



2021-2022 NEW HAMPSHIRE FOREIGN DIRECT INVESTMENT REPORT

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Executive Summary

Foreign direct investment (FDI) in New Hampshire is here to stay! At a time of ongoing uncertainty, inflation, continuing risk of recession and tentative global flows, the 2021-2022 New Hampshire FDI Report shows persistent quality of investments with a range of positive impacts.

Despite global disruption, foreign business in New Hampshire is resilient. New investments are recovering from the pandemic and growing. In the past two years, foreign subsidiaries have invested in access to local markets and distribution in the region and maintained a presence in high-tech industries. New Hampshire benefits from the presence of overseas companies. FDI job-creation is on the increase. In addition to jobs, foreign firms contribute to international connections in finance and insurance and to the state's integration with global banking systems. Foreign subsidiaries support New Hampshire's business ecosystem, with varied and stable presence across value chain activities: manufacturing, wholesale and retail (including logistics and warehousing), and support services (such as IT and administrative services). In the context of tightening financial conditions and heightened investor uncertainty, the status of globalization in New Hampshire is encouraging. International businesses contribute to financing availability for private and corporate residents, to the growth of local markets and industries, and to the resilience of production capacity in New Hampshire.

Regional reach of foreign activities in the state provides an additional source of resilience and positive prospects for New Hampshire FDI. The spatial footprint of globalization shows two foreign subsidiaries clusters: one along the Massachusetts-New Hampshire border and one in the coast area. Clustering effects spill over into foreign firms' presence and activities in Central New Hampshire. Border effects explain FDI in the North Country. Service-providers in the south support cluster business activity along the Massachusetts-New Hampshire border on both sides. Central New Hampshire provides a gateway to larger markets to the south. Northern New Hampshire shows potential for growth in manufacturing investments.

The 2021-2022 New Hampshire FDI Report provides a unique dive into FDI as presence and development. The analysis concludes on actionable insights for anyone who wants to understand the best ways to leverage international business. While FDI levels will only entirely recover and register high growth once there is another full economic recovery, FDI can still be part of the solution for state-level and regional economic development.

Key Figures

2 southern counties, Hillsborough and Rockingham, have a dominating share of 3/4 of all foreign subsidiaries in New Hampshire

\$5 million in 2021 total investment expenditure of newly acquired, established, or expanded foreign enterprises in New Hampshire

10 (8) New Hampshire counties have foreign subsidiaries from Canada (the U.K.)

17% (18%) of foreign distributors (producers) are in the state's inner center (northwest border) counties

20% of foreign firms operate in manufacturing

28% of foreign subsidiaries are in finance and insurance

30% of foreign firms are in trade and logistics

40% of foreign firms provide support services

60% of parent companies are in the Secondary Sector (Manufacturing, Utility, and Construction)

60% and more of foreign entities in the state have under 20 employees

100 jobs in 2021 were planned to be created by the newly expanded foreign enterprises in New Hampshire

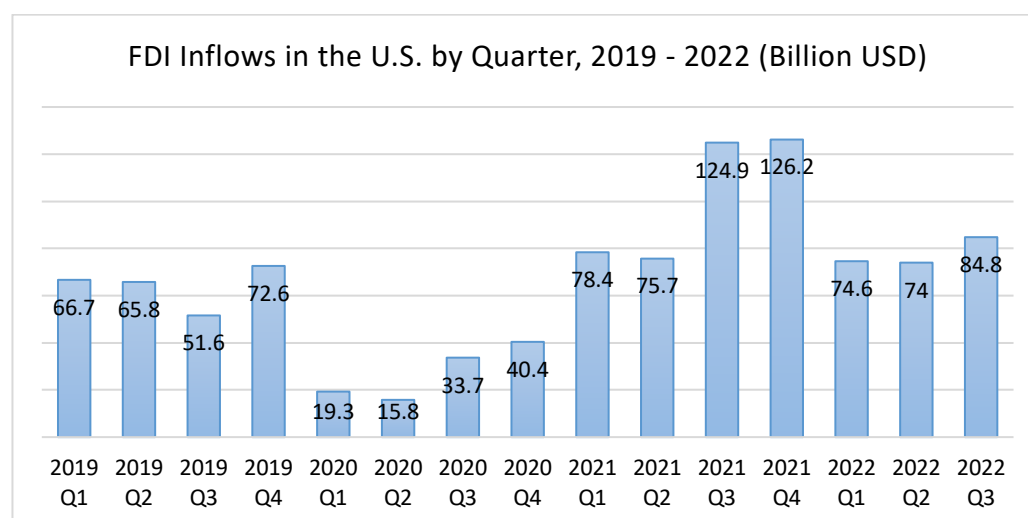
176 parent companies headquartered in 23 countries have operations in New Hampshire

