

Summer 2023 Report: Laidlaw Research and Leadership Scholars Program
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The following report details my research experience and leadership development from June - August 2023, the first summer in the Laidlaw Research and Leadership Scholars Program at Cornell University. My project was performed under the direction of Dr. Lourdes S. Casanova, Senior Lecturer and Gail and Roberto Cañizares Director of the Emerging Markets Institute at Cornell University's S.C. Johnson College of Business.

Research on Emerging Market Multinational Corporations (MNCs) through the Cornell Emerging Market Institute (EMI)

What Drew Me To Laidlaw and the Cornell Emerging Market Institute (EMI)

I arrived at Cornell last Fall with a fascination for emerging markets and the role that they play in our global economy. I care deeply about human rights, and I believe that understanding the role multinational companies serve in these emerging markets is critical to understanding how to foster a safer, more just world.

So when I saw the opportunity to be part of the Laidlaw Scholars Program and conduct research through the Cornell Emerging Market Institute (EMI), I jumped at the opportunity. I knew Laidlaw would prepare me with the research skills to drive meaningful change.

What My Research Entailed and the Impact of This Research

My research this summer entailed assisting Professor Lordes Casanova, the lead author of the 2023 Emerging Market Multinationals Report, with understanding the rise of emerging multinational corporations (MNCs) and their subsequent impact on the global economy. Over the past two decades, emerging economies have gained ground in wealth and influence, leading to significant and rapid changes in the global economic landscape. The rise of these economies have had to do in large part with the rise of multinational companies in these economies. We can see the impact of these emerging multinationals through several statistics:

- 20% of global outward FDI flows today are accounted for by a group of 20 top emerging economics, the E20; that share was 2% in 2000
- 30% of the firms in the Fortune Global 500 list (based on revenues) are enterprises from emerging markets; they were less than 10% fifteen years ago (China, for example, is not far behind the US in terms of Fortune 500 companies)
- Many emerging economies, which just 20 years ago did not have Fortune 500 companies, now have entries on the Fortune 500 list

I particularly focused on understanding the impact these companies had from an environmental footprint, social impact, and governance perspective (ESG); supply chain perspective; economic development angle; and tastes and preferences angle.

My research had five objectives:

- (1) *Gaining a comprehensive understanding of the economic databases mentioned above and identifying which databases should be used to support the research behind the 2023 Emerging Markets Report.*
- (2) *Leveraging these databases to develop graphs and compile data into “vignettes” or profiles on emerging market multinationals.*
- (3) *Summarizing important economic policies and trends in emerging market economies that the profiles above will be used to support.*
- (4) *Using my work and what I’ve learned to help develop a ranking system along certain variables, or rank companies based on characteristics such as ESG, economic development, and supply chain volatility.*
- (5) *Assist with the drafting, editing, and compilation of the final 2023 report.*

Ultimately, my research was part of the larger aim of providing a comprehensive analysis of emerging multinational corporations’ growth, challenges, and contributions to the evolving global landscape.

Research Findings

One of the main aspects of the annual Emerging Market Multinationals Report is to identify the Top 20 Emerging Economies. We identified this year’s largest emerging economies with the following methodology:

- (1) We excluded countries considered advanced economies by the the International Monetary Fund (IMF), countries whose population is less than 1.5 million individuals, and countries for whom Gross Domestic Product (GDP) data, as provided by the World Bank, is older than three years
- (2) We calculated a weighted score for the remaining countries based on the following variables:
 - (a) GDP per capita (*weight 0.4*)
 - (b) Global trade (*weight 0.1*)
 - (c) Poverty level (*weight 0.2*)
 - (d) Extreme poverty level (*weight 0.3*)
- (3) We then ranked countries based on their weighted GDP. The following 20 largest economies (in addition to China, set aside for its unique position) constituted the EMI’s “E20+1” or “E20+China” list.

