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# From Foundations to Frontiers: Chinese American Contributions to the Fabric of America



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## About this project

*From Foundations to Frontiers: Chinese American Contributions to the Fabric of America* is an Economist Intelligence Unit (EIU) report that has been commissioned by the Committee of 100. Built on unique data development, analysis and economic modeling, expert interviews and literature reviews conducted between May and September 2020, the report examines the multi-faceted Chinese American contributions to US society historically and presently. The EIU bears sole responsibility for the content of this report; the findings and views expressed do not necessarily reflect the views of the commissioner.

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## About The Economist Intelligence Unit

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## About the Committee of 100

The Committee of 100 (C100) is a non-partisan leadership organization of prominent Chinese Americans in business, government, academia, and the arts. The Committee's purpose is to provide leadership and act as a constructive force in the dual mission of promoting the full participation of all Chinese Americans in American society and acting as a public policy resource for the Chinese American community and advancing constructive dialogue and relationships between the peoples and leaders of the United States and Greater China. C100 has a rich legacy of harnessing its distinguished membership to address significant and complex issues pertaining to Americans of Chinese descent and U.S.-China relations. For more information, visit [www.comittee100.org](http://www.comittee100.org).

While every effort has been taken to verify the accuracy of this information, The Economist Intelligence Unit Ltd. cannot accept any responsibility or liability for reliance by any person on this report or any of the information, opinions or conclusions set out in this report.

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# Foreword

From Committee of 100

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**H. Roger Wang,  
Chairman of Committee of 100**

“This landmark study is dedicated to the countless millions of Chinese Americans who came in the past two centuries, adopted and made America their home, and gave their ingenuity, dedication, and lives to make this nation what it is today. Chinese American contributions in science, technology, healthcare, public service, and the arts have paved the way for the advancement of all Americans.”



**Zhengyu Huang,  
President of Committee of 100**

“Like other immigrant communities, even after 175 years, Chinese Americans continue to face barriers to advancement in the form of systemic biases and entrenched stereotypes. America can only reach its full potential when all of its citizens are provided the means to reach their full potential. We hope this study will serve as the foundation for all Americans to come together to create a more just and equal society for all.”

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# Executive Summary

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The United States' economic strength, societal resilience and cultural vibrancy have all been enriched by the interplay between its diverse ethnic and racial groups—both those indigenous to the country and those who have arrived over several centuries. The nation has prospered thanks to the cross-pollination of ideas, perspectives and values that demographic diversity brings.

With a history of immigration to the US stretching back over 170 years, Chinese migrants were among the first non-native people of color to arrive in the country. Since their first arrivals in the country, people of Chinese descent, alongside other immigrant groups, have played an important role in the building of the nation and the shaping of its economic, institutional and social fabric. Today there are approximately 3.9m American citizens of Chinese descent, accounting for 1.2% of the total US population.<sup>1</sup>

In an age inflamed with resurgent racism, and with geopolitical tension reversing decades of fruitful exchange with China, the US has reached a moment when it is critical to examine how diversity has benefited the society and how minority groups such as Chinese Americans have, over time, become identified with the country itself. With the country's combined racial minorities set to make up a majority of the population by 2045, an awareness of the contribution of immigrant groups—and the damaging misperceptions that exist alongside this—can ensure a future of co-operation, mutual appreciation and respect.<sup>2</sup>

This white paper, produced by The Economist Intelligence Unit and commissioned by the Committee of 100, a non-partisan Chinese American leadership organization, combines unique data development, analysis and economic modeling, and expert interviews, to

illuminate how the Chinese American story, very often untold, interweaves with—and has in some ways shaped—that of the modern US. Looking ahead, this study also examines the ongoing challenges Chinese Americans face that might impede them from continuing to contribute in the future.

### Key takeaways

**The Chinese American community contains many different groups and cohorts, reflecting complex migration patterns, past and present.** The Chinese American community today is present across all states in the US, with members ranging from first-generation immigrants to fifth- or sixth-generation descendants, and representing great socioeconomic diversity. While the majority of Chinese Americans aged older than 25 have a bachelor's degree or above—compared with a third of general Americans in the same age cohort—20% of Chinese Americans aged five and older still cannot speak proficient English, double the share among Americans in general.<sup>3</sup> Although the community overall has an income level above the national average, roughly one in ten households earns less than US\$15,000 per year and 35% have incomes below the national median.<sup>4</sup> They are also active across varied professional occupations and both the public and private sectors. This diversity is a result of the community's immigration and integration history, which has intertwined with legal and social evolution in American society as well as geopolitical shifts. The more welcoming the US has been to Chinese

Americans, as with other immigrant groups, the more it has benefited from their presence.

**Chinese Americans have contributed extensively to the US economy,** from building transport and agricultural infrastructure in the 19th century to helping the nation secure its leadership in the Space Race in the 20th century and the high-tech industries today. Their involvement in the US economy spans small businesses in essential services such as food and laundry, and in technical professions including medicine, education and engineering. Overall, Chinese Americans make a significant economic contribution in terms of GDP generation, job creation and capital market growth. They contributed over US\$300bn to US GDP in 2019 through consumer spending, supporting 3m jobs.<sup>5</sup> There are over 160,000 Chinese American-owned businesses in the US, generating approximately US\$240bn in revenue and supporting 1.3m jobs as of 2017.<sup>6</sup> Fortune 500 companies founded by Chinese Americans have supported hundreds of thousands of jobs, and their market capitalization has reached as high as US\$578bn, bringing significant value creation to public shareholders including retail investors and 401k pension accounts.<sup>7</sup>

**Chinese Americans have come to play a greater role in public and institutional life.** Their pursuit of civil rights and judicial justice in the 1800s established many landmark legal precedents that would significantly shape American democracy. As their political rights have strengthened, Chinese Americans have also played a

more active role in civil service and political activities. Between 2009 and 2018, Chinese Americans' employment in public administration grew by 68%, outpacing the growth of the Chinese American population and of the public administration workforce as a whole.<sup>8</sup> Chinese Americans have also played an important and under-reported role in US national defense, from military enrollment to scientific and professional contributions to defense and security agencies. As outer space becomes a geopolitical hotspot, one in 25 aerospace engineers in the US is Chinese American, and one in 20 aerospace engineers in the aerospace manufacturing industry is Chinese American.<sup>9</sup>

**Chinese Americans are an influential force within US society and culture.**

Their contributions range from popular dishes in the national cuisine to creative works in photography, cinema and fashion, gathering more mainstream prominence in recent decades. One in 25 chefs and head cooks in the US is Chinese American, as are one in 20 fashion designers and one in 30 architects.<sup>10</sup> Chinese Americans have also helped to forge social support structures through active involvement in non-profits, volunteering and philanthropy, as well as making important contributions to public health and social well-being. Since March 2020 more than 690 Chinese American grassroots organizations have raised over US\$18m and delivered

millions of items of personal protective equipment (PPE) and meals to hospitals, nursing homes, police departments and other agencies in the fight against the COVID-19 pandemic.<sup>11</sup> Today, one-tenth of working Chinese Americans are employed in healthcare and health-support occupations.<sup>12</sup>

**Continuing—and evolving—barriers restrict Chinese American participation in US society, resulting in lost opportunities for the country as a whole.**

Decades of anti-racist jurisprudence, including the efforts of Chinese immigrants, has countered and, to some extent, neutralized, systemic discrimination in the form of legislation and bureaucratic oppression. However, considerable challenges remain. Anti-Chinese sentiment linked to US-China geopolitical tensions and the COVID-19 pandemic is threatening the safety and well-being of the Chinese American community. In addition, the community remains under-represented in executive corporate positions. Despite a fast-growing population of eligible voters, the community's voter turnout has also remained below the national level. Some Chinese American citizens, especially those with limited English language skills and education levels, struggle to advance, leaving a sizeable share below the median income level. Tackling these barriers would unleash untapped economic, political and creative potential among Chinese Americans, which, in turn, would benefit the nation as a whole.





<sup>1</sup> As of 2018, approximately 5.3m people in the US self-identify as ethnically Chinese, either exclusively or as part of a multi-ethnic identity; 75% (3.9m) are American citizens. Unless otherwise indicated, the designation 'Chinese American' throughout this report refers to the latter group: American citizens of ethnically Chinese descent.

<sup>2</sup> William H. Frey, "The US Will Become 'Minority White' in 2045, Census Projects," Brookings, March 14, 2018, <https://www.brookings.edu/blog/the-avenue/2018/03/14/the-us-will-become-minority-white-in-2045-census-projects/>.

<sup>3</sup> US Census Bureau, 2018 American Community Survey 1-year estimates, public use microdata sample (PUMS); The Economist Intelligence Unit analysis.

<sup>4</sup> US Census Bureau, 2018 American Community Survey 1-year estimates, PUMS; The Economist Intelligence Unit analysis.

<sup>5</sup> The Economist Intelligence Unit analysis. See Appendix for methodology details.

<sup>6</sup> Not including nonemployer businesses, i.e. businesses that have no paid employment and payroll; potentially including

businesses established by non-American citizens. Source: US Census Bureau, Annual Business Survey 2017; The Economist Intelligence Unit analysis.

<sup>7</sup> Fortune 500; The Economist Intelligence Unit analysis. The value is as of June 2020 after inflation adjustment.

<sup>8</sup> US Census Bureau, 2018 American Community Survey 1-year estimates, PUMS; The Economist Intelligence Unit analysis.

<sup>9</sup> US Census Bureau, 2018 American Community Survey 1-year and 5-year estimates, PUMS; The Economist Intelligence Unit analysis.

<sup>10</sup> US Census Bureau, 2018 American Community Survey 1-year estimates, PUMS; The Economist Intelligence Unit analysis.

<sup>11</sup> "Chinese Americans Joining Our Nation's Fight against COVID-19," Chinese Americans United for America, accessed September 15, 2020, <https://www.caufa.org/>.

<sup>12</sup> US Census Bureau, 2018 American Community Survey 1-year estimates, PUMS; The Economist Intelligence Unit analysis.

# 01 Introduction

Today, approximately 5.3m people in the US are of Chinese descent, and 75% (3.9m) are American citizens (henceforth referred to as “Chinese Americans”).<sup>13</sup> Chinese Americans make up 1.2% of the US total population. They form a diverse group, residing in all states and crossing every economic and social facet (Figure 1). This diversity is a result of over 170 years of immigration and integration.

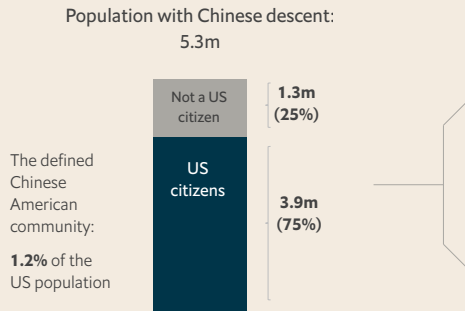
## Immigration

Historically, the Chinese arrived in the US in several waves. Beginning in the mid-1800s, early generations of Chinese immigrants came primarily as workers in construction, mining and agriculture, and, in some cases, became small business owners. Enduring economic suffering and social challenges at home, ranging from tax increases and forfeiture of land to overpopulation and peasant rebellions, many Chinese people were drawn to the US by the Gold Rush and the rapid growth of the New World.<sup>14</sup>

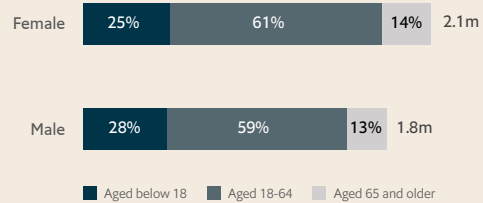
This immigration flow was soon severely limited by discriminatory legislation, including the Chinese Exclusion Act of 1882. The act barred the entry of Chinese workers for ten years and prohibited Chinese people from becoming citizens through naturalization. After being extended twice, the act was made permanent in 1904.<sup>15</sup> This immigration restriction, alongside other factors including a lack of Chinese women among the early immigrants and low rates of interracial marriages, resulted in a significant decline in the Chinese American population.<sup>16</sup> Between 1880 and 1940, prior to the repeal of the Act in 1943, the number of people of Chinese descent in the US declined by over one quarter and their percentage in the total population more than halved (Figure 2).

Sixty years after its installment, the Chinese Exclusion Act was revoked in 1943, primarily driven by the alliance formed between the US and China during World War II.<sup>17</sup> The repeal, together with other immigration policies, especially the 1965 Immigration and Nationality Act,<sup>18</sup> reopened the immigration pathway to Chinese wage workers, entrepreneurs and professionals with various scientific and technical skills, while also

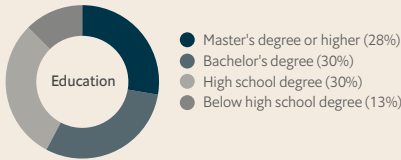
**FIGURE 1** Demographics of Chinese Americans



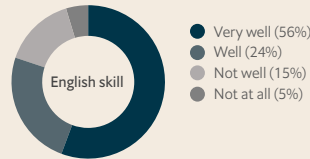
Among Chinese Americans, women slightly outnumber men, and roughly three-quarters of the total population are aged 18 and older.



