

# **BRAIN GAIN IN NORTH AMERICA: CHANGES IN A LONG-TERM PARADIGM**

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## **Introduction**

Previous migration literature has studied brain gain in terms of talent attraction by certain destination countries or regions, but also as “brain circulation,” which implies the possibility that countries of origin may network with their diasporas abroad, forming epistemic groups and fostering innovation.

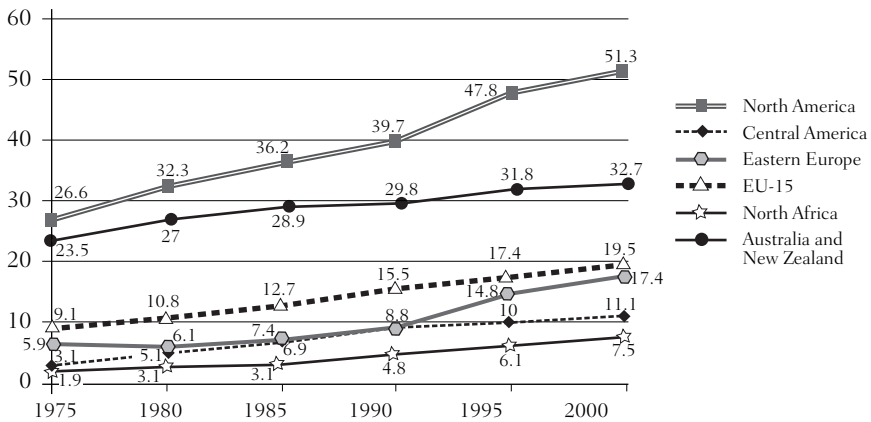
This study focuses on talent attraction in North America, the leading region in brain attraction since World War II. North America has been the leading region in the highly skilled as a percentage of resident population and has been gradually increasing its attraction of professionals from 26.6 percent in 1975 to 51.3 percent in 2000 (see Figure 1). Over half of North American residents (51.3 percent) are highly skilled, compared to 32.7 percent in Australia and New Zealand and 19.5 percent in Western Europe in 2000 (Deefort and Rogers, 2008).

As a geographical and economic region, North America includes the U.S., Canada, and Mexico. As shown here, disparities among the skilled personnel in the region are quite high. This study will focus on the U.S. and Canada in particular, due to the absence of explicit talent attraction policies in Mexico, as the historical review will show. Mexico has been among the main countries of origin of skilled migrants in the world, with over 1 million first-generation Mexican professionals in the U.S. As a member of the NAFTA and later USMCA agreements, it further benefitted from the TN visas, granted to Mexican professionals who worked in the U.S., but did not create mechanisms to attract professionals from the U.S. and Canada, apart from inves-

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tors and retirees. This is why Mexico is more a case for brain drain than for brain gain, compared to the U.S. and Canada.

FIGURE 1  
 PERCENTAGE OF THE HIGHLY SKILLED AMONG RESIDENT POPULATION  
 AGED 25 OR OVER (1975-2000)



SOURCE: Deefort and Rogers (2008).

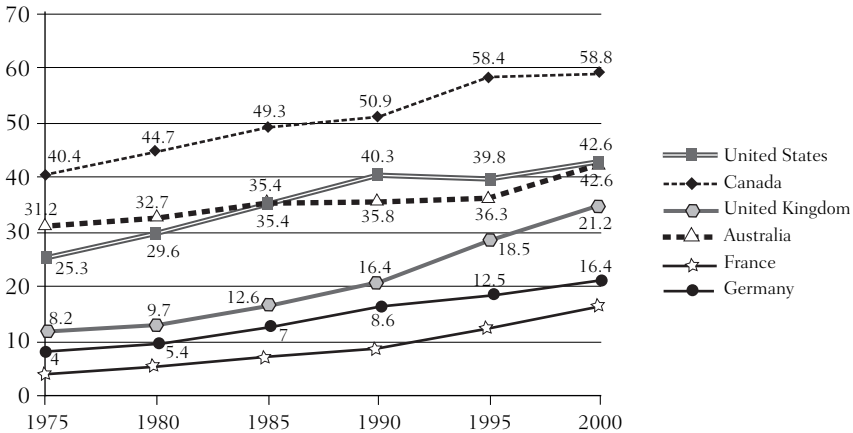
Historically, the U.S. has been the world’s main receiver of skilled migrants, with over 10 million in 2000, four times more than Canada and seven times more than Australia (see Figure 2). In terms of percentage of skilled immigrants compared to the overall cohorts, the U.S. was behind Canada, where skilled migrants represented 58.8 percent of the total in 2020 (Figure 3), compared to just 42.5 percent in the U.S. (Deefort and Rogers, 2008).

This is precisely the tendency that has been questioned since Donald Trump’s campaign and throughout his administration (2017-2021). Apparently, the U.S. president wanted to change the overall cohort of immigrants, emphasizing abilities rather than family-based migration, but also to put a cap on the number of skilled migrants who enter the United States, in order to stop unfair competition with native-born workers.

Many media reports have correlated the moment after Trump’s election in 2016, the travel ban and temporary suspension of the H-1B visa program, with the immediate release of the Global Skills Strategy in Canada, in order to speed up the hiring of highly skilled foreign workers. That initiative has since attracted 24,000 people, according to some estimations (Tejani, 2019;

Argitis, 2019). Many companies and political adversaries have criticized the new immigration programs, which would lead to a slowdown in U.S. competitiveness. For instance, New York City Mayor Michael Bloomberg criticized the tough return policies for international students in the U.S., saying, “We’re committing what I call national suicide. Somehow or other, after 9/11, we went from reaching out and trying to get the best and the brightest to come here, to trying to keep them out. In fact, we do the stupidest thing, we give them educations and then don’t give them green cards” (West, 2011: 4).

FIGURE 2  
 PERCENTAGE OF SKILLED MIGRANTS  
 IN THE WORLD’S MAIN DESTINATION COUNTRIES

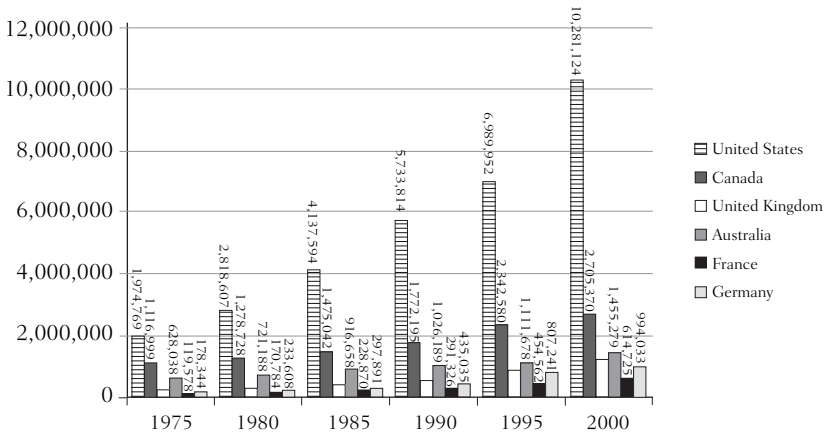


Source: Deefort and Rogers (2008).