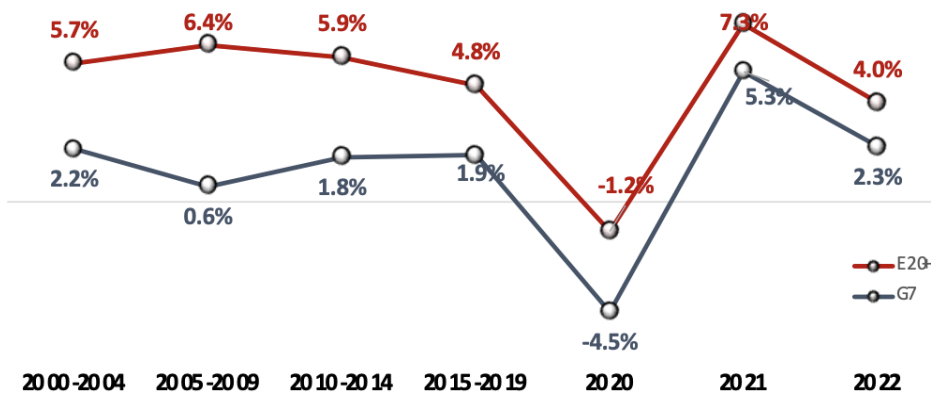
Table 1. Emerging Markets 20 + China by Ranking and Region

	Country	Region
0	China	Asia
1	India	Asia
2	Russian Federation	Europe
3	Brazil	Latin America and Caribbean
4	Mexico	Latin America and Caribbean
5	Indonesia	Asia
6	Turkiye	Asia
7	Argentina	Latin America and Caribbean
8	Thailand	Asia
9	Nigeria	Africa
10	Egypt, Arab Rep.	Africa
11	Bangladesh	Asia
12	Vietnam	Asia
13	Malaysia	Asia
14	South Africa	Africa
15	Philippines	Asia
16	Iran, Islamic Rep.	Asia
17	Pakistan	Asia
18	Colombia	Latin America and Caribbean
19	Romania	Europe
20	Chile	Latin America and Caribbean

Determining the E20 and GDP Growth Rates

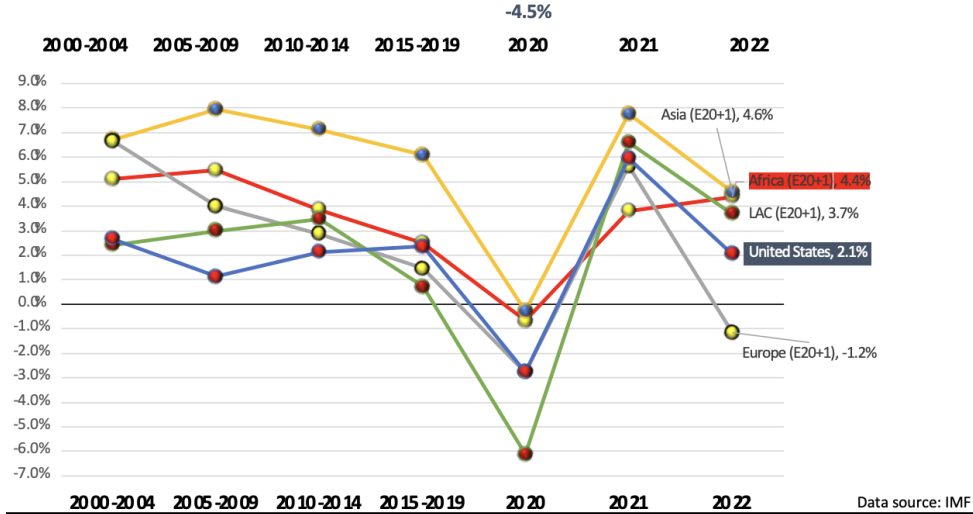
After identifying this year’s “E20+1” list, we calculated each E20+1 country’s economic growth rate in the past year using data from the International Monetary Fund. See Figure 1. While economic growth had plummeted due the COVID-19 pandemic, economic growth quickly resumed and saw a sharp increase from 2020 to 2021 before experiencing a slowdown from 2021 to 2022.