Chinese Americans have diverse levels of educational attainment, although the majority of those aged older than 25 have a bachelor's degree or above.



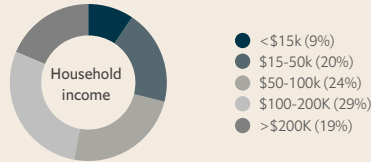
Most Chinese Americans aged five and older speak proficient English, but 20% regularly face language difficulties.



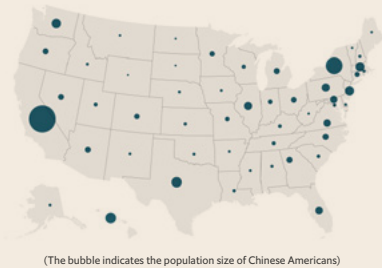
Chinese Americans are active in both private and public sectors. Over one-fifth work for not-for-profit organizations or government agencies.



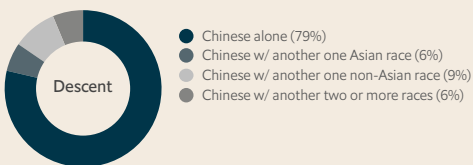
Although the community overall has an income level above the national average, one in 10 households earns less than US\$15k per year and 35% have incomes below the national median.



Chinese Americans are resident across the country. California, New York, Hawaii, Texas and Washington have the largest communities, accounting for 64% of the total Chinese American population.



Thanks to the diverse geographic origins of their ancestors and assimilation into American society, over one-fifth of Chinese Americans identify themselves with at least one ethnic descent other than Chinese.



Sources: US Census Bureau, 2018 American Community Survey 1-year estimates, public use microdata sample (PUMS); The Economist Intelligence Unit analysis. Due to rounding errors, some distribution percentages exceed 100.

“Mirroring their immigration experience, the domestic integration of Chinese communities has been neither smooth nor linear.”

leading to inflows of students seeking a world-class American education, many of whom stayed after graduation and later became US citizens.

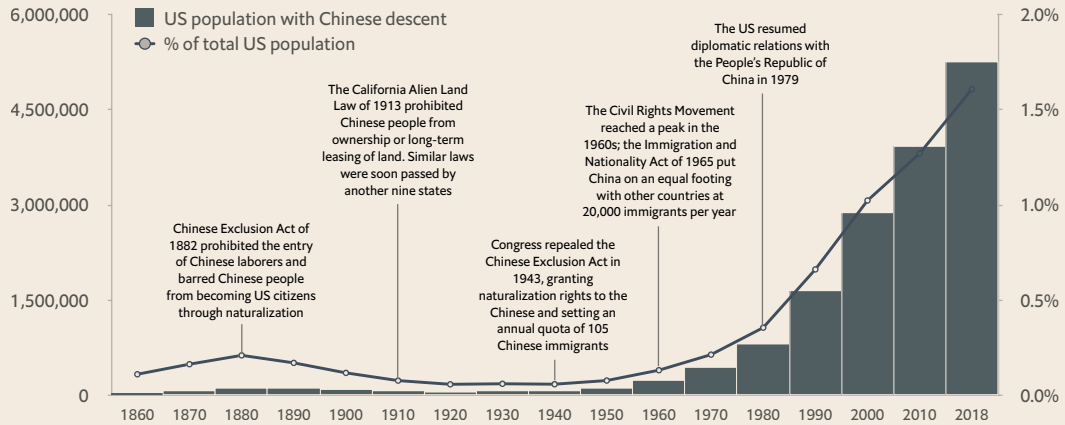
Initially, the majority of Chinese immigrants arriving during the 1950-70s were from Hong Kong and Taiwan, as direct emigration from China was not possible until the US and China restored diplomatic ties in 1979. Following the normalization of US-China relations, the number of Chinese people arriving from mainland China has grown significantly over time—in 2018, China was the third-largest source country of naturalized citizens in the US, behind Mexico and India.<sup>19</sup> In addition, political turmoil in Cuba, Peru, Burma, Indonesia, the Philippines and Vietnam in the second half of the century also brought in thousands of people with Chinese descent from those areas.<sup>20</sup> For example, approximately 35% of refugees who arrived in the US from Vietnam when the Vietnam War ended in 1975 were ethnic Chinese.<sup>21</sup>

A large number of Chinese Indonesians also sought political asylum in the US following violence and riots in the mid-1960s and again in the late 1990s.

The various countries of origin, coupled with the overall increase in interracial marriages following the lift of anti-miscegenation laws in the 1960s, have led to diverse descents among Chinese Americans.<sup>22</sup> According to 2018 data, over one-fifth of Chinese Americans identify themselves with at least one ethnic descent other than Chinese (Figure 1).<sup>23</sup>

### Integration

Mirroring their immigration experience, the domestic integration of Chinese communities has been neither smooth nor linear. Arriving in the American West amid the Gold Rush, early immigrants immediately encountered racial discrimination and class exploitation. They were deemed racial inferiors, along with Africans, Mexicans and American Indians. Later, as an economic depression hit the West in the 1870s, anti-Chinese and anti-Asian sentiment and violence grew among white workers, farmers and fishermen who blamed the Chinese for their economic distress. The Chinese American community frequently suffered from looting, lynching and expelling by murderous mobs. In turn, many Chinese Americans moved to the East, Midwest and the South, where their presence was better tolerated. By the turn of the 20th century, Chinese Americans resided in every US state.<sup>24</sup>

**FIGURE 2** Population of Chinese Descent in the US, 1860-2018

Sources: The Economist Intelligence Unit analysis based on 1) U.S. Census Bureau, *Historical Census Statistics on Population Totals by Race, 1790 to 1990, and by Hispanic Origin, 1970 to 1990, for the United States, Regions, Divisions, and States*. 2) U.S. Census Bureau, *The Asian Population: 2000*. 3) U.S. Census Bureau, 2018 American Community Survey 2018 one-year estimates, public use microdata sample (PUMS). Note: 2000, 2010 and 2018 data include population who self-identified as ethnically Chinese, either exclusively or as part of a multi-ethnic identity. Prior to 2000, because the option to identify with more than one race/ethnicity was not provided in census questionnaires, the data might not fully capture those with multi-racial/ethnic descent.

Driven by opportunistic politicians, discriminatory legislation also arose at both state and federal levels, limiting the economic and social activities of Chinese and other Asian immigrants. The California Alien Land Law of 1913 prohibited many ethnic groups from ownership or long-term leasing of land, initially targeting Japanese people but affecting Chinese as well. Similar legislation was soon passed in nine other states.<sup>25</sup> In addition, as the Chinese Exclusion Act banned Chinese immigrants from obtaining citizenship through naturalization, for many decades they faced limited access to job opportunities, particularly those requiring practice licenses granted to only American citizens—such as physicians.<sup>26,27</sup>

As a result of legal barriers and anti-Chinese sentiment, for decades Chinese Americans were restricted to the margins of society. They clustered in Chinatown communities that best served their economic, social and political needs. Facing limited employment opportunities, many started small businesses, often in the form of mom-and-pop storefronts; those who were able to start small factories tended to specialize in less lucrative areas, such as ready-made clothing, undergarments and slippers, to avoid competition with white manufacturers.<sup>28</sup> In the 1940s, the domestic labor shortage during World War II and the repeal of the Chinese Exclusion Act opened up new opportunities for Chinese Americans,



who were increasingly able to find jobs in private companies and professional fields outside of Chinatown.<sup>29</sup> Later, the civil rights movement led by Black Americans in the 1950s and 1960s gave rise to dramatic social and legal changes that ended formal racial segregation and prohibited employment discrimination based on race, color, religion, sex or national origin, further expanding Chinese Americans' access to the country's education and research systems and a broader spectrum of professions.<sup>30</sup>

Over time, a combination of population growth, immigration and assimilation

has created a robust, heterogeneous Chinese American community, which spans a diversity of income, educational attainment and language levels. Working in private companies, local and federal governments, and non-profits (Figure 1), Chinese Americans have for generations contributed to the economic, institutional and social fabric of American life. However, in an era of rising nationalism and nativism, there is a risk that this progress could backslide for the Chinese American community and others, resulting in under-realized potential and missed opportunities for US society as a whole.

<sup>13</sup> U.S. Census Bureau, 2018 American Community Survey 1-year estimates, public use microdata sample (PUMA). Data retrieved in May 2020.

<sup>14</sup> Judy Yung, Gordon H. Chang, and H. Mark Lai, *Chinese American Voices: From the Gold Rush to the Present* (University of California Press, 2006), 1.

<sup>15</sup> Yung, Chang, and Lai, *Chinese American Voices: From the Gold Rush to the Present*, 4.

<sup>16</sup> While many early Chinese migrants to the US were married men, most did not bring their wives and families for cultural and economic reasons; later, they were prevented from doing so by anti-Chinese immigration laws. See Yung, Chang, and Lai, *Chinese American Voices: From the Gold Rush to the Present*, Part I.

<sup>17</sup> "Repeal of the Chinese Exclusion Act, 1943," US Department of State Office of the Historian, accessed September 15, 2020, <https://history.state.gov/milestones/1937-1945/chinese-exclusion-act-repeal>.

<sup>18</sup> The Immigration and Naturalization Act of 1965 eliminated an earlier immigration quota system based on national origin (which limited the number of Chinese migrants allowed into the US annually to just 105) and established a new immigration policy giving preference to family reunification and skilled labor. (Source: "U.S. Immigration Since 1965," History.com, June 7, 2019, <https://www.history.com/topics/immigration/us-immigration-since-1965>.)

<sup>19</sup> John Teke, "U.S. Naturalizations: 2018" (US Department of Homeland Security Office of Immigration Statistics, August 2019), [https://www.dhs.gov/sites/default/files/publications/immigration-statistics/yearbook/2018/naturalizations\\_2018.pdf](https://www.dhs.gov/sites/default/files/publications/immigration-statistics/yearbook/2018/naturalizations_2018.pdf).

<sup>20</sup> Yung, Chang, and Lai, *Chinese American Voices: From the Gold Rush to the Present*, 227.

<sup>21</sup> Yung, Chang, and Lai, *Chinese American Voices: From the Gold Rush to the Present*, 228.

<sup>22</sup> Sharon M. Lee and Keiko Yamanaka, "Patterns of Asian American Inter-marriage and Marital Assimilation," *Journal of Comparative Family Studies* 21, no. 2 (1990): 287–305.

<sup>23</sup> US Census Bureau, 2018 American Community Survey 1-year estimates, PUMS; The Economist Intelligence Unit analysis.

<sup>24</sup> Yung, Chang, and Lai, *Chinese American Voices: From the Gold Rush to the Present*, 4.

<sup>25</sup> Masao Suzuki, "Important or Impotent? Taking Another Look at the 1920 California Alien Land Law," *The Journal of Economic History* 64, no. 1 (2004): 125–43.

<sup>26</sup> Scott D. Seligman, "Joseph Thoms: Defending America's Chinese," *New York Almanack*, September 28, 2015, <https://www.newyorkalmanack.com/2015/09/joseph-thoms-defending-americas-chinese/>.

<sup>27</sup> David FSMB, "Medical License: Citizenship Required?," *The Armchair Historian*, June 14, 2019, <https://armchairhistorian.blog/2019/06/14/medical-license-citizenship-required/>.

<sup>28</sup> Yung, Chang, and Lai, *Chinese American Voices: From the Gold Rush to the Present*, 4.

<sup>29</sup> Yung, Chang, and Lai, *Chinese American Voices: From the Gold Rush to the Present*, 106.

<sup>30</sup> "Civil Rights Act of 1964," History.com, February 10, 2020, <https://www.history.com/topics/black-history/civil-rights-act>.



## 02 Building an economic powerhouse

The US has retained its position as the world's largest economy since 1871, when it overtook Britain.<sup>31</sup> In large part, this economic strength is a result of the labor and intellectual contributions of generations of immigrants, including Chinese Americans. The first motivation behind Chinese migration to the US was economic, with early generations of Chinese immigrants making lasting contributions to critical infrastructure that made possible America's "special century" of growth (1870-1970).<sup>32</sup> Entrepreneurial immigrants formed small businesses to serve Chinese consumers and, later, to provide much-needed services in everything from laundry to food and accommodation. Since the repeal of discriminatory laws in the mid-20th century, Chinese Americans have entered occupations across every industry, including science and high-technology, and as founders and leaders of large corporations. Today, Chinese Americans—as consumers, employees, business owners and corporate leaders—make significant economic contributions in terms of GDP generation, job creation and capital market growth (Figure 4).