Despite Trump’s short mandate, his policies have been previously discussed in many papers. Significant academic production exists about the effects of his anti-migrant discourse on migrants’ well-being. Among others, Matthews and Lord (2017) have studied what they consider the lasting impact of the travel ban and hate discourse on the image of the United States in the world, as well as on a social level and the “people-to-people relations” that have been harmed. Other studies have focused on the return of skilled migrants to their countries of origin (Darmoe, 2017; Lo, Li and Yu, 2019). In a previous academic study, with my colleague Amba Pande, I explored the hypothesis that restrictive policies in the U.S. may favor brain attraction to Canada, as a long-term trend in migration policy in North America (2020).

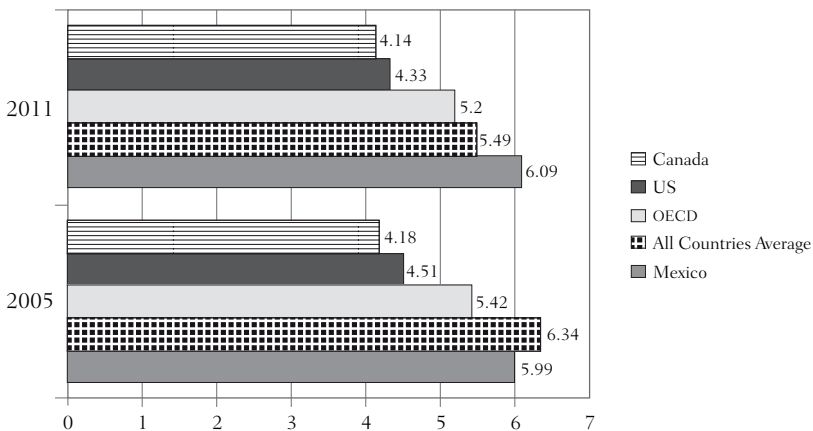
The purpose of this chapter is to offer a historical reflection about how the America First policy differs from the overall tendency of talent attraction in the U.S. I will discuss how Canada benefits from a spillover effect of those individuals who chose to re-migrate because of the U.S. president’s anti-migration discourse.

FIGURE 3  
NUMBER OF SKILLED MIGRANTS IN THE WORLD’S  
MAIN DESTINATION COUNTRIES



SOURCE: Deefort and Rogers (2008).

FIGURE 4  
RELiance ON PROFESSIONAL MANAGEMENT IN NORTH AMERICA



Source: World Economic Forum (2011).

This chapter's working hypothesis is that the current migration policies for attracting talent in North America display considerable differences compared to a long-term trend of attracting the most "suitable" population based on race, skills, and financial capital. Changes in the U.S. determine regional and even international challenges, as the U.S. is the main country that currently receives skilled migrants. Any variation in its flows or policy affects the global talent market.

The chapter is structured as follows: a) a theoretical discussion of brain gain, from the perspective of meritocracy and human capital management; b) a historical analysis of migration legislation in North America; c) a comparative discourse analysis of "brain gain" in the U.S. and Canada; and d) conclusions.

## **A Theoretical Discussion of Brain Gain and Meritocracy**

The idea behind brain gain is attracting the "best and brightest" professionals (Batalova and Lowell, 2006) and offering jobs and payment that may benefit individuals and destination economies. Other implications, seen from the countries of origin, rely on those individuals' capacity to return knowledge, networks, and financial investments to their home countries, thus acting as non-official diasporas.

The purpose of this theoretical argument is to discuss the fundamentals of brain gain seen from the destination countries'—the winner's—perspective. This implies establishing a direct relationship between talent attraction, global justice, and meritocracy. The American Dream along with the emerging Canadian Dream are based on the idea that hard-working individuals, foreigners, and native-born workers will not only fulfill their own life projects, but also contribute to a more general project of nation building, the "just" America—or Canada—where studying and working hard will have a good outcome.

However, populist leaders' recent discourses around the world have questioned educational elites and the overall distribution of wealth, mirroring certain research trends in academic literature. The justice of meritocracy has been discussed for at least three decades in international migration policy as well as on a domestic level. Since the 1990s, some authors criticized credentialism and the lack of possibility for the middle and lower classes to climb the social scale (Derber, Schwartz, and Magrass, 1990).

Other academic works have questioned meritocratic criteria in the selection of migrants, especially in the case of Canada, claiming that certain countries act like elite universities, further privileging elites who benefitted from university education in their countries of origin (Lim, 2017). Therefore, meritocracy has implications on a domestic but also on an international level. By promoting skilled migration instead of simply labor migration, they help foster inequality among countries.

It is also important to outline particular attraction policy incentives, such as visa facilities and citizenship, in order to compete on the global market of competencies. Studies by Schachar (2006 and 2011) have outlined countries' efforts to imitate and even overtake the others, for instance, by using methods such as the Olympic citizenship for athletes who may wish to acquire a particular citizenship for the specific purpose of competing in Olympic games. In this way, individuals who are part of certain elites—economic, educational, or both—may have more access to be able to migrate and be accepted in new destinations.

Inside the U.S., this discussion seems to be revived in recent works such as the book of Yale Law School scholar Daniel Markovits (2019), who considers himself part of a privileged educational elite in a meritocratic system that no longer promotes social justice. Even though Markovits accepts the historical benefits of “meritocratic energy, ambition, and innovation” (p. XIII), in his view, meritocracy nowadays only helps reproduce opportunities for the most privileged social classes and geographic areas in the U.S., but does not really allow for equal opportunities of education and jobs across his country. Even though Markovits's book makes no mention of migration or migrant workers, his argument reveals certain problems of U.S. society, including domestic brain drain, bad distribution of resources, the populist vote, and finally, the reasons behind the current questioning of skilled migrant workers.

Many economists already took a stand on whether migrant workers damage the possibilities of native-born workers, some of them linking public opinion on migration with the cycles of U.S. economic crisis and growth (Borjas, 2005). The new approach to meritocracy makes visible how middle classes in the Midwest, for instance, have lost opportunities against local and foreign workers alike. Markovits writes:

Middle-class families cannot afford the elaborate schooling that the rich buy, and ordinary schools lag further and further behind elite ones, commanding

fewer resources and delivering inferior education. Even as top universities emphasize achievement rather than breeding, they run admissions competitions that students from middle-class backgrounds cannot win, and their student bodies skew dramatically toward wealth. Meritocratic education now predominantly serves an elite caste rather than the general public. (2019: xiv)

Meritocracy similarly transforms jobs to favor the super-educated graduates that elite universities produce, so that work extends and compounds inequalities produced in school. Competence and an honest work ethic no longer assure a good job. Middle-class workers, without elite degrees, face discrimination all across a labor market that increasingly “privileges elaborate education and extravagant training,” according to Markovits (2019: xiv).