Figure 1: GDP Growth of E20 and G7 from 2000-2022



We also found that only the economies of African countries increased their economic growth rate over the past year, while all other regions experienced a decrease in their economic growth rate from 2021 to 2022. The European region even experienced a negative economic growth rate from 2021 to 2022. See *Figure 2*. The decline in European growth rates may have been due to the supply-shock pressures caused by the Russian invasion of Ukraine and its subsequent economic fallout. It will be important to see whether change in growth rates stabilize in the near future, as they largely did from 2000 to 2019, or continue to experience wild fluctuations due to external factors such as war, health crises, and natural disasters. It will also be important to see whether emerging economies continue to grow alongside, or against, the growth rate of developed economies. If countries cannot grow alongside one another, this may lead to a rise in conflict as powers battle over a zero-sum economic game.

Figure 2. Change in GDP Growth by Region from 2000-2022 (%)



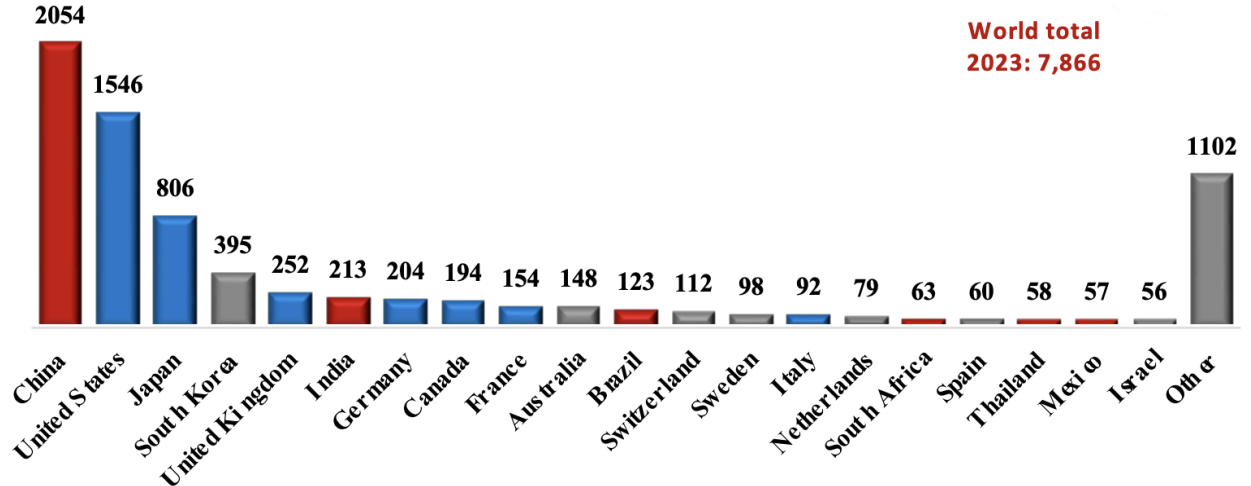
Breakdown of Top 500 Emerging Multinational Corporations by Region

Given that our study was about identifying the impact of emerging market multinational corporations on their regional economies and subsequently the global economy, we established a list of the Top 500 Emerging Multinational Corporations. We built this list by first obtaining a list of all companies worldwide with revenues greater than one billion dollars from the Capital IQ database. This yielded a data set containing 32,616 companies. We then removed all entities that were not public or private companies such as governments, duplicates, subsidiaries (grouping by parent company), and outliers or possible mistakes in the database by looking for abnormal revenue growth, mismatch in the date of public filing, and discrepancies between Capital IQ information and company 10-K filings. Our final set of data for analysis was then 7,866 active public or private companies with more than one billion dollars in revenue.