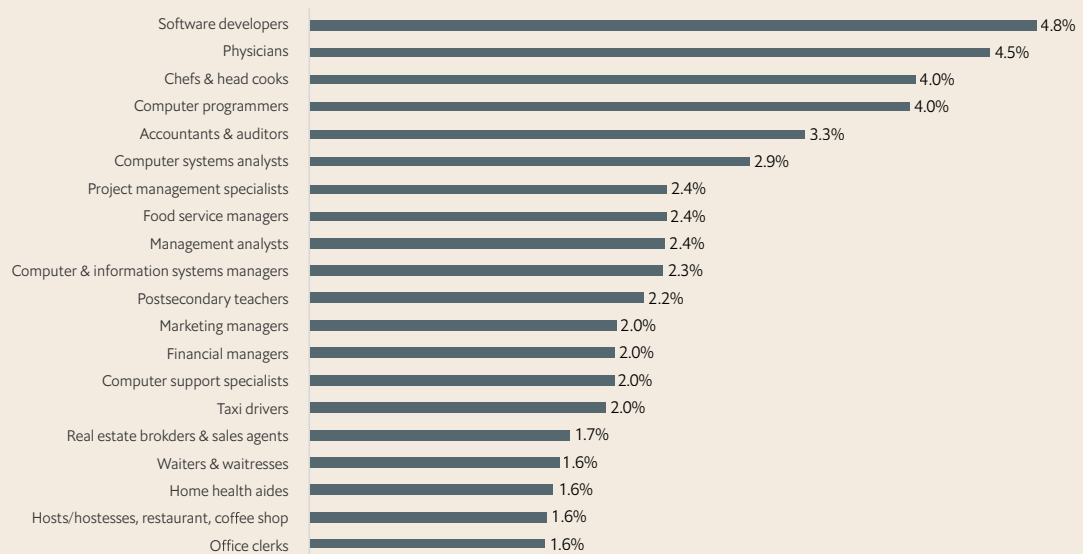
### Dynamism in diversity

Chinese Americans today represent a mosaic of communities across a broad range of economic segments. They have outsized representation in jobs close to many Americans' daily lives, from chefs to taxi drivers, real-estate brokers to domestic service providers, and in more technical professions like software development, computer programming, medicine, academia and science (Figure 3). They work across sectors, with the majority (63%) active in professional and business services, health services, leisure and hospitality, wholesale and retail trade, and education industries.<sup>33</sup>

Chinese Americans are also an integral part of American entrepreneurship (Box 1). There

are over 160,000 Chinese American-owned businesses in the US, making up nearly 3% of all firms that have paid employment and payroll.<sup>34</sup> These businesses, over 80% of which are small firms with fewer than ten employees, are spread across varied segments. They are particularly active in the sectors of accommodation and food services, wholesale and retail trade, healthcare and social assistance, and professional, scientific and technical services—roughly three-quarters of Chinese American-owned businesses operated in these sectors in 2017.<sup>35</sup> One in ten businesses that provide food or accommodation services and one in 20 wholesale-trade businesses in the US are owned by Chinese Americans.<sup>36</sup>

**FIGURE 3** The 20 occupations with the highest share of Chinese American workers, as of 2018 (among the top 100 US occupations)

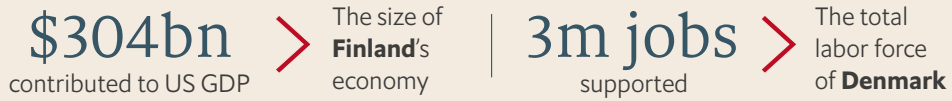


Sources: US Census Bureau, 2018 American Community Survey 1-year estimates, PUMS; The Economist Intelligence Unit analysis.

**FIGURE 4 The economic contributions of Chinese Americans**

**CONSUMER SPENDING**

Chinese Americans supported an estimated US\$304bn of US GDP, 3m jobs, and US\$175bn in labor income in 2019



**THE WORKFORCE**

There are 2.3m Chinese Americans active in the workforce, accounting for 1.2% of total US employment—equivalent to their percentage in the total population. They are spread across various industries and occupations.



**ENTREPRENEURSHIP**

There are over 160,000 Chinese American-owned businesses\* in the US, which generate US\$238bn in revenue and support 1.3m jobs, as of 2017.



**CAPITAL MARKET**

Chinese Americans founded or served as a C-suite executive in 20 companies in the Fortune 500 in 2011-20, the total market cap of which amount to US\$1.4tn as of June 2020.



Sources: US Census Annual Business Survey 2017; US Census Bureau, 2018 American Community Survey 1-year estimates; The Economist Intelligence Unit analysis and economic modeling (see Appendix for methodology details).

\*Not including non-employer businesses, i.e. businesses that have no paid employment and payroll; potentially including businesses established by non-American citizens.



### **BOX 1 The entrepreneurship of early immigrants**

The history of Chinese American entrepreneurship can be traced back to the first Chinese immigrants who arrived in the American West during the Gold Rush. The lack of established business infrastructure in the region created a gap in the market to meet the demand of a massive influx of fortune-seekers from inside and outside the US. Sensing an opportunity, Chinese immigrants started businesses to provide essential services, such as laundry. In the early days of the Gold Rush, there were few women available in the West to do laundry, while white men were generally reluctant to do the work. As a result, laundry was shipped to Hong Kong to be cleaned for an exorbitant US\$12 per dozen shirts and later to Honolulu for US\$8 per dozen—both cheaper options than shipping it to the east coast of the US.<sup>37</sup>

Identifying an opportunity to provide locally available, far less expensive services, Chinese entrepreneurs established the first commercial laundry industry in the American West. In 1851, Wah Lee opened the first known Chinese laundry in San Francisco, charging US\$5 to wash a dozen shirts.<sup>38</sup> By 1870, there were 1,300 Chinese laundries in San Francisco, making up the majority of laundries in the city.<sup>39</sup> Throughout the 1870s, Chinese-owned laundries began to appear in midwestern and eastern cities, including Denver, Chicago, Pittsburgh and Philadelphia. By 1900, one in four Chinese American men worked in a laundromat.<sup>40</sup> These laundrymen provided a vital service that supported myriad professional industries across the nation throughout the 19th and 20th centuries, establishing the foundations for an industry that remains a staple of towns and cities in the US to this day.

Those working in corporations are active in many essential lower- and middle-tier roles, ranging from sales representatives and business analysts to human resource managers and information system managers. While persistently under-represented in leadership positions, some have managed to break the so-called “bamboo ceiling.”<sup>41</sup> Chinese Americans founded or served as C-suite executive members in 20 companies in the Fortune 500 between 2011 and 2020. In total, these companies’ market capitalization amount to

US\$1.38trn as of June 2020, equivalent to 10% of the NASDAQ market cap.<sup>42</sup>

By leading large, successful US corporations, these executives bring significant value creation to public shareholders. For example, Lisa Su, who became CEO of Advanced Micro Devices (AMD) in October 2014, led the semiconductor company to a 30-fold increase in market capitalization. Jensen Huang, co-founder and CEO of NVIDIA, a manufacturer of computer gaming hardware, has positioned the company as a leader in the fast-growing

market of AI-focused chips, increasing the company's market capitalization 22-fold since 2015.<sup>43</sup> As businesses like these grow, they also generate massive revenue and create job opportunities. For example, AMD and NVIDIA generated combined revenue of nearly US\$18bn in 2019 and hired over 25,000 employees in the US and overseas.<sup>44,45</sup>

### Supporting competitiveness and innovation

Backed by a developed economic infrastructure, generous research and development (R&D) spending, and innovative private sector, the US is a long-established global economic powerhouse. Its ability to produce world-class companies and ideas results not just from exceptional individual entrepreneurs (important as they are), but also from this enabling environment that allows ideas to surface and take flight. Chinese Americans

have long helped to nurture US economic competitiveness, whether through building critical infrastructure or pushing scientific and innovation frontiers.

### Building critical infrastructure

Infrastructure is fundamental to the functioning of every modern economy. In a country as geographically vast as the US, it is impossible to overstate the significance of a robust agriculture production system and physical networks to ensure the fast, safe and reliable transmission of people, goods, energy and information. Chinese Americans were among the first immigrants to play a primary role in building this critical infrastructure.

One of their early contributions was in building rail infrastructure in the late 1800s. The US transcontinental railway network connected an enormous but fragmented market and allowed internal

#### **BOX 2 Agricultural development in California in the 1860s-1910s**

When the first Chinese immigrants arrived during the Gold Rush, California relied on agriculture imports to meet the food demands of a fast-growing population.<sup>46</sup> Drawing from their experience in controlling waterways and developing fertile farmland in inaccessible river valleys, Chinese immigrants were hired to reclaim swamplands in the Sacramento-San Joaquin Delta. By 1880, they had reclaimed 88,000 acres for agricultural use, a project that increased the land value from US\$1-3 an acre to US\$20-100 an acre.<sup>47</sup> The work of Chinese immigrants is also credited with facilitating the establishment of the Californian wine industry. It is estimated that viticulture in California, which today produces 90% of all wine made in the US, would have been set back 30-50 years without the contribution of Chinese vineyard workers.<sup>48,49</sup>



migration to economic hotspots, notably during the California Gold Rush. In addition, the advent of rail travel in the US linked manufacturing and agriculture supply chains and enabled the emergence of heavy industries like iron and steel manufacturing.<sup>50</sup> From 1865 to 1869, as many as 20,000 Chinese workers were employed by the Central Pacific Railroad (CPRR), making up 90% of the construction workforce. Building the western half of the project, Chinese workers held jobs including blacksmithing, carpentry, tunneling, leveling of roadbeds and laying tracks.<sup>51</sup> Within just ten years of its completion, the railroad was shipping US\$50m worth of freight from coast to coast every year.<sup>52</sup> After completing the first transcontinental railroad in 1869, Chinese workers fanned out across the country to work on at least 70 other rail lines.<sup>53</sup> Today,

freight railroads remain a mainstay of the US economy, moving nearly 40% of the nation's goods each year and supporting 1.5m jobs.<sup>54,55</sup>

The expansion of agricultural infrastructure, a second engine of US competitiveness, was also spurred by Chinese Americans. Beginning in the 1850s, Chinese were recruited to work on sugar and rice plantations in Hawaii. By 1887 over 50,000 Chinese laborers had arrived to work on the plantations.<sup>56</sup> On the US mainland, they played an instrumental role in transforming California into an agricultural powerhouse (Box 2). As such, they helped to establish the base for the US agriculture industry, which today contributes over 5% of US GDP annually and provides 11% of employment; every year, 20% of the American agricultural yield is exported to foreign markets, an important source of cashflow to the domestic economy.<sup>57,58</sup>

If manual labor and service provision characterized the Chinese contribution to 19th-century public capital in the US, the post-World War II period saw Chinese Americans contributing to construction and engineering in new ways. In the 1950s, Tung-Yen Lin, a visionary structural engineer, developed pre-stressed concrete for practical purposes and advocated for its use in modern buildings. This innovative technology, which combines steel wires with concrete, allows the construction of high-rises and bridges able to withstand earthquakes and heavy loads.<sup>59,60</sup>

Elsewhere, I.M. Pei, a renowned architect, focused his career in the design and construction of public buildings. Among his designs are a terminal at New York City's John F Kennedy International Airport, known as the "Sundrome," and the East Building of the National Gallery of Art, in Washington, DC. The former is admired for instilling a sense of serenity amid the chaotic bustle of an international transport hub, while the latter is an elegant triangular composition that has been hailed as one of Mr Pei's finest achievements; it remains a staple of the capital's public arts infrastructure.<sup>61,62</sup>

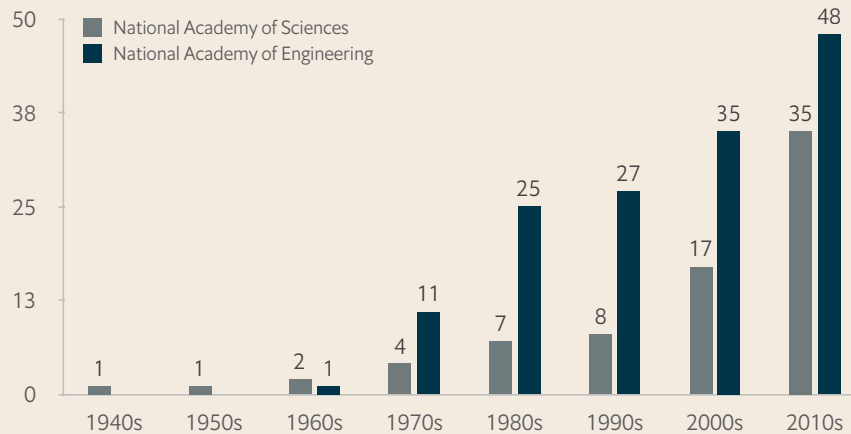
Engineering and architecture have long been two major professional categories of interest for the Chinese American community as a whole. As of 2018, one in 40 civil engineers and one in 30 architects in the US are Chinese American—both proportionally more than double the share of Chinese Americans in the total US population.<sup>63</sup>

### **Pushing scientific and innovation frontiers**

Thanks in part to the influx of Chinese immigrants who came to the US to study in the post-World War II period and eventually became US citizens, the contributions of Chinese Americans became increasingly visible in academia (Box 3) and science. The integration of Chinese Americans into the US scientific community is evident in the growth in the number elected as members of the National Academy of Engineering (NAE) and the National Academy of Sciences (NAS) (Figure 5), following in the footsteps of figures including Chien-Shiung Wu, dubbed the "Queen of Nuclear Research" and "The First Lady of Physics," who in the 1950s became one of the first elected Chinese NAS members.<sup>64</sup> Today, one in 25 living members of both the NAE and the NAS is Chinese American.<sup>65</sup> As leaders in their fields, they have developed truly paradigm-shifting advances, ranging from groundbreaking developments in electronics and information systems to breakthroughs in medicine and feats of aerospace engineering.