His point is the division in U.S. society that sparks resentment and even hurts the elites themselves. In this book, meritocracy equals aristocracy, with the difference that aristocrats lived a good life, while today’s meritocrats no longer own their own time. They work and study more and more, under ongoing psychological pressure to maintain their privileges. Poor and rich work alike, for huge amounts of time but very different payment. Markovits finally notes:

This is, in fact, the same alienation that Karl Marx diagnosed in exploited proletarian labor in the nineteenth century. Indeed, as technological development renders mid-skilled workers increasingly surplus to economic requirements, and at the same time places super-skilled labor at the very center of productive life, meritocracy shifts the classic afflictions of capitalism up the class structure. The increasingly superfluous middle classes assume the role once occupied by the lumpenproletariat, while alienated labor comes home to roost in the elite.

Marx’s knife takes an added twist. The elite, acting now as rentiers of their own human capital, exploit themselves, becoming not just victims but also agents of their own alienation. Once more, the elite should not—they have no right to—expect sympathy on this account from those who remain excluded from the privileges and benefits of high caste. (2019: 40)

The overall questioning of merit in the U.S. is linked to inequalities, the management of human capital and domestic brain drain. Not only is the U.S. attracting fewer skilled workers, but it also experiences a serious inequality among its regions, with the Rust Belt states less able to maintain and attract human capital than the Boston-Washington corridor.

Certain new economic theories on human capital may help explain the success of certain cities and regions in attracting and maintaining skilled labor. I am referring to the works outlining the importance of epistemic groups and teams that may foster individual capacities of workers in the knowledge-based economy. Ployhart et al. (2014) emphasize the importance of the combination of human capital and the complementarity that occurs in certain work environments, where innovation and creativity multiply each individual's capacity.

Human capital is based on personal investment in education and brings value to the working units (companies, universities, scientific fields, etc.) that assimilate skilled workers, especially through the complementarity of their capabilities (Campbell, Coff, and Kryscynski, 2012). Briefly put, this theory may be understood as an emphasis on collective as opposed to individual capital. One individual alone may not be able to change the outcome of a working unit in the same way as a varied group of individuals may. This means, in terms of migration, that certain work units in traditional destination countries may attract human capital because of their ability to boost employees' capabilities and provide good remuneration.

Ployhart et al. (2014: 378) also emphasize the importance of promoting human capital resources in order to achieve a competitive advantage as a company or work environment. In this way, work units in successful economies look to attract but also increase the human capital of particular individuals understood as complex resources, by improving and updating pre-existing abilities. According to this approach:

The locus of strategic human capital resource-based competitive advantage is not the content of the resources but the degree to which they are interconnected. It is the interconnections among resources that make the resources immobile and difficult to imitate (not to mention hard to value given the lack of efficient strategic factor markets). Interconnections increase the social complexity, causal ambiguity, and path dependency of strategic human capital resources. (Ployhart et al., 2014: 392)

This theoretical background proves the relevance of attracting skilled workers and combining a variety of human capital resources in order to maintain competitiveness. In what follows, this chapter discusses the past and present of talent attraction in the U.S. and Canada, based on historical legislation and present political discourse.



## Historical Background of Brain Gain in the U.S. and Canada

The history of migration legislation in North America shows certain patterns of distinction among migrants that today may be even considered discriminatory. The paupers, the ill, the insane, the people of certain races or sexual orientation were constantly rejected, while labor migration was facilitated according to the necessities of the moment (see Table 1).

I propose a dichotomous model of analysis of skilled migration policy history, dividing migrants into friends (privileged migrants who are allowed to enter) and foes (unwanted foreigners). Based on International Migration Institute Demig Policy Data (2020), the proposed timeline summarizes the migration legislation in North America, divided into nine stages according to the growing preference given to skilled migrants.

TABLE 1  
FRIENDS AND FOES IN MIGRATION LEGISLATION OF NORTH AMERICA

<i>Migration Stage</i>	<i>Friends (Privileged and Preferred Migrants)</i>	<i>Foes (Unwanted Aliens)</i>
<b>1.</b> From the early eighteenth through the nineteenth centuries: free movement and little regulation	free white persons of good moral character (U.S., 1790); colonizers and Europeans (U.S., 1824)	paupers (1891, U.S.) and the poor (Canada, 1910)
<b>2.</b> End of the nineteenth century: racial and historically-based prohibitions	children (Canada, 1892); Japanese (U.S., 1894)	Chinese (U.S.: 1875-1888, 1902, ending in 1943); (Canada: 1931) the ill and insane (U.S.: 1882; Mexico: 1865; Canada: 1906); Spaniards (Mexico: 1827); British (Canada: 1907 and 1913); foreign laborers (Canada: 1897); anarchists (Mexico: 1909); Japanese (Canada: 1910)
<b>3.</b> ww I: Agriculturalist period	agriculturalists (during the entire nineteenth century in all three countries, in particular, Mexican agricultural workers (U.S.: 1917-1921, 1942-1964)	the charity class; migrants from enemy nations; the illiterate and South East Asians (U.S.: 1917); recalcitrant and undesirable foreigners (Mexico: 1917) alcoholics, illiterates, those guilty of espionage (Canada: 1919)

TABLE I  
FRIENDS AND FOES IN MIGRATION LEGISLATION OF NORTH AMERICA  
(continuation)

<i>Migration Stage</i>	<i>Friends (Privileged and Preferred migrants)</i>	<i>Foes (Unwanted Aliens)</i>
<b>4.</b> Interwar period 1921: start of "skills" preferences	the skilled (U.S.: 1921, 1924; Mexico: 1947; Canada: 1949); British (Canada: 1923)	Japanese (U.S., 1921); foreigners with bad conduct, prohibition of labor migration (Mexico: 1926); those who leave the country without permission (Mexico: different years, 1926)
<b>5.</b> WWII and its aftermath: boom of European refugees	Family reunification with minors and spouses, especially from Mexico and Canada (U.S.: 1924); returned citizens from the U.S. (Mexico: 1934; Spanish: 1934); displaced people after WWII, preferably from Europe and the skilled (Canada: 1947; U.S.: 1948; Mexico: 1947)	Mexicans (U.S.: deportation of 1930, 1954); foreigners who do not comply with language criteria (Mexico: 1934; U.S.: 1941); Jews (Canada: 1947); ban of previous war enemies and sexual minorities (Immigrants Acts of 1952 in the U.S. and Canada); communists (U.S.: 1953)
<b>6.</b> The Cold War emancipation: end of racial discrimination, start of selection based on education and citizenship to skills integration	certain European countries under the category "preferred class" (U.S. and Canada: 1952); domestic servants from British Guiana (Canada: 1962); workers of distinguished merit (U.S.: H1 visas); Cubans (U.S.: 1966, 1982) Citizens from Hong Kong (1966); Hungarians (1956); and Czechs (1968); Canada Families of H1 workers (U.S.); Vietnamese (U.S.: 1975 1982, 1987); Laotians and cambodians entrepreneurs and investors (Canada: 1980 and 1987); Mexicans (U.S.: 1986); Canadians, especially businesspersons (U.S.: 1988)	homosexuals, drug dealers and consumers (Canada: 1952, based on the doctrine of suitability); irregular migrants (Canada: 1973); and undocumented aliens (U.S.: 1986); quotas for refugees (max. 50,000 in the U.S.: 1980)