We then organized this list by country to identify which countries and regions yielded the highest gross revenue businesses. We found that China led the way, followed by the United States and Japan. See *Figure 3*. The colors of each country in the figure below shows which development category the country

belongs to, with red standing for E20+1 markets, blue for developed countries, and gray for emerging countries that did not make the E20+1 list.

Figure 3. Billionaire Firms by Country and Development Type



Additionally, we organized companies with revenues over a billion dollars by region and by stage of development. See Figure 4 and Figure 5. Asia retains over half of the world's billionaire companies, with Europe, the United States, and Canada almost completing the other fifty percent. Africa lags far behind with only one percent of the world's companies with revenues over one billion dollars. China alone constitutes over a quarter of the world's "billionaire" companies, with the E20 being just over ten percent of the world's largest companies. The G7 countries continue to lead the way, with over 40 percent of companies with greater than one billion dollars in revenue being located in one of these seven countries.

Figure 4. Billionaire Companies by Region

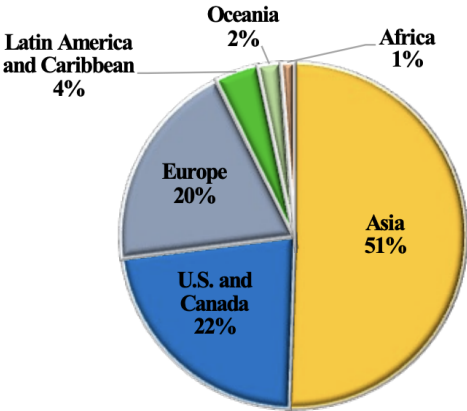
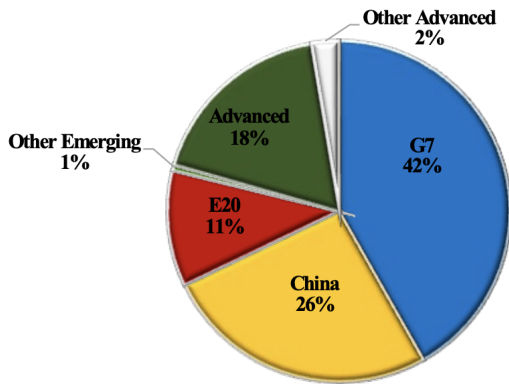
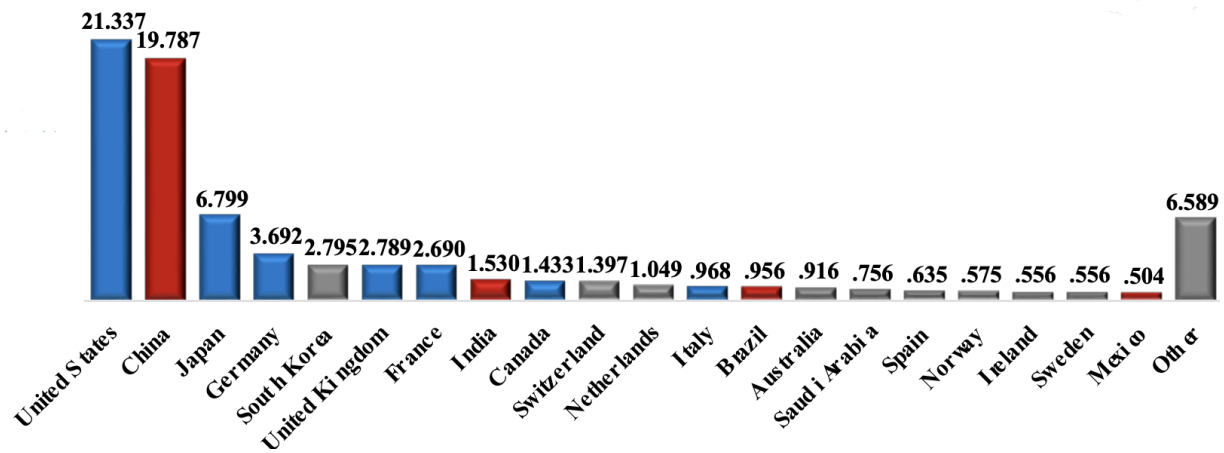