Part 1. Introduction

In 2020 the COVID-19 Pandemic caused an unprecedented collapse in the global Foreign Direct Investment (FDI), and for the first time the U.S. lost its position as the world's largest FDI recipient (in terms of the annual FDI inflows) to China. The former recorded a near 50 percent drop to \$134 billion in FDI inflows, while the latter recorded a 4 percent increase to \$163 billion.¹ A strong boom in the global FDI kicked off in 2021 when many countries recorded FDI inflows that surpassed their pre-pandemic level. Although China continued to grow in its FDI inflows by 20 percent reaching a record \$179 billion, the U.S. returned to the top of the list of recipients with \$323 billion, an increase of 114% from the last year.²

In the first three quarters of 2022, the FDI inflows in the U.S. totaled \$233.4 billion, which remained the world's largest recipient of FDI. Figure 1.1 below displays the quarterly data on the U.S. FDI inflows. In the year before the COVID-19 pandemic, the U.S. attracted FDI at an average amount of \$70 billion every quarter. This number declined to below \$20 (\$40) billion in the first (second) half of 2020 due to the lock-down of economies caused by the pandemic. It bounced up to more than \$70 billion in the first half of 2021 and then rose sharply to more than \$120 billion in the second half. Entering 2022 the U.S. quarterly FDI inflows returned to slightly above its pre-pandemic normal and remained in the values from \$74 billion to \$84.8 billion.

Figure 1.1



Data source: U.S. Bureau of Economic Analysis, U.S. International Transactions Data. The BEA released preliminary data for third quarter 2022 on December 21, 2022.

On one hand, the big picture of global investment reveals its volatile nature across the countries. On the other hand, there exists significant heterogeneity in both the effects of the

¹ UNCTAD, Global Investment Trends Monitor, No.38. https://unctad.org/system/files/official-document/diaeiainf2021d1_en.pdf.

² UNCTAD, Global Investment Trends Monitor, No.40. <https://unctad.org/webflyer/global-investment-trend-monitor-no-40>

global pandemic disruptions and the outcomes of foreign businesses across the locations within a country (Wright and Wu, 2022).³ Therefore, a more local lens of investigation would shed lights on understanding the status and outcomes of FDI in a locality, and thus provides meaningful implications for the local researchers and policy makers.

The present in-depth local level investigation focuses on the state of New Hampshire. This type of research is relatively sparse due to the limitation in data availability. It first analyzes the aggregate data on investment expenditures and employment by the new FDI in New Hampshire in 2021. It then examines the FDI in New Hampshire from the perspective of presence of foreign subsidiaries. The analyzed sample contains 361 firms that are subsidiaries of parent companies outside the United States identified in the Uniworld database.⁴ The data for other key variables are collected from various publicly available sources with citations provided throughout the report. The distributions of foreign subsidiaries are analyzed across industries, value chain activities, and the employment sizes. The findings provide valuable inferences on contributions that foreign firms make to the state.