TABLE 1  
FRIENDS AND FOES IN MIGRATION LEGISLATION OF NORTH AMERICA  
(continuation)

<i>Migration Stage</i>	<i>Friends (Privileged and Preferred migrants)</i>	<i>Foes (Unwanted Aliens)</i>
7. The human rights turn in the 1990s	Refugees from Russia (U.S.: 1990); specialty occupations and employable skills (U.S.: 1990); domestic workers (Canada: 1990); soviet Union scientists employed in biological, chemical, or nuclear technical fields, high-level defense projects (U.S.: 1992); separate investor program for Quebec (Canada: 1991); business visitors, treaty traders, and investors from Canada and Mexico (U.S.: NAFTA, 1994); temporary Protected Status: Honduras, Nicaragua (1998); El Salvador (U.S.: 2001); Chileans and skilled labor from around the world (Canada: 1998); nurses (U.S.: 1999)	Ban on “bogus” refugees (Canada: 1990) and further restrictions for refugees, criminals, terrorists, and irregular migrants (Canada: 1993 and 1995); Cubans (U.S.: 1994)
8. Cooperation for twenty-first century talent competition/A regional market for talent	Family-related migration, victims of trafficking and violence and the skilled (U.S.: American Competitiveness in the 21st Century Act, 2000); same-sex family reunification (Canada: 2000)	Terrorists (U.S. Patriot Act, U.S.: 1996, 2002); restrictions on caregivers based on skills (Canada: 2002)
9. Migration restrictions in the populist stage (after 2017)	Skilled migrants in a limited number, preferably with graduate studies under the America First policy (U.S.: 2017); Global Skills Strategy (Canada: 2017)	Muslims (U.S. travel ban of 2017), chain migration/ family reunification (America First Policy, U.S.: 2017); caps and temporary hold on H-1B visas (U.S.: 2017, 2018, 2019, 2020)

SOURCE: IMI (2020) (rows 1 to 8); row 9, developed by the author.

The first legislation on migration in North America dates back to the end of the eighteenth century and it allowed free movement, with little regulation. Nonetheless, the first Naturalization Act of 1790 in the U.S., restricted naturalization to “free white persons” of “good moral character.” Three decades later, after Mexico’s independence from Spain in 1821, Mexican authorities encouraged the settlement of European migrants who wished to work in agriculture in order to populate the northern part of the country.

At that time, the selection of migrants in North America did not depend on their skills, but was race-based. The governments of the U.S., Canada, and Mexico assumed that European migrants were more suitable for integration and had more compatible moral values. Poor migrants or those with bad health were required to pay a certain amount of money to enter the U.S. and Canada. The first migrants were not required to speak English or Spanish, a criterion introduced as literacy tests after World War I.

In Canada, the British North America Act of 1867 included conditions to facilitate the attraction of a large influx of immigrants as a key economic strategy to bolster national demand for domestic goods and stimulate the nation’s small manufacturing sector. In addition, Canada looked for immigrants to settle the largely unoccupied lands in the West as a means of securing national sovereignty in these areas (IMI, 2020).

The end of the nineteenth century marked the start of racial- and historically-based prohibitions in North America, a tendency that lasted at least a century. The recruitment of immigrants began to emphasize skills at the beginning of the twentieth century, according to the type of agricultural and industrial economy that each country was promoting. For instance, in 1907, the Immigration Branch of Canada adopted an intensive plan to recruit British farmers and domestic workers. This means that skills have always been important in the recruitment of migrants; they just differ over time. For instance, in the period before World War I, the United States and Canada promoted hiring agricultural and rail workers, the types of skills that boosted the economy at that time.

Skilled migration as we understand it (migration of professionals with university degrees) was only promoted after World War II, with the boom of European refugees. In the beginning, these refugees settled in North America, many times with the financial aid of organizations such as the Provisional Intergovernmental Committee for the Movement of Migrants from

Europe (PICMME, founded in 1951), a first version of today's International Organization for Migration.

In 1947, Canadian Prime Minister Mackenzie launched the “absorptive capacity” guidelines and created new immigration classes, including entrepreneurs and professionals, domestic workers, nurses' aides, and those sponsored by their future employers. Even while preference for the British, French, and U.S. Americans continued, greater emphasis was placed on migration that could promote economic growth.

In the U.S., the Immigration and Nationality Act of 1952 (the McCarran-Walter Act) gave preferential treatment to highly skilled migrants whose services were needed in the country, together with their spouses and children. This act also created the H1 visa, a category previous to today's H-1B.

In the decades that followed, preference was given to domestic workers and refugees, apart from certain skills that correspond more to the knowledge economy, such as engineers or researchers. While the U.S. and Canada display similar systems for attracting skilled workers and domestic migration governance, Mexico follows different patterns aimed at the return of its workers from the U.S. or lobbying for Mexican workers in that country.

The Cold War marked the beginning of a new stage, which consisted of ending racial discrimination, to start the selection based on education and “citizenship to skills” integration. In 1967, Canada implemented its points-based system for selecting immigrants, one that no longer discriminated based on race, but fulfilled domestic market requirements. This manner of selecting migrants has long been seen as the best way to attract the most skilled and has further inspired similar proposals in the U.S. and Australia, the other two main competitors on the global talent market. Four years later, in 1971, Canada also promoted the policy of multiculturalism to include migrants from a broad range of cultures and social backgrounds, “encouraging them to integrate into their society and take an active part in its social, cultural, economic, and political affairs” (Canadian Multiculturalism Act, 1971 and 1988).

In the 1970s, both the U.S. and Canada passed laws to encourage the entry of business people and intra-company transferees (on the L-1 visa to the U.S., 1970) and attract temporary skilled workers (Employment Visa Regulations of 1973, Canada).<sup>1</sup> Despite similarities in U.S. and Canadian

<sup>1</sup>A comparison between temporary workers and skilled vs. agricultural ones may be a subject for future studies.

immigration legislation, no explicit mechanisms for cooperation on skilled migration existed until 1988, when the Canada-U.S. Free Trade Agreement (CUSFTA) was signed. Similar to the upcoming NAFTA (1994), CUSFTA facilitated the temporary entry into the United States of Canadian professional business persons “to render services for remuneration.”

The agreement marked the beginning of a human rights turn in migration policy in the 1990s, especially after Mexico joined NAFTA. In 1994, a regional market for the mobility of skilled personnel emerged, even though on unequal terms for the signing countries. The U.S. created special conditions for Mexican and Canadian workers under the TN visa. This agreement further promoted the attraction of human capital to the U.S. from both neighboring countries. As the legislative timeline shows (Table 1), Mexico has no talent attraction or brain gain policy, apart from certain scholarships given to graduate students, who are required to return to their countries of origin upon finishing their studies. This justifies why the present chapter centers on the policy of the U.S. and Canada as the main countries that attract skilled human capital.