Figure 5. Billionaire Companies by Development Category

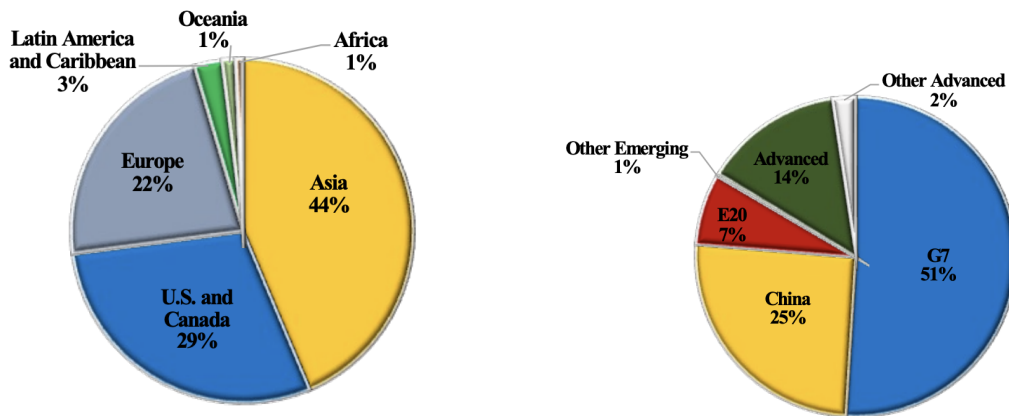


We then explored the total impact of billionaire multinational corporations by categorizing them by country and region. What we found was that the weight of emerging economies, based on total revenue, was less than the weight of emerging economies based on the number of firms with revenues greater than one billion dollars. The United States had the greatest revenue by billionaire firms, outpacing China by over one trillion dollars despite having over 500 less companies with revenues greater than one billion dollars. See Figure 6. When breaking down total revenue among billionaire multinational corporations by region and by development category, the depiction remains relatively similar to Figure 4 and Figure 5. See Figure 6 and Figure 7.

Figure 6. Billionaire Firms Revenues (in Trillion) by Country



Figures 7 and 8. Billionaire Companies by Region and Category by Total Revenue



Identifying The Largest Multinational Companies in Emerging Markets

We then filtered our initial data set to include only corporations with over one billion dollars of revenue in emerging markets. We found that China, likely due to its unique position and development in the global context, dominated the list of top ten emerging market multinational companies. *See Table 2.* When excluding China from the list, there is quite a bit more variety among the E20 in billionaire multinational companies. 10 different countries are represented in the largest multinational companies in the E20. *See Table 3.*

Table 2. Top Billionaire Emerging Multinational Corporations by Country and Revenue

	Billionaire	Country	Latest Annual Revenue (US\$MM)
1	State Grid Corporation of China	China	\$ 516,912
2	China National Petroleum Corporation	China	\$ 492,955
3	China Petrochemical Corporation	China	\$ 488,150
4	China Construction Engineering Corp.	China	\$ 297,955
5	China Communications Construction Group (Ltd.)	China	\$ 271,652
6	Hon Hai Precision Industry Co., Ltd. (TWSE:2317)	China	\$ 215,716
7	Ping An Insurance (Group) Company of China, Ltd. (SEHK:2318)	China	\$ 176,702
8	China Railway Group Limited (SHSE:601390)	China	\$ 167,366
9	China State Railway Group Co., Ltd.	China	\$ 163,435
10	Public Joint Stock Company Gazprom (MISX:GAZP)	Russia	\$ 160,175

Table 3. Top Billionaire Emerging Multinational Corporations by Country and Revenue Excluding China