Our research also scrutinizes the location choices of parent companies with focuses on what countries they are from, in what industries they operate, what counties in New Hampshire they have subsidiaries, and how their subsidiaries fit in the local supply chain. The last part of our analysis is an interesting comparison of the foreign business status in New Hampshire between 2018 and 2022. The comparison adds to the efforts to understand the short-run effects of the COVID-19 pandemic on FDI at the subnational level.

The comprehensive descriptive analysis of both the new FDI and the presence of foreign subsidiaries at the level of counties, sectors and industries of New Hampshire provides unique evidence on the integration of foreign businesses in the ecosystem of New Hampshire. It also contributes to the study of FDI location choices by mapping the countries of origin for FDI in the various aspects of New Hampshire economy. The results hold important value for identifying the sources of FDI, the geographic clusters and industrial agglomerations of foreign businesses in New Hampshire, the sectors and industries where foreign firms add jobs and the extent to which foreign firms strengthen the state's local supply chain.

In addition, because the series of New Hampshire FDI Reports track the same sample of foreign subsidiaries from the pre-pandemic year of 2018 to the tail end of the pandemic in 2022, the findings provide consistent evidence on the contribution of FDI to the New Hampshire economy and the resilience of foreign businesses in New Hampshire despite facing challenges from the global disruptions. The reports have valuable implications for both policy makers and researchers who are interested in attracting and promoting FDI to boost the local economies.

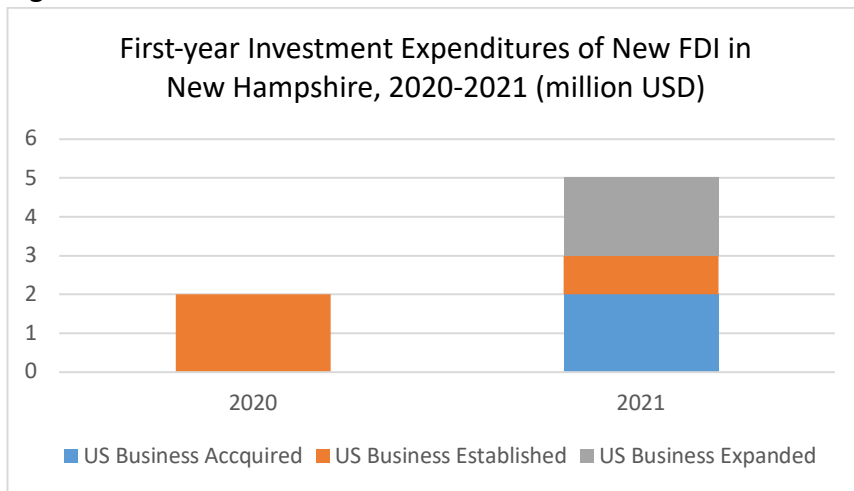
³ Wright, Roxana, and Chen Wu. 2022. The Uneven Short-Run Effects of the COVID-19 Pandemic on Foreign Direct Investment. *Journal of Risk and Financial Management* 15: 468. <https://doi.org/10.3390/jrfm15100468>

⁴ The Uniworld Online. <https://uniworldonline.com/>.