After NAFTA came into effect, each country, especially the U.S. and Canada, continued enforcing its own migration laws that promoted skilled migration over other types of unskilled labor. In the U.S., a new Immigration Act enacted in 1991 established the H-1B visa program as it is known today, by limiting it to foreigners who temporarily perform work in “specialty occupations.” Both the U.S. and Canada promoted the immigration of Eastern Europeans, especially skilled ones, after the fall of Communism. Canada had an East European Self-Exiled Persons Designated Class, while the U.S. facilitated the entry of 750 scientists from former Soviet Union states, plus their family members, under the Soviet Scientists Immigration Act of 1992.

Attracting skilled workers was further emphasized with the American Competitiveness Act of 2001 and the reform to the Omnibus Appropriations Act (U.S.), which increased the number of H-1B skilled workers and extended the stay of intra-company transferees with L-1 visa. At the same time, Canada launched its Foreign Credential Recognition Program (2005) to facilitate the assessment and recognition of foreign qualifications for both regulated and nonregulated occupations.

This brief historical analysis shows an improvement in the laws on migration in the U.S. and Canada, when seen from the perspective of racial

and gender discrimination. It also shows a greater emphasis on skilled migration starting with World War II, under the assumption that this type of migration would contribute to economic development. In what follows and might be considered a ninth stage, is a change in the general discourse on migration in the U.S., which questions the attraction of skilled foreigners and migrants, in general using economic but also cultural arguments. Canada, by contrast, is following the same step-by-step attraction of foreign labor, especially skilled labor, taking advantage of the prejudiced discourse in the U.S.

TABLE 2  
NEW H-1B VISA APPLICATIONS APPROVED PER FISCAL YEAR

<i>Company</i>	2015	2016	2017	2018	<i>Change 2015-2018 (%)</i>
Amazon	1,066	1,414	2,494	2,839	166.00
Facebook	422	472	728	669	59.00
Apple	532	635	675	701	32.00
Microsoft	969	1,142	1,474	1,256	30.00
Google	849	682	1,071	724	-15.00
Tech Mahindra	1,571	1,227	2,224	590	-62.00
Cognizant	3,849	3,946	3,212	507	-87.00
Tata Consultancy	4,766	2,025	2,312	533	-89.00
Wipro	3,185	635	1,236	284	-91.00
Infosys	2,799	2,340	1,188	73	-97.00

SOURCE: D'Souza (2019).

The current ninth stage corresponds to a change of paradigm in migration policy laws and discourse in the U.S., as proposed in the hypothesis of the present study. The America First Policies (2020) implemented during Donald Trump's presidency further emphasized skills for attracting foreigners in order to eliminate "chain migration" or family reunification. However, the H-1B visas were stopped every year since 2017, either to remove backlogs, limit the entry of certain individuals such as those who also corresponded to the Muslim travel ban enforced in 2017, or for health reasons during the COVID-19 pandemic in 2020. Presidential discourse against H-1B pretended

that foreign workers were unfairly competing with the native-born, thus damaging U.S.-born professionals. The outcome was that some companies, especially the ones with Indian capital, hired fewer foreign workers on the H-1B visa (see Table 2). These data confirm the hypothesis that the present stage in immigration policy represents a step backward in terms of talent attraction for the U.S., with clear advantages for Canada.

## **A Comparative Discourse Analysis of “Brain Gain” in the U.S. and Canada**

This section is based on the state of the art of the brain-gain-vs.-brain-drain topic in independent U.S. and Canadian reports and related in-depth features quoted in the media. Independent reports, often released by migration and political think tanks, may be studied as a hybrid type of communication among academic and official sources and the public. They may also be considered a bridge among public opinion, actors involved in migration policy, and academic studies. This type of publication may have a direct impact on public policy. The pieces quoted below attempt to summarize the main arguments involved in our topic, as opposed to the option of a possible content analysis that would count related news and media reports. Most of the documents chosen were released after the Donald Trump presidency, but previous reports that mention similar topics are also included.

Results were summarized in four recurring topics: 1) the need to maintain brain gain through comprehensive immigration reform; 2) domestic brain drain in the U.S.; 3) brain waste; and 4) the Canadian Dream competing with the American Dream.

### **Topic 1: The Need to Maintain Brain Gain through Comprehensive Immigration Reform**

As a result of the historical emphasis on skilled migration, the profile of immigrants to the U.S. has been changing to include more professionals. A report released by the Migration Policy Institute (Batalova and Fix, 2017) assesses a slow shift in the composition of migrants to the U.S., consisting



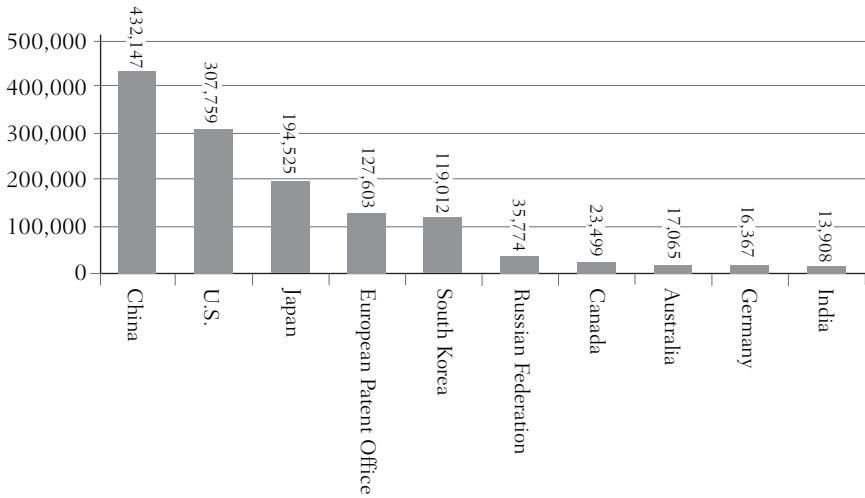
of a greater presence of skilled migrants (48 percent at present, compared to 31 percent between 2011 and 2015). All migrants to the United States are more educated nowadays and almost half enter on temporary visas such as the H-1B (Batalova and Fix, 2017: 34).

Nevertheless, the need to maintain brain gain through a comprehensive immigration reform that would attract more and better skilled migrants has been a topic of discussion for at least a decade, as has been the correct utilization of migrants' abilities. In 2011, a report released by the Brookings Institution (West, 2011) outlined "the contribution made by talented, hard-working, and entrepreneurial immigrants whose skills and knowledge created a prosperous new country" as one of the strongest narratives in U.S. history. By contrast, this report analyzed the way in which the U.S.'s "outmoded visa system" discourages skilled immigrants, with severe consequences for the economy. West called for a comprehensive immigration reform, in direct opposition to the way later proposed by the Trump administration, in order to increase or at least maintain the country's traditional brain gain.

West focused on migrants' contributions to the U.S. GDP. In particular, skilled migrants in the twenty-first century have contributed to the founding of at least a quarter of the new tech companies, co-authored a quarter of international patents, and founded more than half of the new tech start-ups in Silicon Valley. His evidence supports the economic argument for a better selection of skilled migration as opposed to family reunification, making the case for hiring more STEM workers (2011: 3). He bases his evidence on the declining number of patents filed by U.S. innovators, a situation that has worsened since this report's publication. China has indeed surpassed the number of U.S. patents in numbers (Figure 5). Even more interestingly, patent applications per million population for the top ten origins in 2018 show the U.S. is behind other countries such as South Korea, Japan, Switzerland, China, and Germany (see Figure 6).