	Billionaire	Country	Latest Annual Revenue (US\$MM)
1	Public Joint Stock Company Gazprom (MISX:GAZP)	Russia	\$ 160,175
2	Petróleo Brasileiro S.A. - Petrobras (BOVESPA:PETR4)	Brazil	\$ 121,298
3	Petróleos Mexicanos	Mexico	\$ 116,452
4	HCL Technologies Limited (NSEI:HCLTECH)	India	\$ 113,992
5	Reliance Industries Limited (NSEI:RELIANCE)	India	\$ 107,094
6	Indian Oil Corporation Limited (NSEI:IOC)	India	\$ 102,502
7	PTT Public Company Limited (SET:PTT)	Thailand	\$ 97,405
8	Life Insurance Corporation of India (NSEI:LICI)	India	\$ 97,179
9	Oil and Natural Gas Corporation Limited (NSEI:ONGC)	India	\$ 83,393
10	Petrolim Nasional Berhad	Malaysia	\$ 76,028
11	JBS S.A. (BOVESPA:JBSS3)	Brazil	\$ 70,906
12	State Oil Company of the Azerbaijan Republic	Azerbaijan	\$ 70,134
13	PT Pertamina (Persero)	Indonesia	\$ 69,004
14	Bharat Petroleum Corporation Limited (NSEI:BPCL)	India	\$ 57,621
15	Raizen S.A. (BOVESPA:RAIZ4)	Brazil	\$ 48,550
16	Koç Holding A.S. (IBSE:KCHOL)	Turkey	\$ 48,195
17	AECI Ltd (JSE:AFE)	South Africa	\$ 43,301
18	América Móvil, S.A.B. de C.V. (BMV:AMX B)	Mexico	\$ 43,294
19	Vale S.A. (BOVESPA:VALE3)	Brazil	\$ 42,846
20	Tata Motors Limited (BSE:500570)	India	\$ 42,129

My Experience in the Laidlaw Scholars Program

The Laidlaw Scholars Program has encouraged me to develop new and valuable skills through my research this summer, allowing me to become a better leader. Along with strengthening skills such as teamwork, communication, and persistence, I also learned to develop a greater understanding of emerging markets and their interactions in the global economy and gained an ability to research, filter, analyze datasets, organize and present my research findings. In my work, I also collaborated with the 2023 EMI Summer Interns, allowing me to observe and analyze information from different perspectives. The most emphasized part of being both a Laidlaw Scholar and an intern at the EMI was teamwork. Without collaboration and support of my colleagues, each of our personal developments as leaders and thinkers would have been impossible. The incredible amount of teamwork and communication allowed me to embrace receiving feedback and taking steps further in my analyses. I will apply the lessons learned as I continue my studies at Cornell and in the future.

As I continue in my Laidlaw Scholars Journey, I want to focus on emphasizing my skills as a leader in pursuing collaboration, dialogue, and greatness. I am beyond grateful for this experience to work among fantastic faculty, graduate students, and undergraduate students at the EMI and Laidlaw Program. Looking ahead, I hope to use my research and leadership skills in the challenges that await.

Acknowledgements

This research would not have been possible without the support of numerous individuals and institutions. I want to thank Cornell University for giving me the opportunity to be a student here and for inspiring me daily with *Deus et Humanitas* (God and Humanity). I want to thank my fellow students and professors from the Public Policy and Management program for giving me the skills to embark on this research. I want to thank Professor Casanova, Professor Miroux, and the Cornell Emerging Markets Institute for supporting me in this endeavor and giving me this opportunity, and I want to thank the Laidlaw Scholars Program for providing the support and network to embark on a research opportunity

like this so early in my career. And lastly, but just as important, I want to say thank you to my parents and my sister for being there with me every step of the way. I hope to do good by Cornell, by Laidlaw, and the people who have supported me in my journey as I strive to make an impact in the world of human rights and shape a fairer, more just world.