The leading scientists and innovators honored by these professional societies are representative of the numerous Chinese Americans working on basic and applied research critical to the technological innovation that drives America's global economic leadership. As of 2018, 15% of working Chinese Americans are employed in the occupations of life, physical and social

**FIGURE 5 Chinese American members of the NAE and NAS by election year, as of June 2020**



Sources: National Academy of Engineering; National Academy of Sciences; The Economist Intelligence Unit analysis.

sciences, computing and mathematics, and architecture and engineering—nearly three times as high as the percentage of total Americans who work in these fields.<sup>66</sup>

The world is entering the era of the so-called “Fourth Industrial Revolution,” a framework used to describe a confluence of technological breakthroughs across cyber and physical domains, in fields including artificial intelligence (AI), robotics, the Internet of Things, biotechnology, 3-D printing and autonomous vehicles, which all hold huge transformative potential.<sup>67</sup> As these advances unfold, Chinese American scientists and researchers will continue to play an important role in driving US progress. As of 2018, an estimated one in 25 American graduates with a bachelor’s degree or above in disciplines that are core to Fourth Industrial Revolution technologies—including computer science, mathematics, biological and biomedical science, and engineering—is Chinese American.<sup>68</sup>

Some Chinese Americans have also founded and led companies that are at the forefront of innovation. Between 1980 and 1984, 9% of high-tech start-ups in Silicon Valley were run by Chinese immigrants, mostly first-generation; this proportion more than doubled to 20% during 1995 to 1998.<sup>69</sup> Among the most prominent entrepreneurs are Jerry Yang, co-founder of Yahoo, which was the first popular online directory and search engine; Steve Chen, co-founder of YouTube, which became the world’s leading platform for online video sharing and viewing; and Eric Yuan, founder of Zoom Video Communications, which has reshaped the way that people communicate and become an essential tool during the COVID-19 pandemic.

As well as founding companies, an increasing number of Chinese Americans have entered the venture capital and private equity industry to connect innovators and entrepreneurs with the capital market,



helping to catalyze technological advances and business transformations. Alfred Lin, a partner at Sequoia Capital, a high-profile venture capital firm, invested early in the food delivery startup DoorDash<sup>70</sup> in 2014. This initial investment enabled the company's rapid growth, pushing DoorDash's market value into the highly coveted "unicorn" category of more than US\$1 bn and gave the company the highest market share in the food delivery industry, surpassing both UberEats and GrubHub in 2019.<sup>71,72</sup>

Another prominent Chinese American venture capitalist is Aileen Lee, who coined the now-ubiquitous "unicorn" term. Ms Lee founded Cowboy Ventures, a seed-stage fund that backs entrepreneurs seeking to develop software focused on reinventing work and personal life. Ms Lee has invested US\$190m in start-ups to date.<sup>73</sup>

A new generation of venture capitalists is also branching out beyond consumer and enterprise technology to help entrepreneurs overlooked by the mainstream, in turn helping to narrow the gender and ethnic diversity gaps through socially conscious investing. One pioneer is Yiqing "Pocket" Sun, who founded the venture capital firm SoGal Ventures in January 2017 to tackle the male-dominated VC industry and close the funding gap faced by female entrepreneurs. SoGal, which has now grown into a multimillion-dollar, female-led, millennial-focused firm, has invested over US\$3m in 19 companies founded by diverse entrepreneurs to date.<sup>74</sup> These

ventures include Everly Well, a female-founded at-home health testing company that seeks to close the gap between consumers and lab testing, and Function of Beauty, a personalized hair care company started by three MIT graduates.<sup>75</sup>

## Challenges and future directions

### **A "bamboo ceiling" is keeping Chinese Americans out of corporate leadership positions.**

In 2018, Chinese Americans accounted for roughly 3% of professional occupations but held only 1.5% of mid-level management roles and 1.2% of executive positions. In comparison, 69% of professional occupations are held by white workers while 74% of mid-level managers and 85% of executives are white. As such, white professionals are three times as likely as Chinese American professionals to reach the executive ranks; and the likelihood that a white mid-level manager will become an executive is 52% higher than that of a Chinese American working at the same level.<sup>84</sup>

Underrepresentation of ethnic minorities in leadership levels, including Chinese Americans, also persists in the boardroom.<sup>85</sup> Among the workforce of the 721 companies that have featured in the Fortune 500 ranking in the past decade, only 25 Chinese Americans were named to board positions, representing just 0.3% of the total.<sup>86</sup> The causes of this underrepresentation are complex, but they include both cultural differences and explicit or implicit discrimination.<sup>87</sup> The former can be remedied, at least in part, by

**BOX 3 Chinese American’s contribution to higher education**

The history of Chinese involvement in the American education system dates back to the 19th century. Upon his graduation from Yale in 1854, Yung Wing became the first Chinese student to earn a degree from an American university. He later organized a pioneering effort, known as The Chinese Educational Mission, that sent groups of Chinese youths to receive education in the US between 1872 and 1881.<sup>76,77</sup> Today, Chinese Americans overall have higher levels of educational attainment than the US average. Having benefited from the country’s advanced higher-education system, many Chinese Americans have in return dedicated their careers to academia, supporting educational development in the country.

As of 2018, one in 50 teaching and research positions in US colleges and universities is held by Chinese Americans.<sup>78</sup> Among the number of past and present Chinese American academics are figures who have played a central role in founding and promoting education in certain fields critical to today’s technology advances. In bioengineering, for example, Yuan-Cheng “Bert” Fung, dubbed the “Father of Modern Biomechanics,” established the Biomechanics Symposium in 1972, which later became the annual Summer Bioengineering Conference.<sup>79</sup> Following in Dr Fung’s footsteps, Shu Chien and Van C Mow respectively helped to found the Department of Bioengineering at the University of California, San Diego and the Department of Biomedical Engineering at Columbia University.<sup>80,81</sup>

Despite Chinese Americans’ overall underrepresentation in executive leadership at universities, some have managed to make notable contributions.<sup>82</sup> Perhaps the most prominent such figure was Chang-lin Tien, Chancellor of the University of California, Berkeley from 1990 to 1997. Dr Tien, an accomplished engineering scholar, was the first Asian American to head a major research university in the US. Thanks to his leadership and fundraising efforts, the university successfully weathered a storm of severe budget cuts and political changes in the 1990s, becoming one of the premier research universities in the nation.<sup>83</sup>

$T = \frac{3EI_2 \alpha t}{hn_1}; M_A = \frac{4EI}{L} \odot A;$   
 $R_A = -R_B = -\frac{6EI}{L^2} \odot A;$   
 $\eta = \frac{y}{h}; k = \frac{J_1}{J_2} \frac{h}{L}; m = \frac{J_1}{J_3}; d = \frac{\alpha}{\epsilon};$   
 $\eta = 1 + 6k + m; \nu = (2+k) + \frac{m}{k} (3+2k); \eta = 1 +$   
 $M_A = \frac{qh^2}{4} \left[ -\frac{3+k}{6\nu} + \frac{1+4k}{\eta} \right]; M_B = \frac{qh^2}{4} \left[ -\frac{3+k}{6\nu} \right];$   
 $T = \frac{3EI_2 \alpha t}{hn_1}; M_A = \frac{4EI}{L} \odot A;$   
 $R_A = -R_B = -\frac{6EI}{L^2} \odot A;$

25

companies widening their leadership model to accommodate differing communications styles. Outright discrimination, on the other hand, requires education and training to help decision-makers uncover the unconscious biases and assumptions they may hold.

**Continued stereotyping of Chinese Americans as “perpetual foreigners” may limit their future contributions to science.** Since the 1950s, scientists of Chinese descent working in the US have faced suspicions—and, at times, criminal charges—of spying for China. During the Cold War, the FBI ran a program dedicated to surveilling Chinese scientists, including those who were American citizens.<sup>88</sup> Most recently, an investigation by the National Institutes of Health into individual scientists’ violation of research funding rules since 2018 has also drawn concerns and criticism of racial profiling. Some cases involved real espionage or fraud, but in many other cases charges against Chinese Americans suspected of intellectual property theft were later downgraded or dismissed.<sup>89,90</sup> Distrust of Chinese American scientists, feeding the stereotype of them as “perpetual foreigners,” could prohibit US society from tapping into their talents.

Another controversial government program is the Department of Justice (DOJ) China Initiative, launched in November 2018 to counter security threats. It reached an estimated 2,000 active investigations by June 2020 but has been criticized for using China as a “glue” connecting disparate cases, and for attaching a criminal taint to entities with

even tangential linkages to China.<sup>91</sup>

**Chinese students are embroiled in US-China political tensions through restrictions on graduate studies and proposals for more far-reaching barriers.**

International students in the US have consistently served as an important talent pool, reinforcing the country’s scientific and research prowess. According to 2018 data, one-third of foreign students in the US—approximately 403,000—are from China, and 42% major in a science, technology, engineering or mathematics (STEM) field.<sup>92</sup>

Chinese students, many of whom have stayed or desire to stay in the US, have helped to fill talent gaps in areas critical to US national security and interests. In AI, for instance, roughly 30% of international PhD students come from China and overwhelmingly seek to stay in the US, primarily for professional reasons; a 2019 study found that 91% of PhD students from China specializing in AI stay in the US for at least five years after graduating.<sup>93</sup> However, a White House accusation that the Chinese government engages students as “non-traditional collectors of intellectual property” has led to the suspension or limitation of visas for students with links to Chinese educational institutions that are involved in the country’s civil-military fusion program. There are also sweeping legislative proposals to restrict all Chinese graduate students from studying STEM-related subjects.<sup>94</sup> Such moves could exert a chilling effect on the liberty of a group that has long been an asset to the country’s innovative industries.