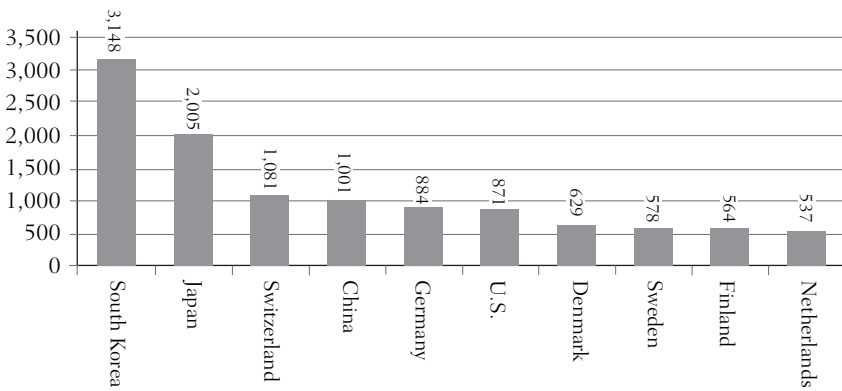
West made a point that would be constantly revisited after Donald Trump's presidential campaign in 2016 and in his subsequent administration: the need to improve the selection of migrants according to their skills, but without a cap (Kennedy, 2019). While institutions such as Brookings recommended an increase in skilled migration, Donald Trump believed a cap should exist to protect native-born workers.

FIGURE 5  
PATENT GRANTS BY THE TOP TEN PATENT OFFICES (2018)



SOURCE: World Intellectual Property Organization (2019).

FIGURE 6  
PATENT APPLICATIONS PER MILLION INHABITANTS  
FOR THE TOP TEN COUNTRIES (2018)



SOURCE: World Intellectual Property Organization (2019).

Back in 2011, West also compared the U.S. and Canadian immigration systems, finding that Canada was following a better international recruitment strategy based on its points system and incentives for permanent residency

and citizenship. His report proposed the “creation of a broadly representative, independent federal immigration commission” that would depoliticize the topic for more objective decisions (West, 2011: 7). Far from being depoliticized, migration has been one of the main issues of the presidential campaigns in 2016 and 2020.

## **Topic 2: Domestic Brain Drain in the U.S.**

A more recurring topic has been the domestic brain drain experienced by the U.S. as a result of unequal development across the country. A Social Capital Project report (SCP, 2019) discusses geographic inequalities produced by the domestic brain drain in the last fifty years in the U.S., which caused poor states to lose their skilled to more prosperous tech hubs and metropolises, the same places foreign workers go.

The SCP report considers brain gain a problem of inequality among international and domestic regions. Brain drain is a result of bad economic planning, among other social and political issues. It is also the complaint of the losers, since for every brain drain problem there is a brain gain or human capital winner.

For instance, the SCP report shows constantly rising brain drain from the Rust Belt and Southeastern states as opposed to considerable brain gain along the Boston-Washington corridor and on the West Coast. Similarly to foreign workers, highly-educated native-born adults move to “dynamic states with major metropolitan areas . . . leaving behind more rural and postindustrial states.” This causes regional inequality, economic stagnation, and declining social capital in states with major outmigration (SCP, 2019: 3). This economic division also corresponds to a political one, as “a greater share of the highly-educated tend to hold liberal political views, compared to those with less than college education. Those living in urban areas are also more likely to hold liberal political views, whereas those living in rural areas are commonly conservative. [U.S.] America’s major metropolitan areas tend to vote Democratic, while most other areas of the country vote Republican” (SCP, 2019: 23).

Before studying international brain drain, we should therefore analyze the domestic level and migration from rural to urban areas. According to his research for CityLab project, Richard Florida found that the end result of

domestic brain drain is “a lopsided ‘winner-take-all’ pattern of regional haves and have-nots. Our politics become ever more divisive and polarized as the ‘big sort’ grows ever bigger, eating away at the social fabric of our nation” (2019).

Florida’s research confirms this brainpower-gaining trend, which tends to widen the geographic divide between the winners and losers of the knowledge economy. Florida writes, “Behind this lies a tale of two migrations: the skilled and educated ‘mobile’ on the one hand and the less educated ‘stuck’ on the other.” Florida even recalls an anecdote from his life in Pittsburgh in 1999 when the local authorities created “Border Guard Bob,” “a uniformed sentinel who would patrol the region’s borders to convince talented local grads to stay—an initiative that quickly became the butt of jokes and was scuttled.” Florida’s conclusion is the same as SCP’s, both outlining how the health of associational life in the United States is affected by the geographical disparity of social capital drain:

Brain drain has significant consequences—economic, yes, but also political and cultural. By increasing social segregation, it limits opportunities for disparate groups to connect. And by siphoning a source of economic innovation from emptying communities, brain drain can also lead to crumbling institutions of civil society. As those natives who have more resources leave, those left behind may struggle to support churches, police, athletic leagues, parent-teacher associations, and local businesses. (Florida, 2019)

Very relevant to this study is the ninth stage in skilled migration history, which corresponds to a populist trend in politics and also shows a shift in the topics treated by reports and media, from international brain drain that favors the U.S. to domestic brain drain that damages the country. One of the solutions to this domestic brain drain, according to Florida, may be remote work, with the advantage of lower housing prices in less successful states.

The topic is also featured by Milligan (2019) in *U.S. News*, based on the same idea of brain drain that leads to economic loss and, furthermore, political polarization. This results in “two, mutually suspicious [U.S.] Americas: one that’s more urban, liberal, and diverse, and one that’s more rural, conservative and homogenous.” Even though Milligan states that “education is not a predictor on its own,” he also finds that “nearly all of the states with the biggest brain drain voted for Trump, while nearly all of those gaining educated residents cast their Electoral College votes for Clinton.”

### **Topic 3: Brain Waste**

The third topic is brain waste or de-skilling of foreign workers. Not only are professionals needed for a more competitive U.S. economy, but there is also concern about how their abilities are actually used. Batalova and Fix, in the aforementioned Migration Policy Institute report, explain that the education of migrants is even higher and growing faster than that of the native-born. According to the report, this trend was especially pronounced in the Rust Belt. “In Michigan and Ohio while 59 to 63 percent of recent arrivals had at least a bachelor’s degree, 26 to 27 percent of the native-born were college graduates” (Batalova and Fix, 2017: 2).

“What may come as a surprise is that 25 percent of recent arrivals who are unauthorized immigrants are college graduates. MPI estimates that approximately 1 million unauthorized immigrant adults possess a university degree” (Batalova and Fix, 2017: 6).