Part 2. New Foreign Direct Investment in New Hampshire in 2021

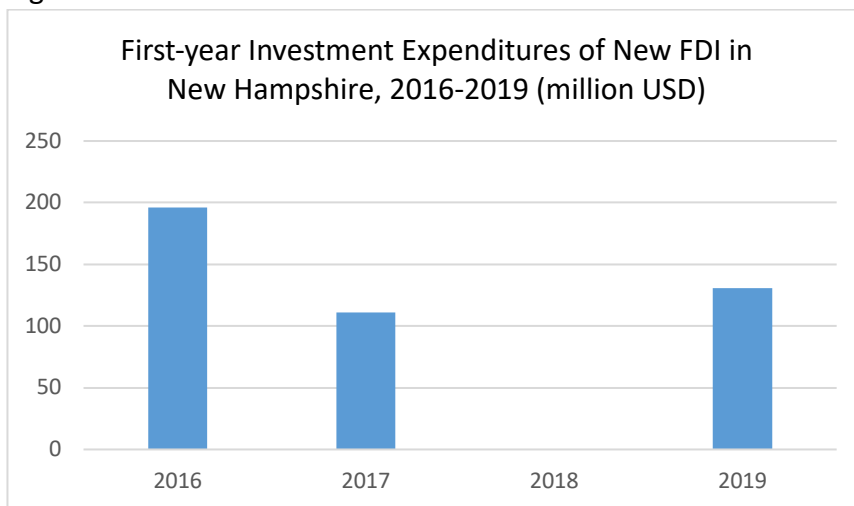
The newly acquired, established, or expanded U.S. businesses by foreign enterprises (new FDI, hereafter) in New Hampshire are recovering from the COVID-19 Pandemic. As shown in Figure 2.1, the new FDI located in New Hampshire made a total investment expenditure of \$5 million in 2021, equaling 2.5 times of the 2020 value during the COVID-19 pandemic when only the newly established US affiliates made an investment expenditure of \$2 million. However, as shown in Figure 2.2 below, the first-year investment expenditures of new FDI in New Hampshire used to be averaged at \$148 million between 2016 and 2019. This comparison highlights a cliff-like drop in the state’s new FDI brought about by the COVID-19 pandemic, and that the new FDI in the Granite State is still far below its pre-pandemic level as of 2021.

Figure 2.1



Data Source: U.S. Bureau of Economic Analysis

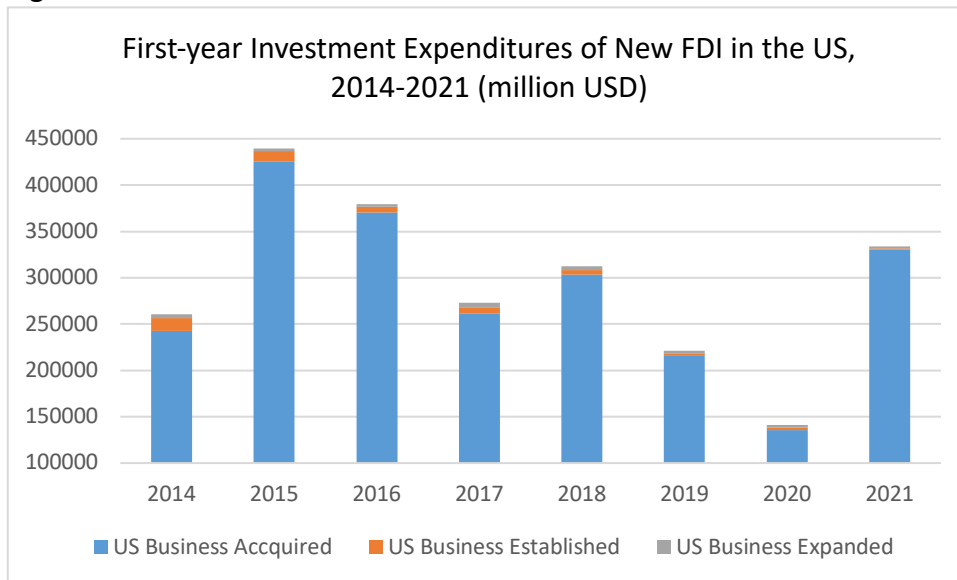
Figure 2.2



Data Source: U.S. Bureau of Economic Analysis. The 2018 data was suppressed to avoid disclosure of data of individual companies.