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- <sup>32</sup> Robert J. Gordon, *The Rise and Fall of American Growth: The U.S. Standard of Living since the Civil War* (Princeton University Press, 2017).
- <sup>33</sup> US Census Bureau, 2018 American Community Survey 1-year estimates, PUMS; The Economist Intelligence Unit analysis.
- <sup>34</sup> US Census Bureau, Annual Business Survey 2017; The Economist Intelligence Unit analysis. Note: Not including nonemployer businesses, i.e. businesses that have no paid employment and payroll; potentially including businesses established by non-American citizens because citizenship of business owners was not specified in the original survey.
- <sup>35</sup> US Census Bureau, Annual Business Survey 2017; The Economist Intelligence Unit analysis.
- <sup>36</sup> US Census Bureau, Annual Business Survey 2017; The Economist Intelligence Unit analysis.
- <sup>37</sup> Eveline Chao, "How Childhoods Spent in Chinese Laundries Tell the Story of America," *Atlas Obscura*, January 3, 2018, <http://www.atlasobscura.com/articles/chinese-laundry-kids-new-york>.
- <sup>38</sup> Chao, "How Childhoods Spent in Chinese Laundries Tell the Story of America."
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- <sup>40</sup> Judy Yung, Gordon H. Chang, and H. Mark Lai, "Declaration of the Chinese Hand Laundry Alliance (1933)," in *Chinese American Voices: From the Gold Rush to the Present* (University of California Press, 2006), 183.
- <sup>41</sup> Equal Employment Opportunity Commission 2018 Job Patterns for minorities and women in private industry; The Economist Intelligence Unit analysis.
- <sup>42</sup> The Economist Intelligence Unit analysis. See Appendix for methodology details.
- <sup>43</sup> As of June 2020. Sources: Macrotrends.net; The Economist Intelligence Unit analysis.
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- <sup>45</sup> "Nvidia Company Profile," *Fortune*, accessed August 12, 2020, <https://fortune.com/company/nvidia/>.
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- <sup>47</sup> Yung, Chang, and Lai, *Chinese American Voices: From the Gold Rush to the Present*, 3.
- <sup>48</sup> Nancy Wey, "A History of Chinese Americans in California," in *Five Views* (State of California Resources Agency, Department of Parks and Recreation, Office of Historic Preservation, 1988).
- <sup>49</sup> "Wines of California: A Brief Guide," USA Wine Ratings, December 26, 2018, <https://usawineratings.com/en/blog/insights-1/wines-of-california-a-brief-guide-188.htm>.
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- <sup>51</sup> "The Rise of Asian Americans - Chapter 1: Portrait of Asian Americans" (Pew Research Center, June 19, 2012), <https://www.pewsocialtrends.org/2012/06/19/chapter-1-portrait-of-asian-americans/>.
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- <sup>60</sup> "Dr. T. Y. Lin: Memorial Tribute," National Academy of Engineering, accessed August 14, 2020, <https://nae.edu/28992/Dr-T-Y-Lin>.
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- <sup>85</sup> Deb DeHaas et al., "Missing Pieces Report: The 2018 Board Diversity Census of Women and Minorities on Fortune 500 Boards," The Harvard Law School Forum on Corporate Governance, February 5, 2019, <https://corpgov.law.harvard.edu/2019/02/05/missing-pieces-report-the-2018-board-diversity-census-of-women-and-minorities-on-fortune-500-boards/>.
- <sup>86</sup> Assuming an average board size of 11 members, the total number of board positions of the 721 companies is 7,931. For reference, in 2018, Fortune 500 companies had 5,670 board seats in total, or on average 11.3 members per board. See DeHaas et al., "Missing Pieces Report."
- <sup>87</sup> A 2020 study found that, within the Asia group, East Asians (Chinese and Japanese) are less likely than South Asians (Indians and Pakistanis) and whites to attain leadership positions. This is due to factors like cultural assertiveness—the tendency to speak out for one's individual interests and engage in more argumentative forms of discussion—rather than overt prejudice, although such differences may call for a wider "prototype" of what leadership characteristics look like. Experts interviewed for this study similarly cite Chinese behavioral norms of taciturnity and modesty as a potential limiting factor in being noticed and rewarded in an extravert-friendly cultural environment. See Jackson Lu, Richard Nisbett, and Michael Morris, "Why East Asians but Not South Asians Are Underrepresented in Leadership Positions in the United States," *Proceedings of the National Academy of Sciences of the United States of America* (PNAS), February 18, 2020, <https://www.pnas.org/content/117/9/4590>.
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- <sup>91</sup> Margaret K. Lewis, "Criminalizing China," *Journal of Criminal Law and Criminology* 111, no. 1 (August 25, 2020), <https://papers.ssrn.com/abstract=3600580>.
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- <sup>93</sup> Remco Zwetsloot et al., "Keeping Top AI Talent in the United States" (Center for Security and Emerging Technology, December 2019), <https://cset.georgetown.edu/wp-content/uploads/Keeping-Top-AI-Talent-in-the-United-States.pdf>.
- <sup>94</sup> "Cotton, Blackburn, Kustoff Unveil Bill to Restrict Chinese STEM Graduate Student Visas & Thousand Talents Participants," Tom Congress Arkansas Senator, May 27, 2020, [https://www.cotton.senate.gov=press\\_release&id=1371](https://www.cotton.senate.gov=press_release&id=1371).





# 03 Strengthening American institutions

The US's global leadership is built on not only its economic strength but also its democratic values—liberty, equality and justice—as well as robust institutions and military prowess to protect them. Chinese Americans have closely engaged in protecting America's security and shaping its institutional foundation since their earliest days in the country. From initial efforts to contest exclusionary legislation and bureaucratic oppression, they later widened their participation to contribute to the fight for civil rights and equality, in mutual solidarity with other minority groups. More recently, Chinese Americans have bolstered the nation's institutions by working within the civil service and public administration organizations, playing a growing role in electoral politics and making a sizeable contribution to national defense and security—demonstrating a commitment to the core values of the US.



## Building a fairer society and strengthening civil rights

The US was founded as a nation of immigrants united by common values, such as the pursuit of economic opportunity and freedom from political and religious persecution. Yet cultural and racial differences have long been sources of stereotypes, discrimination and ill treatment of racial and ethnic minorities.

Generations of Chinese Americans have contributed to a more open and tolerant society, from early immigrants fighting for the right to be legally accepted as Americans, to younger generations focusing on wider civil rights battles—in the forms of social movements and even artistic works—affecting not only themselves but also other minorities and disadvantaged groups.

Under the Chinese Exclusion Act, Chinese immigrants were prohibited from becoming citizens and hence denied the right to vote, giving them no political power to contest unfair treatment. Instead, they turned to the legal system to fight discriminatory immigration and citizenship laws. Two cases stand out for their longer-term implications: *Yick Wo versus Hopkins* (1886) resulted in a landmark Supreme Court ruling advocating for equal protection under the law for all US residents, irrespective of race or nationality; and *the United States versus Wong Kim Ark* (1898) established the concept of birthright citizenship in the US. These landmark cases set important precedents for equal protection under the Constitution, which would help to establish civil rights for immigrants and non-white Americans for years to come (Box 4).



**BOX 4 The early generation seeking judicial justice**

***Yick Wo versus Hopkins (1886)***

Yick Wo was a laundry facility owned by Lee Yick, a Chinese immigrant in California. Mr Lee sued for a writ of habeas corpus after he was imprisoned for refusing to pay a fine for allegedly violating an ordinance that was discriminatory to Chinese-owned laundries. In 1886, the Supreme Court ruled in favor of Yick Wo, ruling that it was unconstitutional to discriminate against a group of people in the passage or enforcement of legislation. The case was the first in a long series of cases to use the “equal protection” clause of the Fourteenth Amendment, and the decision opened the doors for immigrant integration into US society and established an important precedent for subsequent related cases.<sup>95</sup> By the 1950s, the Supreme Court had used the principle established in Yick Wo to strike down several attempts by states and municipalities in the Deep South to limit the political rights of Black Americans. For example, in 1954, the Supreme Court ruled in *Brown versus Board of Education* that the practice of “separate but equal” racial segregation in schools was inherently unequal and unconstitutional owing to its violation of the equal protection clause, another landmark decision in civil rights history.<sup>96</sup> To date, the Yick Wo case has been cited over 150 times in civil rights proceedings since the original decision.<sup>97</sup>

***United States versus Wong Kim Ark (1898)***

Wong Kim Ark, a San Francisco-born Chinese American, was barred from entering the US upon returning from China in 1894, on the grounds that he was not a US citizen under the Chinese Exclusion Act.<sup>98</sup> Eventually, the Supreme Court ruled in favor of Mr Wong, stating that children born in the US to non-citizen parents are automatically granted citizenship under the Fourteenth Amendment to the Constitution.<sup>99</sup> The decision established birthright citizenship—one of the cornerstones of American identity—having an untold impact on immigrant families of all backgrounds and ethnicities, including the many generations of Americans descended from English, Scotch, Irish, German and other European immigrants.<sup>100</sup> As Lucy Salyer, a legal historian at the University of New Hampshire holds, had the Supreme Court rejected Mr Wong’s claim to citizenship, rather than defining itself as a nation of citizens descended from immigrants, America might have instead become the uneasy home to “colonies of foreigners.”<sup>101</sup>



The civil rights movement led by Black Americans in the 1950s and 1960s gave rise to dramatic social changes that overhauled how Americans perceived racial relations and politics. Chinese Americans were among those speaking out against racial discrimination and social injustice against all minority groups at the time. Key advocacy groups emerged and have continued working to this day. One is Asian American Advancing Justice—Los Angeles, a legal aid and civil rights organization founded in 1983. It counseled on the case of Vincent Chin, a second-generation Chinese American beaten to death by two laid-off automotive workers who assumed him to be Japanese, at a time when Japanese automakers were blamed for the deterioration of the US car industry. Advancing Justice-Los Angeles is now the largest legal and civil rights organization for Asian Americans, Native Hawaiians and Pacific Islanders in the US, serving more than 15,000 individuals and organizations a year.<sup>102</sup>

Another example is the OCA—Asian Pacific American Advocates (previously the Organization of Chinese Americans). Founded in 1973, the organization supports the community on issues including immigration support services, voter suppression and hate crimes.<sup>103</sup> Together, these advocacy groups work to foster positive social change at the community and national levels, and campaign for racial justice, equity and inclusion in all aspects of US society and culture.

In addition to utilizing legal and social justice channels to effect change, Chinese Americans have used arts and culture to

bring awareness to sociopolitical issues. Artists and creative thinkers have protested the injustices of anti-Asian and wider racial discrimination, raised awareness of the struggles faced by new immigrants, and advocated for positive social and political change through their work. Exemplifying this type of social activism, the Chinese American visual artists Jim Dong and Nancy Hom produced a “portable mural” in 1976 entitled *The Struggle for Low Income Housing*, a large-scale artwork that protested the destruction of low-income communities in San Francisco and advocated for increased civil rights for the city’s diverse immigrant populations.<sup>104</sup>

The community’s experience of discrimination has fostered solidarity with other minority groups. Escaped slave and abolitionist Frederick Douglass denounced the Chinese Exclusion Act in the late 1800s, for instance, and Chinese American activist Grace Lee Boggs emerged as an advocate for Black social justice in the mid-1900s (she was described as “probably Afro-Chinese” in her FBI files).<sup>105</sup> Chinese and Jewish civil rights groups have also forged ties. Chinese American organizations condemned the shooting at the Pittsburgh’s Tree of Life synagogue in 2018 and the rise in anti-Semitic attacks during 2019. Jewish advocacy groups, in turn, have extended their support for Chinese American communities amid the rise of scapegoating and xenophobia directed at Chinese and Asian Americans during the COVID-19 pandemic.<sup>106,107</sup> In 2011 and 2012, the American Jewish Committee partnered



with Chinese Americans and other Asian American groups to successfully push the US Senate and House of Representatives to pass resolutions to formally express regret for congressional approval of the Chinese Exclusion Act.<sup>108</sup>

### Protecting national security

National security is the precondition for US prosperity and the social well-being of Americans. Built on military and geopolitical power and intelligence capabilities, and buttressed by science and technology, the US national security landscape is a complex one. Alongside Americans of every race and ethnicity, Chinese American, including military service members, scientists and even artists, have helped to protect the national security and way of life throughout the past 100 years and beyond—from WWII to the Cold War to the War on Terror—demonstrating their commitment to protecting their home country.

## 1 in 5

Chinese American men served in the US army in World War II

Chinese American commitment to the security and integrity of the US has most directly been evidenced by military participation.

One out of every five Chinese American men served in the US Armed Forces in World War II, some earning decorations for bravery and service.<sup>109</sup> Rear Admiral Gordon Chung-Hoon, for instance, was awarded the Navy Cross and Silver Star honors for his heroism when commanding

a Navy warship in the Pacific campaign against Japan.<sup>110</sup> Captain Francis B Wai, killed when leading assaults upon the enemy in the Philippines, received the Medal of Honor—the US’s highest and most prestigious military decoration for bravery. To date, he is the only Chinese American recipient of the medal and one of two non-Japanese Asian American awardees.<sup>111</sup>

Chinese women also played a largely unreported role in defense-related positions in World War II, including as clerical workers, translators, interpreters and nurses.<sup>112</sup> Several notable Chinese American women worked with or served in the military directly. For example, Hazel (Ying) Lee and Maggie Gee joined the Women Air Force Service Pilots (WASP) to work with the Air Force to ferry planes from factories to air bases and test planes for mechanical problems (Ms Lee was killed in a plane crash in the line of duty).<sup>113</sup>

In peacetime, Chinese Americans continued to participate in the US military. As of 2018, one in 40 Chinese Americans aged 17 years old or over has previously served in the military, or is currently on active duty either in the military or training to serve in the Reserves and National Guard.<sup>114,115</sup> One in 40 first-line supervisors of mechanics, installers and repairers in the US Army, and one in 50 healthcare practitioners and technical personnel serving in the military, are Chinese American.<sup>116</sup> Although not directly engaging in combat, they provide essential support for frontline soldiers and help to mitigate casualties.

In the military's senior leadership, trailblazers like Major General John L. Fugh have made contributions with far-reaching impacts. Maj. Gen. Fugh, the first Chinese American in US military history to reach the rank of general in 1984, introduced the Army's first environmental law division and established its procurement fraud division. During the Gulf War, he established a human rights training program and published the War Crimes Report—the first American effort since WWII to systematically document enemy war crimes.<sup>117</sup> These initiatives improved the accountability and social consciousness of the US military, helping one of the country's oldest institutions adapt to the modern era.