By contrast, the report also shows an increase in the underutilization of migrants’ abilities. Batalova and Fix find that “one in four, or nearly 2 million, U.S. college-educated immigrants were either working in low-skilled jobs or unemployed. This ‘brain waste’ comes at a cost of nearly [US]\$40 billion in unrealized earnings annually, with a resulting loss to federal, state, and local governments of [US]\$10 billion in uncollected taxes” (Batalova and Fix, 2017: 35). Similarly to another report by McHugh and Morawski (2017), they recommend better licensing procedures and better policies to encourage employers to “reduce their bias against foreign degrees and work experience, and creating opportunities to bridge educational and language gaps.”

### **Topic 4: The Canadian Dream Competing with the American Dream**

The competition between U.S. and Canadian migration policies is a shared topic in the reports and media features in both countries. It is often described as the U.S.’s recent inability to attract and retain foreign graduates. In 2018, Edgecliffe-Johnson warned in *The Financial Times* that “Corporate America’s Visa Loss is Canada’s Brain Gain.” Like many other media features, he starts with an Indian engineer in the U.S. who moves to Canada because of visa

hassles and difficulties in running a start-up in the U.S. Apparently a work permit in Canada takes five days to process, compared to three months in the U.S. Edgecliffe-Johnson analyzes how the America First immigration policy has affected skilled and unskilled workers alike, both white-collar and blue-collar workers. In particular, the travel ban and hate speech affected Indian migrants, some of whom chose Canada as a country for re-emigration and second citizenship.

This type of publication has been more recurrent since 2017. For instance, Singh (2019), featured by *CBS News*, states that graduate applicants from India to the U.S. fell by 8.8 percent, while Canada saw an increase of international graduate enrollment of 16.4 percent in 2017. Consequently, high-tech manufacturing companies such as Deloitte estimated that up to 2.4 million jobs could go unfilled between 2018 and 2028, costing the U.S. economy US\$2.5 trillion (Singh, 2019).

The issue was commented on by many migrants who found an opportunity to show their discontent with Trump's policy. In an *Expatrius Blog Network* post, Reiche (2019) notes the growing attraction of Canada as a second or first option for skilled migrants. It is pictured as a country friendly to foreigners, and this image helps build on the Canadian Dream possibly overtaking the American one. Reiche writes:

Seeing opportunities rather than threats in skilled foreign workers, Canada implements its Global Skills Strategy, which makes it easier to bring in foreign talent. Focusing on tech talents, the immigration system allows developers, computer analysts, software engineers, and alike to get work permits to enter Canada within two weeks of application. Moreover, Canadian policies try to retain the brightest foreign talent in the country already upon graduation, by granting foreign students work permits for up to three years after graduation. (2019)

The Canadian Dream was previously studied in various papers that summarize the history of Canadian migration policy from the perspective of people looking for a better life in North America (Ranke, 2012). This idea, which may come across as a promotional image of Canada, is used by the media and public figures alike. The Canadian government speaks of a "round 2" of brain gain in Canada, releasing news on visiting academics' part in Canadian research chairs. According to one release on its webpage:

Canada is the destination of choice for some of the world's leading scientists and scholars, including expatriate Canadian researchers who are coming home to further their thriving research careers. They see that Canadians respect the work of researchers who create new knowledge and help train the next generation of students. They understand that the Government of Canada has made science a priority following unprecedented investments in basic science. (Government of Canada, 2018)

Various Canadian public figures also help build on this public diplomacy discourse to favor the attraction of skilled foreigners. One hypothesis to be confirmed by further longitudinal studies is the circular relationship between the favorable discourse on migration policy in Canada, migration policy programs, and benefits to the Canadian economy. For instance, the National Bank of Canada's chief economist Stéfane Marion (quoted in Tejani, 2019) also explains how Canada went from "brain drain" to "brain gain," with Canada ranking first among OECD countries in attracting highly skilled immigrants as a proportion of total entries.

While that discourse may seem like propaganda, it actually corresponds to a particular economic approach. This open-door policy is of course based on labor market and demographic needs, as more Canadians are leaving the workforce than graduating to replace jobs in health care, technology, and services. Over time, one of the challenges of Canadian migration policy has been brain retention, that is, the ability to maintain a highly skilled workforce that has often been attracted by a greater number of and better paying jobs in the U.S. An article by Lemieux, Dorland, and Givoni (2018) addresses the puzzle of the sustainability of this sudden brain gain in Canada. Talent retention will indeed require better paid jobs and a wider range of projects at tech companies in Canada.

## **Conclusions**

North America, the main region for attracting talent since World War II, is the most relevant case study for brain attraction vs. brain drain. It is also a good starting point for a normative theoretical discussion: what is the correct management of human capital?

The discussion of brain gain from the perspective of meritocracy and global justice entails a different understanding of present populist claims

around skilled migration. What may seem like an irrational policy may in fact have ethical underpinnings. Under conditions of populist claims for justice, meritocracy has been questioned for perpetuating elites, rather than offering equal opportunities. Therefore, the selection of skilled migrants was questioned in the U.S. for damaging local workers, with new arguments that differ from historical migration policies.

The replacement of the American Dream with America First policies creates a new, unfriendly image of the country as a possible destination, and also affects the integration and coexistence of migrant minorities. In the long term, it remains to be seen whether the Canadian Dream will overtake the American Dream, in terms of attracting more skilled foreign workers.

Paradoxically, the analysis of brain gain also leads to further considerations about brain drain, which may even be redefined in terms of forced migration: when professionals are forced to leave their place of origin (town, city, or region) to find work in their own country or abroad. As the U.S. case shows, brain drain is often based on incorrect domestic economic policies, and a lack of internal migration planning. One of the results of this study is that domestic brain drain should be a greater topic of study to complement existing literature on an international level.

## Bibliography

### AMERICA FIRST POLICIES

2020 “Immigration Reform to Put America First,” <https://www.americafirst-policies.org/issues/immigration-reform-to-put-america-first/>, accessed April 28, 2020.

### ARGITIS, THEOPHILOS

2019 “Canada Is Luring Tech Talent Away from U.S. with Fast-Track Visa,” June 12, <https://www.bloomberg.com/news/articles/2019-06-12/canada-is-luring-tech-talent-away-from-u-s-with-fast-track-visa>, accessed April 4, 2020.

### BATALOVA, JEANNE, BRITTANY BLIZZARD, and JESSICA BOLTER

2020 “Frequently Requested Statistics on Immigrants and Immigration



in the United States,” *Migration Information Source*, February 14, <https://www.migrationpolicy.org/article/frequently-requested-statistics-immigrants-and-immigration-united-states>, accessed February 8, 2021.

BATALOVA, JEANNE, and MICHAEL FIX

2017 *New Brain Gain: Rising Human Capital among Recent Immigrants to the United States*. Washington, D.C.: Migration Policy Institute.

BATALOVA, JEANNE, and B. LINDSAY LOWELL

2006 “The Best and the Brightest: Immigrant Professionals in the U.S.,” in M. P. Smith, and A. Favell, eds., *The Human Face of Global Mobility: International Highly Skilled Migration in Europe, North America and the Asia-Pacific*, vol. Comparative Urban and Community Research, Chapter 4. New York: Routledge, 81-101.

BORJAS, GEORGE J.