Because the gross investment spending, by the domestic investors or by the foreign investors, tends to be volatile over time, it is worth comparing the New Hampshire data with country measures. At the national level which is shown in Figure 2.3, although the COVID-19 pandemic in 2020 also caused the lowest first-year investment expenditures of the country's new FDI since 2014, dropping from \$440 billion in 2015 to only \$141 billion in 2020, this number drastically bounced up by 2.4 times to \$334 billion. It is worth noting that the U.S. and New Hampshire shared the same percentage growth in the new FDI expenditures from 2020 to 2021 but the U.S. restored and outperformed the average of its values between 2014 and 2019, while New Hampshire did not. This comparison reveals the COVID-19 pandemic had a more severe impact on some states (including New Hampshire) than the others. Figure 2.3 also reveals the declining trend in the investment expenditures of the Greenfield new FDI (or the newly established U.S. affiliates) in the US, which has been going down every year from \$14 billion in 2014 to \$1.6 billion 2021.

Figure 2.3



Data Source: U.S. Bureau of Economic Analysis

New Hampshire has also been recovering from the 2020 COVID-19 pandemic in the sense of job creations by the new FDI. As shown in Table 2.1 below, 100 jobs were planned to be created by the newly expanded US affiliates in 2021, compared to zero job creation by the new FDI one year ago. In the years before the pandemic, job creations by the state's new FDI were volatile and fluctuating between 100 and 1,000 jobs every year, mainly created by the newly acquired US affiliates. But the relevant importance of the newly expanded US affiliates in supporting the New Hampshire employment has been rising since 2019. The newly established US affiliates has been a negligible contributor to the employment of the state.

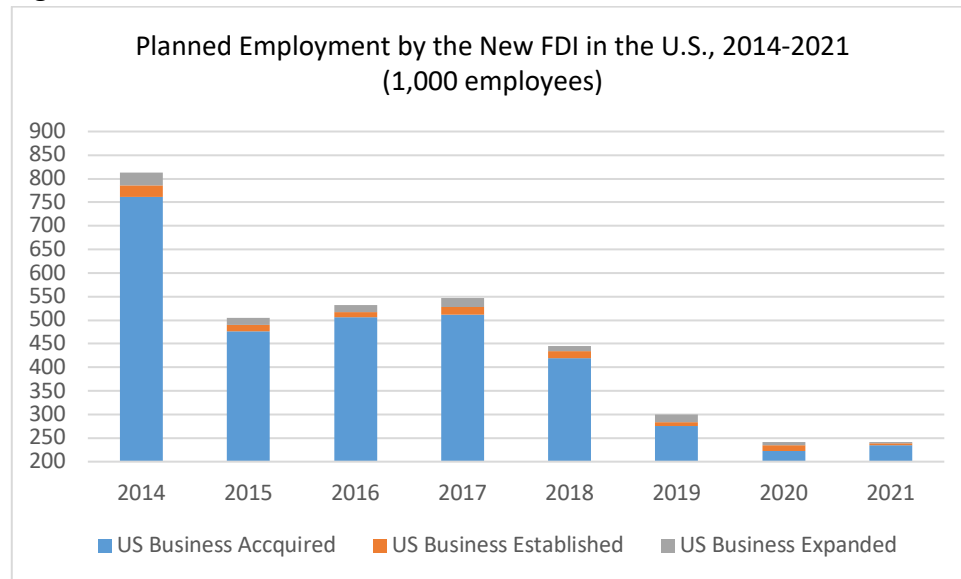
Table 2.1 Planned Employment by the New FDI in New Hampshire, 2014-2021 (1,000 employees)

	2014	2015	2016	2017	2018	2019	2020	2021
Total Planned employment	0.9	0.1	1	0.4	0.1	F	(*)	0.1
US Business Acquired	0.8	0.1	1	0.3	0.1	A	0	0
US Business Established	0	0	0	(*)	(*)	(*)	(*)	(*)
US Business Expanded	0.1	0	0	0	0	F	0	0.1

Data source: U.S. Bureau of Economic Analysis. The size ranges are: A-1 to 499; F-500 to 999. (*) means a nonzero value that rounds to zero.