In the intelligence community, an estimated 16,000 Chinese Americans worked on national security and international affairs in the public sector in 2018, accounting for 1.3% of all Americans working in this field (greater than the Chinese American proportion of the adult population of the country); one in 20 computer and information research scientists and one in 50 interpreters and translators working in the intelligence community are Chinese American.<sup>118</sup>

US geopolitical power has historically been underpinned by scientific prowess, evidenced perhaps most significantly by the Manhattan Project and achievements made during the Space Race. The success of major government scientific programs in the 20th century was made possible by critical contributions from members of different ethnic and racial groups, from the

Black female mathematicians who worked at NASA in the 1960s to the physicists of European origin who were involved in the US nuclear program.

Chinese American scientists also featured among these essential and, hitherto often under-appreciated, minorities.

For example, in the 1960s, Wen Tsing Chow, an engineer, made groundbreaking advances in the fields of computer-guided navigation and systems engineering, playing a key role in verifying the guidance equations and software implementation for NASA's Gemini manned spaceflight program.<sup>119</sup> Today, as outer space becomes a geopolitical hotspot, one in 25 aerospace engineers in the US is Chinese American, as is one in 20 aerospace engineers in the aerospace manufacturing industry.<sup>120</sup>

**1 in 25**

aerospace engineers in the US is Chinese American

### Shaping public policy and political systems

As America's population has grown more diverse, its political leaders and public servants have, albeit slowly, come to more closely resemble the constituents they serve.<sup>121</sup> A more diverse government brings with it a richer array of policy ideas and perspectives, helping to ensure that laws and policies meet the different needs of all communities.

Chinese Americans have been an integral part of this encouraging shift, playing an increasing role in both civil service and electoral politics. As legal and social

discrimination shut out the early generation of Chinese immigrants from government and political roles—as well as the vote, not until the second half of the 20th century did the first prominent Chinese American political leaders emerge.

One of these political leaders was Hiram Fong, a Republican from Hawaii and the first Chinese American in the US Congress. Senator Fong took office in 1959 and played an instrumental role in supporting the expansion of civil rights programs, voting to establish refugee aid programs, drafting legislation to raise the minimum wage for federal employees, and advocating for the liberalization of US immigration policy.<sup>122</sup>

Gary Locke further widened the political participation of the community. A Democrat who was elected governor of Washington state in 1997, Governor Locke's successful tenure included passing bipartisan welfare reform and overseeing a vibrant economy despite two recessions (Governor Locke also established the most diverse cabinet in state history).<sup>123</sup>

In 2001, Elaine Chao was appointed as Secretary of Labor and became the first Chinese American to serve in the president's cabinet. Her contributions include promoting job training and workforce competitiveness and improving workplace safety and health.<sup>124</sup>

Steven Chu, a former Nobel prize winner and Secretary of Energy under Barack Obama, helped to implement an ambitious green energy agenda,

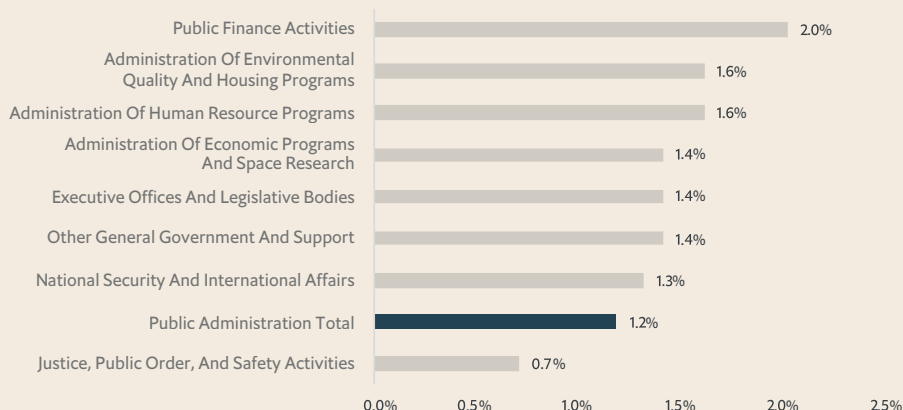
including the green stimulus plan following the 2008-09 financial crisis. He launched several initiatives including Advanced Research Projects Agency-Energy (ARPA-E), a US innovation agency founded in 2019, and modeled on the pioneering Defense Advanced Research Projects Agency (DARPA).<sup>125</sup>

These high-profile political leaders have shown younger generations that career success in public office is achievable, inspiring others to enter this domain. Between 2009 and 2018, Chinese Americans' employment in public administration grew by 68%, outpacing the growth of the Chinese American population (46%) and the growth of the public administration workforce as a whole (8.8%).<sup>126</sup> Today, Chinese Americans make an outsized contribution in almost all major functions of public administration, playing a particularly important role in programs related to public finance, environmental quality and housing, and human resource (Figure 6).<sup>127,128</sup>

In electoral politics, Chinese Americans are now prominent on both sides of the aisle, with one US senator and four house representatives currently of Chinese descent.<sup>129</sup> In 2019, a high-profile Democratic presidential campaign by Andrew Yang, who ran on a progressive agenda, sparked a national conversation on the merits of Universal Basic Income.<sup>130</sup> Younger Chinese American politicians have also emerged at state and local levels, including in regions without a significant Chinese or Asian American demographic. In

**FIGURE 6 The representation of Chinese Americans in public administration, 2018**

Chinese Americans are making outsized contributions in all but one major function and play a particularly important role in public finance, environmental quality and housing, and human resource programs.



Sources: US Census Bureau, 2018 American Community Survey 2018 1-year estimates, PUMS; The Economist Intelligence Unit analysis.

2016, for example, Theresa Mah became the first Asian American elected to the Illinois General Assembly.<sup>131</sup> In 2018, Mike Yin was elected into the Wyoming House of Representatives, becoming the first Chinese American legislator in a state where Chinese Americans account for less than 0.1% of the total population.<sup>132,133</sup>

### Challenges and future directions

**Civil rights for minority groups in America are deteriorating.** There has been a rise in racism that affects all people of color and the trend lines over the last four years.<sup>134,135,136</sup> The Black Lives Matter movement, which manifested in the largest national protests since the civil rights marches of the 1960s, is pushing for reforms to the many obstacles faced by immigrants and ethnic minorities. Chinese Americans

are bound up in the prejudices faced today by people of color, experiencing it directly through the rise in anti-Chinese sentiment linked to the COVID-19 pandemic. Over a six-week period in 2020, for instance, the organization STOP AAPI HATE, which campaigns against violence, discrimination and harassment of Asian American and Pacific Islanders, received over 1,700 incident reports of verbal harassment, shunning and physical assault against Asian Americans across the US.<sup>137</sup> In addition, US-China geopolitical tensions have revived harmful narratives of Chinese Americans as outsiders. Such experiences have led some Chinese Americans to doubt whether they will continue to be viewed as Americans and worry about a potential repetition of legislation such as the Chinese Exclusion Act, which saw discrimination against Chinese Americans enshrined in law. It is imperative for US society to remain vigilant against hate

“Between 2008 and 2018, the number of Chinese Americans eligible to voter grew by 57%, five times the growth of the total number of eligible voters in the US.”

speech and racism to guard its democratic values and strengthen social solidarity.

**The contribution of Chinese Americans to public service, defense and national intelligence is stymied by political tensions, which could reverse decades of progress.**

Despite the valuable work of many to protect the nation's security interests, Chinese Americans have faced persistent racism, distrust and stereotyping as “perpetual foreigners.” Although the US military ended the racial segregation of military units after World War II, discrimination within the armed forces has persisted. In 2012, Danny Chen, a born-and-raised New Yorker and an Army veteran of the conflict in Afghanistan, took his own life after racial slurs and physical abuse from others in his unit became unbearable.<sup>138</sup> Furthermore, while Chinese Americans have been a major force in scientific research, including on matters critical to national security, they have been targets of FBI investigations

for decades.<sup>139</sup> The escalated tension in US-China relations in recent years could complicate the ability of current and future Chinese Americans to work in government administration, the military and national defense, especially those arriving through the student route.

**The Chinese American community forms a fast-growing population of eligible voters, but constraints on their ability to exercise their political rights must be addressed.**

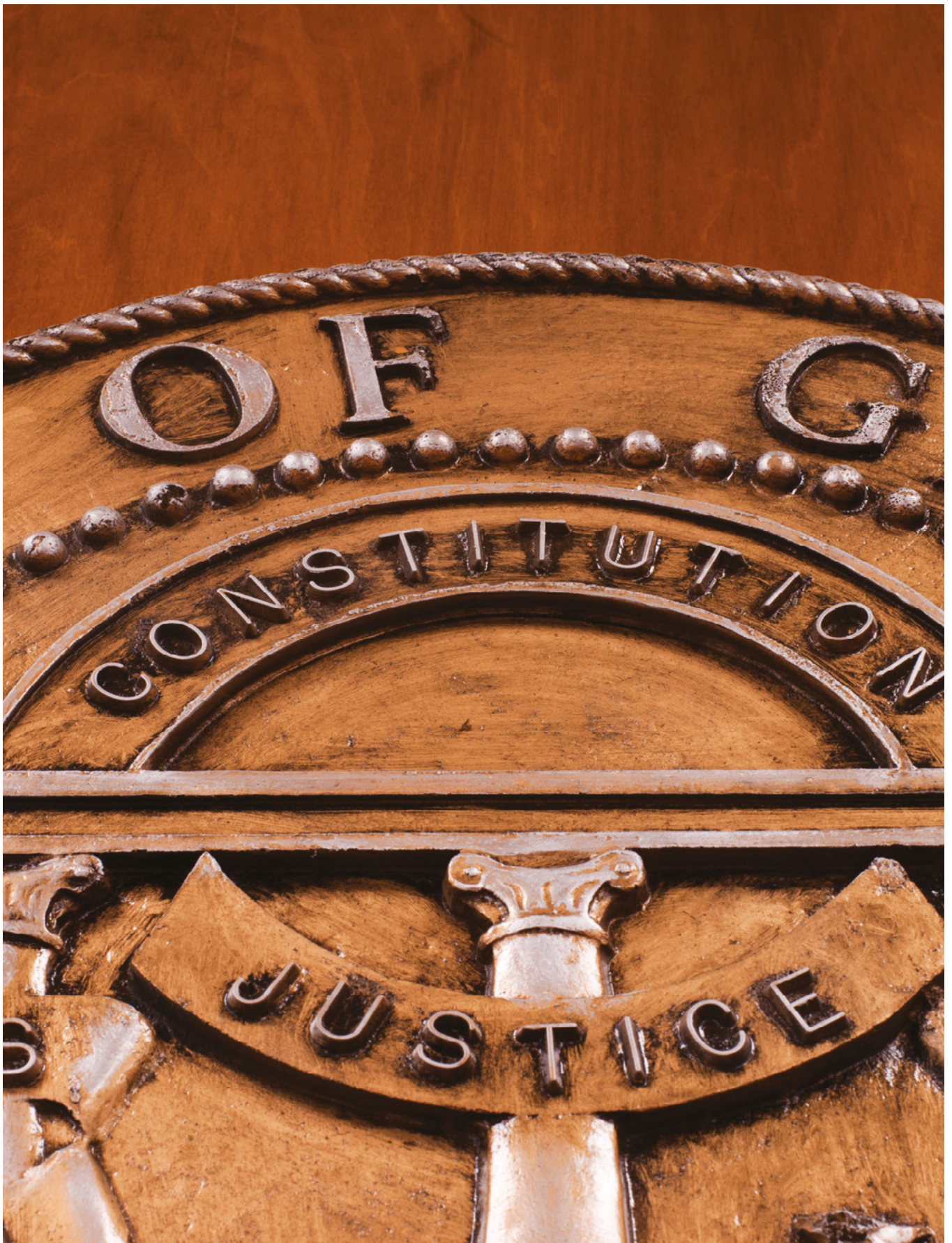
Between 2008 and 2018, the number of Chinese Americans eligible to vote grew by 57%, five times the growth of the total number of eligible voters in the US.<sup>140</sup> However, Chinese American voter turnout rates remain low. In the 2018 midterm elections, despite an increase of 13 percentage points from 2014, the community's voter turnout rate was 39%, lower than both the overall rate of Asian Americans, at 42%, and the national rate of 53%.<sup>141,142</sup> Various factors have discouraged Chinese Americans from going to the polls, including election workers being unable to read and understand Chinese American names to verify their identities; a lack of candidate information printed in Chinese; and lack of familiarity with political concepts and processes, among others.<sup>143,144,145</sup> In addition, candidates of both the Democratic and Republican parties have historically failed to reach out to the Asian-American community for support while campaigning.<sup>146</sup> Generally speaking, broader efforts are needed to engage Chinese American voters with US politics.