2005 “The Labor-market Impact of High-Skill Immigration,” *American Economic Review* 95, no. 2: 56-60.

CAMPBELL, BENJAMIN A., RUSSELL COFF, and DAVID KRYSZYNSKI

2012 “Rethinking Sustained Competitive Advantage from Human Capital,” *Academy of Management Review* 37, no. 3: 376-395.

DARMOE, JOSEPH

2017 “The Professor Coming Home: Determinants of Retention of Brain Gain Knowledge,” *International Journal of Management in Education* 11, no. 2: 128-139.

DEFOORT, CÉCILY, and GODFREY ROGERS

2008 “Long-term Trends in International Migration: An Analysis of the Six Main Receiving Countries,” *Population* 63, no. 2: 285-317.

DERBER, CHARLES, WILLIAM A. SCHWARTZ, and YALE R. MAGRASS

1990 *Power in the Highest Degree: Professionals and the Rise of a New Mandarin Order*. New York: Oxford University Press on Demand.

D'SOUZA, DEBORAH

2019 "The Impact of Trump's H-1B Visa Crackdown in 5 Charts," <https://www.investopedia.com/news/impact-trumps-H-1B-visa-crackdown-5-charts/>, accessed April 28, 2021.

EDGECLIFFE-JOHNSON, ANDREW

2018 Corporate America's Visa Loss Is Canada's Brain Gain, *Financial Times*, December 28, <https://www.ft.com/content/b99c0090-0a01-11e9-9fe8-acdb36967cfc>, accessed April 2, 2020.

FLORIDA, RICHARD

2019 "The Geography of Brain Drain in America," <https://www.citylab.com>, accessed February 2, 2020.

GOVERNMENT OF CANADA

1988 "Canadian Multiculturalism Act," <https://laws-lois.justice.gc.ca/eng/acts/c-18.7/page-1.html>, accessed April 30, 2020.

2018 "Canada's Brain Gain. Round 2," March 29, [https://www.canada150.chairs-chaieres.gc.ca/news\\_room-salle\\_de\\_presse/news\\_releases-communiqués\\_de\\_presse/2018/march-mars-2018-eng.aspx](https://www.canada150.chairs-chaieres.gc.ca/news_room-salle_de_presse/news_releases-communiqués_de_presse/2018/march-mars-2018-eng.aspx), accessed April 28, 2021.

(IMI) INTERNATIONAL MIGRATION INSTITUTE

2020 "Demig Policy Data, Determinants of International Migration," <https://www.imi-n.org/data/demig-data/demig-policy-1>, accessed February 10, 2020.

KENNEDY, ANDREW

2019 "The Politics of Skilled Immigration: Explaining the Ups and Downs of the US H-1B Visa Program," *International Migration Review* 53, no. 2: 346-370.

LEMIEUX, JEAN-MICHEL, BRUCE DORLAND, and INMAR GIVONI

2018 "How to Sustain Canada's Brain Gain," *The Globe and Mail*, May 31, accessed January 6, 2020.

LIM, DESIREE

2017 “Selecting Immigrants by Skill: A Case of Wrongful Discrimination?,” *Social Theory and Practice* 43, no. 2: 369-396.

LO, LUCIA, WEI LI, and WAN YU

2019 “Highly-skilled Migration from China and India to Canada and the United States,” *International Migration* 57, no. 3: 317-333.

MARKOVITS, DANIEL

2019 *The Meritocracy Trap: How Meritocratic Inequality Dismantles the Middle Class and Devours the Elite*. New York: Penguin Press.

MATTHEWS, MARK, and MARY LORD

2017 “Brain Gain,” *ASEE Prism* 26.7, 24, no. 29, accessed April 13, 2020.

McHUGH, MARGIE, and MADELEINE MORAWSKI

2017 *Successful Initiatives for Integrating Foreign-trained Immigrant Professionals*. Washington, D.C.: Migration Policy Institute.

MILLIGAN, SUSAN

2019 “Brain Drain: What States Stand to Lose,” *US News*, June 12, <https://www.usnews.com/news/best-states/articles/2019-06-12/how-brain-drain-makes-social-segregation-and-political-division-worse>, accessed February 20, 2020.

PLOYHART, ROBERT E., ANTHONY J. NYBERY, GREG REILLY,  
and MARK A. MALTARICA

2014 “Human Capital Is Dead; Long Live Human Capital Resources!,” *Journal of Management* 40, no. 2: 371-398.

RANKE, SASCHA

2012 “The Canadian Dream: Canadian Immigration from 1500 until Today,” seminar paper, GRIN Verlag, <https://www.grin.com/document/196846>.

REICHE, SEBASTIAN

2019 “From Brain Drain to Brain Gain: The Case of Canada,” Blog of University of Navarra Business School, April 5, <https://blog.iese.edu/expatriatus/2019/04/05/from-brain-drain-to-brain-gain-the-case-of-canada/>, accessed March 8, 2020.

SCHWAB, KLAUS, ed.

2012 *The Global Competitiveness Report 2011–2012*, World Economic Forum, [http://www3.weforum.org/docs/WEF\\_GCR\\_Report\\_2011-12.pdf](http://www3.weforum.org/docs/WEF_GCR_Report_2011-12.pdf).

SCP (SOCIAL CAPITAL PROJECT)

2019 “Losing Our Minds: Brain Drain across the United States,” Report no. 2, April, Washington, D.C.

SHACHAR, AYELET

2006 “The Race for Talent: Highly Skilled Migrants and Competitive Immigration Regimes,” *NYU Law Review* 81: 148.

2011 “Picking Winners: Olympic Citizenship and the Global Race for Talent,” *The Yale Law Journal* 120, no. 8: 2088-2139.

SINGH, VIKRAM J.

2019 “Commentary: The Great American Brain Drain Is Coming,” *CBS News*, May 23, <https://www.cbsnews.com/news/commentary-the-great-american-brain-drain-is-coming/>, accessed January 10, 2020.

TEJANI, SHAFIN DIAMOND

2019 “How Canada Went from ‘Brain Drain’ to ‘Brain Gain’ (and How to Keep It That Way),” *Cantech Letter*, December 18, <https://www.cantechletter.com/2019/12/how-canada-went-from-brain-drain-to-brain-gain-and-how-to-keep-it-that-way/>, accessed January 30, 2020.

TIGAU, CAMELIA, and AMBA PANDE

2020 “Brain Rejection under the Trump Presidency: Evidence from Indian and Mexican Professionals in the U.S.,” in Mónica Vereá, ed., *Anti-Immigrant Policies during the Trump Era*. Mexico City: CISAN-UNAM.

WEST, DARRELL M.

2011 “Creating a ‘Brain Gain’ for U.S. Employers: The Role of Immigration,” Policy Brief, Brookings Institute, no. 178, <https://www.brookings.edu/research/creating-a-brain-gain-for-u-s-employers-the-role-of-immigration/>, accessed December 13, 2019.

WORLD INTELLECTUAL PROPERTY ORGANIZATION

2019 “The Geography of Innovation: Local Hotspots, Global Networks,” <https://www.wipo.int/wipr/en/2019/>, accessed April 20, 2020.