projects (1)	0	2	5	5	12
Amount (million of \$US) (2)	0	677	2,790	5,810	9,277
Employment (number of employees) (3)	0	1,056	9,112	31,835	42,003
Amount (2) / project (1)	--	339	558	1,162	773
Amount / employment (2) / (3)	--	0.641	0.306	0.182	0.221
Employment (3) / project (1)	--	528	1,822	6,367	3,500
<b>China National Petroleum Corporation (CNPC)</b>					
Number of infrastructure projects (1)	0	1	2	1	4
Amount (million of \$US) (2)	0	5,000	3,169	211	8,380
Employment (number of employees) (3)	0	1,049	3,090	1,034	5,173
Amount (2) / project (1)	--	5,000	1,585	211	2,095
Amount / employment (2) / (3)	--	4.766	1.026	0.204	1.620
Employment (3) / project (1)	--	1,049	1,545	1,034	1,293
<b>China National Nuclear Corporation (CNNC)</b>					
Number of infrastructure projects (1)	0	0	0	1	1
Amount (million of \$US) (2)	0	0	0	7,900	7,900
Employment (number of employees) (3)	0	0	0	9,000	9,000
Amount (2) / project (1)	--	--	--	7,900	7,900
Amount / employment (2) / (3)	--	--	--	0.878	0.878
Employment (3) / project (1)	--	--	--	9,000	9,000

Source: own elaboration based on *Monitor*.



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