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- <sup>115</sup> Including those on active duty for training in Reserves/National Guard. Data source: US Census Bureau, 2018 American Community Survey 1-year estimates, PUMS; The Economist Intelligence Unit analysis.
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- <sup>127</sup> The only exception is justice, public order and safety activities.
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# 04 Threading the social fabric

Creating a vibrant society requires more than economic and political forces alone: beyond the public sector and business organizations, movements, networks and collective efforts exist that work to support cultural richness, social cohesion and well-being. Alongside Americans of every race, gender and background, Chinese American artists and creatives have utilized their talents and influence to enrich American culture in many ways, from helping to shape a common national identity in times of war and crisis to cultivating social and political change. In addition, Chinese Americans have made material philanthropic and charitable contributions to support vulnerable social groups. A major workforce for healthcare and medical research, Chinese Americans have also played a significant role in strengthening the US health system, including during the current pandemic.

## Expanding the cultural lexicon of America

The US has had a profound impact on global culture and arts as the epicenter of modern English-language cinema and a key force in innovations in musical genres including jazz, rock and folk. This cultural richness has been aided by the arrival and integration of many diverse demographic groups, including Black American, Latinx, Asian and Jewish communities. Chinese Americans have received less attention as a cultural force, but their contribution



## 1 in 20

fashion designers  
in the US is  
Chinese American

to fields ranging  
from photography to  
animated film has been  
profound. Notably,  
Chinese Americans are  
active in fashion and

architecture. According to 2018 data, one in 20 fashion designers and 1 in 30 architects are Chinese American.<sup>147</sup>

Chinese Americans have been a longstanding voice in arts in the US. Early efforts to document the Chinese immigration experience led, over time, to outward engagement in the social, political and cultural themes defining the US.<sup>148</sup> Pan-Asian art exhibitions in San Francisco in the 19th and early 20th centuries helped to forge the cultural melting pot that the country would become.<sup>149</sup> By the late 20th and early 21st centuries, Chinese American artists had achieved popular acclaim and mainstream status.

Pioneers include Ang Lee, best known for his movies *Life of Pi*, *Brokeback Mountain*, and *Crouching Tiger, Hidden Dragon*, which integrated themes of multiculturalism, migration and sexual orientation, and greatly advanced the use of computer-generated imagery in film.<sup>150</sup> Ali Wong, a comedian of both Vietnamese and Chinese descent, achieved mainstream popularity with two Netflix-produced stand-up comedy specials, *Baby Cobra* and *Hard Knock Wife*, which draw on the intersectionality of her identities as a child of first-generation immigrants, a woman and a mother.<sup>151</sup> The 2018 film *Crazy Rich Asians*, directed by Jon Chu, was both a critical and commercial success, grossing

over US\$238m on a budget of US\$30m, making it the highest-grossing romantic comedy of the decade.<sup>152,153</sup>

By bringing unique ideas and perspectives to the screen, and relating to both white and non-white audiences, leading Chinese American filmmakers and performers have helped US cinema to be more inclusive and relatable. Reports published by the University of California, Los Angeles show that films with casts reflecting America's diversity are, on average, the top performers in global box office receipts. Global box office receipts peaked in 2018 and 2019 for films with relatively diverse casts, and people of color, who constituted more than 40 percent of the US population in 2019, were responsible for the majority of domestic ticket sales for eight of the top 10 films ranked by global box office sales.<sup>154</sup>

If the standing of Chinese Americans in US cinema has only recently been acknowledged, their place in the national cuisine is well-established. The US had little cuisine of its own to speak of in the early years of the Chinese arrival, especially when compared with China's centuries of experience in hospitality. As such, the best restaurants of the era were, according to one local patron, Chinese-owned.<sup>155</sup> In the 20th century, affordable Chop Suey joints became popular with young urbanites, and the food itself, in terms of flavors, ingredients and cooking methods, evolved as a fusion of Chinese and American tastes.<sup>156</sup>

After the liberalization of US migration laws, a more diverse range of Chinese cuisine styles emerged from regions including Hunan,





Sichuan, Taipei and Shanghai; the shift in immigration legislation also led to the arrival of more skilled Chinese chefs, and more popular eateries emerged in cities with large Chinese populations, such as New York and San Francisco. By 2016, there were 45,000 Chinese restaurants in operation in the US, greater than the combined number of McDonald's, KFC, Pizza Hut, Taco Bell and Wendy's branches, leading one commentator to observe that there is "nothing so all-American as Chinese food."<sup>157</sup>

### Philanthropy and giving

The US has a long history of charity and philanthropy. Early captains of industry, notably John D Rockefeller and Andrew

Carnegie, formed foundations that disbursed significant funds to support social causes at home and abroad. Later, the huge wealth created by the tech boom led to the rise of modern-day "philanthropic capitalism" evidenced through individuals such as Bill Gates and, latterly, Priscilla Chan and Mark Zuckerberg. Giving and philanthropy are sometimes channeled along lines of race, ethnicity and kinship by wealthy individuals from minorities seeking to support their communities.

Chinese American philanthropists, volunteers and non-profits have shown commitments both to their own networks and to broader social issues. Early Chinese American charity and community engagement often took the form of benevolent associations, or *huiguan*,

through which immigrants formed family clan associations to protect themselves from economic discrimination by pooling resources to provide financial and social support to needy community members and to facilitate remittances.<sup>158</sup> Giving has increased in quantity and thematic scope over time as the Chinese American community has grown and experienced both rising income levels and greater connectedness with local social issues.<sup>159</sup>

So far, the 21st century has seen rapid growth in the activity of Chinese Americans in relation to charitable foundations; the number of Chinese American foundations reached 1,300 by 2014, a growth of 400% on 2000 levels.<sup>160</sup> A frequent central motivation to start a charitable foundation is a desire to reciprocate the advantages that successful Chinese Americans credited their success to; a 2015 survey of Chinese American philanthropists in the Bay Area surrounding San Francisco showed that a desire to “give back” was a common reason for philanthropy.<sup>161</sup>

Education is the most popular area of Chinese American philanthropy, reflecting a cultural prioritization of learning and a recognition that skills and knowledge are vital to success and social mobility in modern-day America.<sup>162</sup> According to the Million Dollar List database from Indiana University (2008–14), among donations worth US\$1m or more from Chinese Americans, higher education ranked first by far as the primary cause for giving, accounting for 66% of large gifts donated.<sup>163</sup> When asked why they chose education as a philanthropic area, Chinese American

philanthropists credited their education at American universities with enabling their later success, and they sought to enable future generations of students to access the same level of support and education that they received.<sup>164</sup>

There is also a growing crossover among Chinese Americans between philanthropy, social impact projects and the arts. Philippa Soo, an actress and singer in the acclaimed musical *Hamilton*, started the Eliza Project initiative in partnership with Graham Windham, a private orphanage in Brooklyn, New York City, which was founded by Eliza Schuyler Hamilton, the character portrayed by Ms Soo in Lin Manuel Miranda’s musical.<sup>165</sup> The project is open to the nearly 4,000 students at Graham Windham, teaching children to turn to the arts as an outlet for personal expression and experience, and to uplift the creative spirit.<sup>166</sup>

Yo-Yo Ma, a world-renowned cellist known for celebrating multiculturalism and diversity, has also established programs that increase inclusiveness in performing arts, in this case by bringing musical education to more schools and communities worldwide. In 2018, Mr Ma established the Bach Project to collaborate with artists, students and activists, exploring the contribution of arts and culture to social progress.<sup>167</sup>

“Giving back” extends beyond the efforts of affluent philanthropists, also taking the form of volunteering by the broader Chinese American community and the provision of vital services to vulnerable groups by not-for-profit organizations. According to the 2014-19 American Time Use Surveys

produced by the Bureau of Labor Statistics, 6.8% of Chinese American respondents aged 15 and older reported participating in volunteering activities. On the days when Chinese Americans volunteered, they spent an average of 1.9 hours doing so.<sup>168</sup> In addition, studies also show that when first-generation Chinese Americans—who make up more than 40% of the community—opt to volunteer, they tend to do so in schools, hospitals, mutual aid organizations and religious non-profits.<sup>169,170</sup> These choices perhaps reflect the value that many place on education, as well as a sense of communal responsibility and an obligation towards the more vulnerable in society (Box 5).<sup>171</sup>

Another way the Chinese American community gives back to society is through founding and operating non-profits that provide various social services to not only Chinese Americans but also to other immigrant and low-income communities. The Chinese-American Planning Council (CPC), the largest Asian-American social service organization in the US, serves 60,000 New Yorkers. It offers programs in education, family support, community health and professional development, among other areas.<sup>172</sup> Although founded to serve primarily the Chinese American community, today the CPC provides various services to a population that mirrors the full diversity of the New York City: overall, while two-thirds of those who receive their services are Asian American, the rest is a diverse mix of races, including Latinx and Black Americans.<sup>173</sup> Similar to the CPC, many Chinese American non-profits serve

their local communities across the country; these include the Chinese American Service League in Chicago, the Chinatown Service Center in Washington, DC, and the Chinese Community Center in Houston.

By providing funds and social services, establishing outreach programs and volunteering to support the vulnerable, Chinese Americans leverage not only their financial success but also their skills and time to give back to their communities and to American society at large.

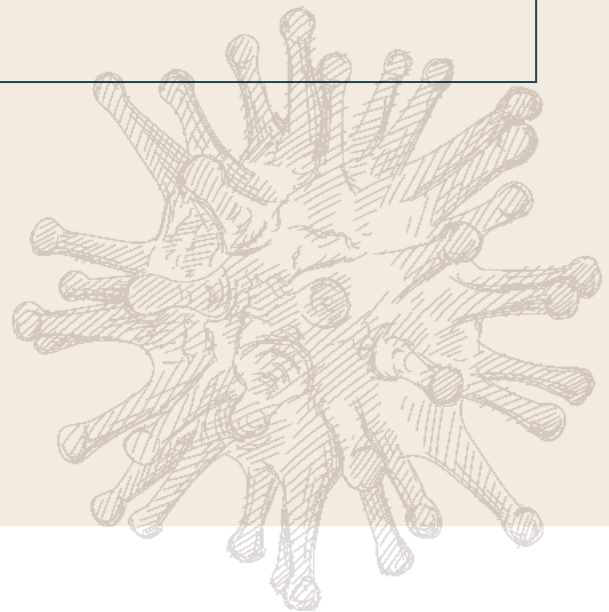
“ According to the 2014-19 American Time Use Surveys produced by the Bureau of Labor Statistics, 6.8% of Chinese American respondents aged 15 and older reported participating in volunteering activities. On the days when Chinese Americans volunteered, they spent an average of 1.9 hours doing so. ”

### **BOX 5 Chinese Americans in the fight against COVID-19**

At the height of the COVID-19 pandemic in the US, a number of Chinese American individuals and organizations joined other American peers to contribute to the fight against the spread of COVID-19. Fuqin Liu, a professor at Texas Woman's University, started a grassroots fundraising campaign to provide personal protective equipment (PPE) for medical professionals. The campaign raised nearly US\$240,000 in 40 days and donated PPE to 81 hospitals, 18 nursing homes and ten police and fire stations.<sup>174,175</sup> In New York City, Whitney Hu led South Brooklyn Mutual Aid, a food relief group with over 400 volunteers, providing meals to over 2,000 low-income families that had been disproportionately affected.<sup>176</sup>

In addition to the efforts of individuals, Chinese American non-profits across the country are uniting to fight the pandemic. They are creating vast networks and rallying their contacts in the US and China to procure supplies for doctors and nurses in need. After Peter Lee, an emergency room doctor from New Jersey, put out a public request for PPE, the Millburn Short Hills Chinese Association raised more than US\$50,000 and obtained 10,000 masks, gowns and other pieces of equipment to distribute to Dr Lee's hospital and other organizations.<sup>177</sup> In New York City, the Chinese-American Planning Council established a COVID-19 relief fund, providing essential services such as hot meals and cash assistance to low-income, at-risk and immigrant communities.<sup>178</sup> Further west, the Chinese American community in Michigan came together in January to the Michigan Chinese American Coalition to Fight COVID-19. The organization raised about US\$240,000 and donated more than 200,000 masks, many of them N95s, as well as thousands of eye goggles, hand sanitizer containers and protective coveralls, to 55 hospitals.<sup>179</sup>

In total, based on the most recent data collected by Chinese Americans United for America, a non-profit, since March 2020 more than 690 Chinese American grassroots organizations have raised over US\$18m and delivered millions of items of PPE and meals to hospitals, nursing homes, police departments and other agencies in the fight against the COVID-19 pandemic.<sup>180</sup> These coalitions of volunteers have dedicated their time and efforts to stopping the spread of COVID-19.





## Strengthening public health and social wellness

The US has produced many foundational innovations in healthcare and medicine, with far-reaching impacts on the domestic population and the world at large. In-vitro therapy, treatments for HIV/AIDS and malaria, advances in robotic surgery, imaging and radiography, the artificial heart, anesthetics, and the production of many vaccines and drugs, have all either been developed by or in partnership with the US science community and academic institutions. Recent years have brought an increased appreciation for the contribution of different minority groups in this impressive history including women and people of color, with Chinese Americans playing a formative role in a number of advances.

Reflecting a strong professional engagement in medicine and science, pioneering Chinese Americans have made critical and under-reported contributions to public health. In 1959, Min Chue Chang, a Chinese American biologist, became one of the first to successfully produce healthy rabbits through in-vitro fertilization (IVF), a process that he would continue to refine in the move towards eventual human trials.<sup>181</sup> Today, the IVF technology that Dr Chang helped to fine-tune has brought hope and joy to countless people unable to conceive naturally. More than 8m babies have been born via IVF globally since 1978, while in the US roughly 1-2% of new births every year are via IVF.<sup>182,183</sup>

David Ho, a virologist, began his career in Los Angeles during the first outbreak of HIV/AIDS and, along with colleagues at the Aaron Diamond AIDS Research Center, helped to develop combination antiretroviral therapy, a drugs cocktail that turned HIV from a death sentence into a manageable condition.<sup>184</sup> Dr Ho is now leading a research team developing COVID-19 treatment candidates.<sup>185</sup>

In 1995, Peter Tsai, a material scientist, developed the N95 respirator, which helps to keep healthcare workers safe during the COVID-19 pandemic; he has since come out of retirement to assist in developing methods to clean and reuse masks and to scale up production.<sup>186</sup>

Today, Chinese Americans represent a major force in driving scientific research and developing medicine and technology. In

2018, there were approximately 18,000 Chinese American biological scientists, medical scientists and other life scientists working in the US—accounting for 7% of the workforce in these occupations. More than 80% are active within the pharmaceutical industry, research and development (R&D), hospitals and healthcare services, and universities.<sup>187,188</sup>

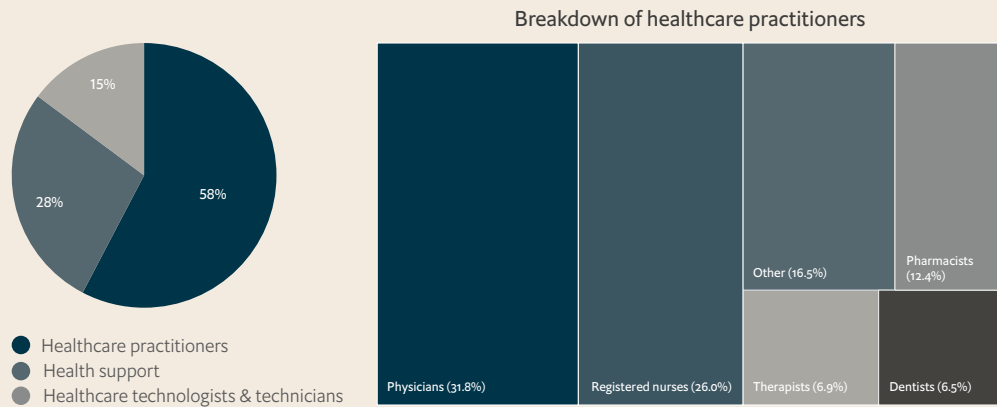
Outside of research laboratories, Chinese Americans play an important role in providing healthcare services (Figure 7).

**1 in 20**

surgeons, physicians, optometrists, pharmacists and dentists in the US is Chinese American



**FIGURE 7 Chinese Americans working in healthcare, 2018**



Sources: US Census Bureau, American Community Survey 2018 1-year estimates, PUMS; The Economist Intelligence Unit analysis.

According to 2018 data, one in ten Chinese Americans in the workforce is employed in healthcare and health support occupations. The majority are healthcare practitioners, with outsized contributions as physicians, surgeons, optometrists, pharmacists and dentists. Roughly one in 20 of people working across these occupations is Chinese American.<sup>189</sup> As the US works to slow the spread of COVID-19, Chinese American medical practitioners, together with their peers, are working on the frontlines to save the lives of their fellow citizens.

### Challenges and future directions

**The relevance and recognition of Chinese American artistic output could grow further.** Historically, Chinese American creatives have faced Eurocentric assumptions that race and ethnicity indelibly mark artistic production, and

thus that artists of Asian descent have to produce art that is somehow inherently “Asian” in theme or aesthetic.<sup>190</sup> For decades, Chinese American art was rarely considered “American,” and was, at best, subjugated to the trope of being a bridge between “Eastern” and “Western” art. The historical marginalization of Chinese Americans in the arts continues to manifest in certain areas. The visibility of Chinese Americans at the highest levels of American performing arts remains small—those who have managed to break glass ceilings are an exception to the rule, rather than a reflection of broad and fair representation.<sup>191</sup> Increasing the visibility of Chinese and other minorities in American arts and culture could open up new avenues for innovation and economic opportunity.

**Racial prejudice against Chinese American healthcare professionals persists and is worsening during the COVID-19 pandemic.** Although

discriminatory legal barriers to Chinese Americans' entry into medical practice was removed with the repeal of the Chinese Exclusion Act in 1943, racial discrimination has endured against Chinese American and other minority practitioners. According to a survey conducted in 2017, 59% of US physicians surveyed had been victims of offensive comments regarding their race, ethnicity or gender.<sup>192</sup> Asian American and Black American physicians were the most likely to experience discriminatory comments regarding their race, and Asian Americans were the most likely to report overhearing patients speak negatively about their ethnicity or national origin.<sup>193</sup> Such bigotry has been exacerbated by the COVID-19 pandemic. Chinese and other Asian healthcare workers have reported repeat incidents of racial harassment and violence, often stemming from the untrue perception that Asians are more likely to carry the virus.<sup>194,195</sup>

**Public health funding has come under scrutiny as part of wider US-China tensions.** The National Institutes of Health (NIH), the primary funder of cutting-edge public health research, disbursing roughly US\$30bn per year,<sup>196</sup> is closely scrutinizing researchers' links to foreign entities in an effort to enforce disclosure policies and address concerns about intellectual property theft. This has led to the uncovering of malpractices, such as undisclosed funding, but it has also been criticized as auguring an over-reaching suspicion of any researcher with links to China.<sup>197,198</sup> While not all serious offenses being investigated involve ethnically

Chinese researchers, some critics believe that Asian-born researchers are being targeted simply for their participation in Chinese foreign researcher recruitment programs. The NIH is faced with a balancing act in which it must conduct comprehensive investigations into governance breaches without creating a culture of fear or undue surveillance of well-intentioned China-linked scientists who have abided by NIH rules.

“As of 2018, there are approximately 18,000 Chinese American biological scientists, medical scientists and other life scientists working in the US—accounting for 7% of the workforce in these occupations. More than 80% are active within the pharmaceutical industry, research and development (R&D), hospitals and healthcare services, and universities.”

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# 05 Conclusion

Since first arriving in the US, Chinese Americans have contributed extensively to shaping the fabric of American society. They have played an integral part in driving economic growth and technological innovation, establishing robust institutions and supporting national security, and enriching culture and promoting social well-being. Furthermore, they have done so despite facing many legal and social barriers.

The contributions of Chinese Americans—and their ability to participate fully in society—have evolved over time, in step with broader legal, social and geopolitical shifts. The liberalization of immigration policies, advances in civil rights and improvements in US-China relations in the 20th century opened up economic and political opportunities for the Chinese American community, enabling its members to contribute in broader and more influential ways than ever before. History has shown that, as has been the case with other minority groups, the more welcoming the US has been to Chinese Americans, the more it has benefited from their presence.

Today, the Chinese American community continues to hold enormous untapped economic, political and creative potential. However, a variety of persistent and emerging challenges could prevent this potential from being fully realized. These barriers include a longstanding stereotyping of Chinese Americans as “perpetual foreigners,” consistent underrepresentation in leadership positions in corporate sectors, and challenges such as limited English language skills and educational levels among those

struggling to advance economically. Escalated US-China tensions and scapegoating linked to the COVID-19 pandemic have raised the prospect of new and renewed challenges, in the form of increased immigration restrictions and the risk of racial profiling in government security clampdowns. Failure to address these barriers would result in a missed opportunity for American society at large.

Immediate action is needed to address the obstacles faced by Chinese Americans, some of which are unique to the community, many others of which are also faced by other minority communities. Meaningful progress will require efforts from multiple stakeholders, including governments, political leaders, business leaders, civil society organizations, think tanks, academia and the media.

We invite stakeholders to ask critical questions in their daily decision-making, including but not limited to:

- Do we have a full appreciation of how the country's history of immigration and citizenship has helped to build the US economy and the society that we live in today? What are the forces that led to today's progress, and which obstacles are standing in the ways of a more fruitful future shared by all Americans? How can we work together to overcome these obstacles?
- Are we, as legislative, policy or business decision-makers, making adequate efforts to understand the consequences of our actions? Do the decisions that we make disproportionately affect certain racial or ethnic groups (whether intentionally or otherwise)? If so, what are the implications for the core values of American society, social justice, national security, and our long-term competitiveness and prosperity? What would we put at risk if we undid an economic and social fabric that values diversity and welcomes all people that wish to contribute?
- Have we, as governments, employers, educators, funders and sponsors, done enough to address the underrepresentation of minority groups across economic, social and political domains? What is the missed opportunity for our economy and society if we fail to do so? What benefits might we reap from improved diversity in leadership in private and public organizations? And how can we tackle the obstacles that have prevented minorities from taking key leadership positions?

Only through productive dialogue and engagement on these issues can shared interests be identified, assumptions be challenged with data and evidence, and solutions be identified and implemented. This will pave the way for continued progress in the future—to the benefit of all Americans.

# Appendix: Methodology

## Definition and data development

This Economist Intelligence Unit (EIU) study focuses on the Chinese American population, defined as American citizens of ethnically Chinese descent—either exclusively or mixed with other ethnicities. The EIU used the US Census Bureau’s 2018 American Community Survey (ACS; public use microdata sample) 1-year estimates<sup>199</sup> as the primary source to develop demographic data of the Chinese American community, including its population by age, gender, ethnic descent, state of residence, household income and education attainment, and employment by occupation and by industry. In addition, 5-year estimates<sup>200</sup> were used to develop employment data by occupation and industry to assess underlying, long-term trends, as recommended by the US Census Bureau.

Existing data for topics of interest to this study is very often focused on Asian Americans or Asian Americans and Pacific Islanders (AAPIs), without a further breakdown by ethnicity. Examples include education completion statistics from the Department of Education’s Integrated Postsecondary Education Data System (IPEDS), and private-sector job patterns statistics for minorities from the Equal Employment Opportunity Commission (EEOC). In such cases, the EIU disaggregated the data to the Chinese American population by adjusting based on the proportion of Chinese Americans in Asian Americans or AAPIs in relevant fields (based on ACS 5-year estimates).

## Economic impact of Chinese Americans’ consumer spending

The EIU team quantified the economic impact of Chinese Americans’ spending activities via the Impact Analysis for Planning (IMPLAN) model, an input-output model widely used by academia, policymakers and industry leaders for economic analyses.

For the purpose of this modeling, the target group, “Chinese Americans,” included both citizens and permanent residents (or Green Card holders), given that the majority of Chinese Green Card holders were naturalized to become citizens between 1960 and 2019<sup>201</sup> and assuming their consumption behavior and hence economic impact are similar to citizens.

The input element for the model, i.e. household spending, was calculated by leveraging data from the 2018 ACS 1-year estimates and IMPLAN. The economic impact (i.e. output of the model) was measured in terms of gross valued added, job creation and labor income.

### Fortune 500 companies founded/led by Chinese Americans

The EIU team took three steps to identify Fortune 500 companies founded or led by Chinese Americans:

**Step 1:** compiling a list of the 721 companies that have featured at least once in the Fortune 500 ranking over the period 2011-2020.

**Step 2:** developing a list of over 130 prominent Chinese American business leaders, who were identified via examination of a variety of credible sources including the Bloomberg Billionaire Index, Forbes, Committee of 100 membership and the Gold House A100 list.

**Step 3:** examining the individuals’ career histories to identify names of companies they had founded or led, and cross-tabulating that information with the compiled full list of Fortune 500 companies.

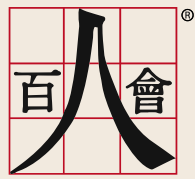
Through this process, the team identified 20 Fortune 500 companies that had been led by at least one Chinese American c-suite executive over the past decade and/or were originally founded by a Chinese American. Building on this list, the team analyzed these companies’ market caps at their historical peak and as of June 2020.<sup>202</sup>

<sup>199</sup> Based on information collected over a 12-month period.

<sup>200</sup> Based on information collected over a 60-month period, and best used when examining a small population or assessing an underlying, long-term trend (according to “Understanding and Using American Community Survey Data,” US Census Bureau, July 2018.)

<sup>201</sup> The Economist Intelligence Unit analysis based on statistics retrieved from US Department of Homeland Security and US Department of Justice.

<sup>202</sup> For the six companies that were acquired/merged, either the value of acquisition deals or the most recent available market cap was used after adjustment to June 2020 value based on inflation rates.



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