The national situation looks similar with New Hampshire. The Figure 2.4 below illustrates that job creations by the new FDI at the national level was declining annually since 2017 (512,000 employees) to 2020 (222,000 employees). It was slightly increased to 234,500 jobs in 2021, but was still lower than the year of 2019 whose value (299,000 employees) was the lowest in the pre-pandemic era. A closer scrutiny of the data reveals that while the planned employment by the newly acquired U.S. affiliates in 2021 was higher than the pandemic year, the employment of both the newly established and the newly expanded U.S. affiliates continued to worsen (from 11,600 to 3,800, and from 7,800 to 3,100, respectively). This is opposite to New Hampshire, where newly expanded U.S. affiliates became increasingly important for the state’s employment expansion.

Figure 2.4



Data Source: U.S. Bureau of Economic Analysis

Part 3. Status of Foreign Business Outcomes in New Hampshire: Industry, Value Chain Activity and Employment

To understand the reach and scale of foreign direct investment in New Hampshire, the authors completed an analysis of foreign firms'⁵ presence across New Hampshire industries and by employment scale. The analyzed sample contains 361 firms that are subsidiaries of parent companies outside the United States identified in the Uniworld database⁶. Industry, activity, and employment data for these firms were collected from publicly available sources⁷. The North American Industry Classification System (NAICS)⁸ was used in the analysis, with accompanying industry codes identifying sectors and sub-sectors⁹. The U.S. Bureau of Labor Statistics' firm size classes¹⁰ were utilized to analyze employment and scale.

The study provides insights on how international enterprise touches on various aspects of New Hampshire's business and its value chain ecosystems. Findings related to scale of operations emphasize how overseas companies are represented in the state and the ways in which international business contributes to employment in New Hampshire.

Foreign Firms Are Integrated in the New Hampshire's Value Chains and the Business Ecosystem

Foreign subsidiaries are engaged in the full range of value-adding activities needed to create products and services in the state. Foreign firms' statewide representation in supply chain activities shows diversity and balanced distribution in terms of presence in manufacturing, wholesale and retail (including logistics and warehousing), and support services (such as IT and administrative services). These three key areas of value chain activities in our state are steadily

⁵ For reporting, the authors of this study have used varied language interchangeably to identify foreign subsidiaries, such as firms, foreign firms, foreign entities, and foreign-related operations.

⁶ The Uniworld Online at <https://uniworldonline.com/> provides a directory of headquarters, subsidiaries, branches and executives of multinational firms.

⁷ Publicly available data on New Hampshire foreign firms were collected and triangulated from the following sources: Dun & Bradstreet company profile directory at <https://www.dnb.com/>; Manta Business Directory at <https://www.manta.com/business-directory>; Buzzfile Company Information Database at <https://www.buzzfile.com/Home/Basic>; AllBiz business database at <https://www.allbiz.com/>; local business directories available at <https://www.b2byellowpages.com/>; company profiles in LinkedIn; zoominfo company directory at <https://www.zoominfo.com/>; NAICS company profiles from <https://www.naics.com/>; PitchBook company profiles via <https://pitchbook.com/profiles>; Yelp business directories from <https://www.yelp.com/>; business overviews at <https://siccode.com/>; companies' home websites; Inhersight company profiles from <https://www.inhersight.com/>; IndustryNet lists at <https://industry.net/>; Datanyze company overviews search <https://www.datanyze.com/>; Bloomberg company profiles from <https://www.bloomberg.com/>.

⁸ "The North American Industry Classification System (NAICS) is the standard used by Federal statistical agencies in classifying business establishments for the purpose of collecting, analyzing, and publishing statistical data related to the U.S. business economy.", excerpt from <https://www.census.gov/naics/>.

⁹ The NAICS Association codes were used in the analysis and shown in some of the results, from <https://www.naics.com/search/>.

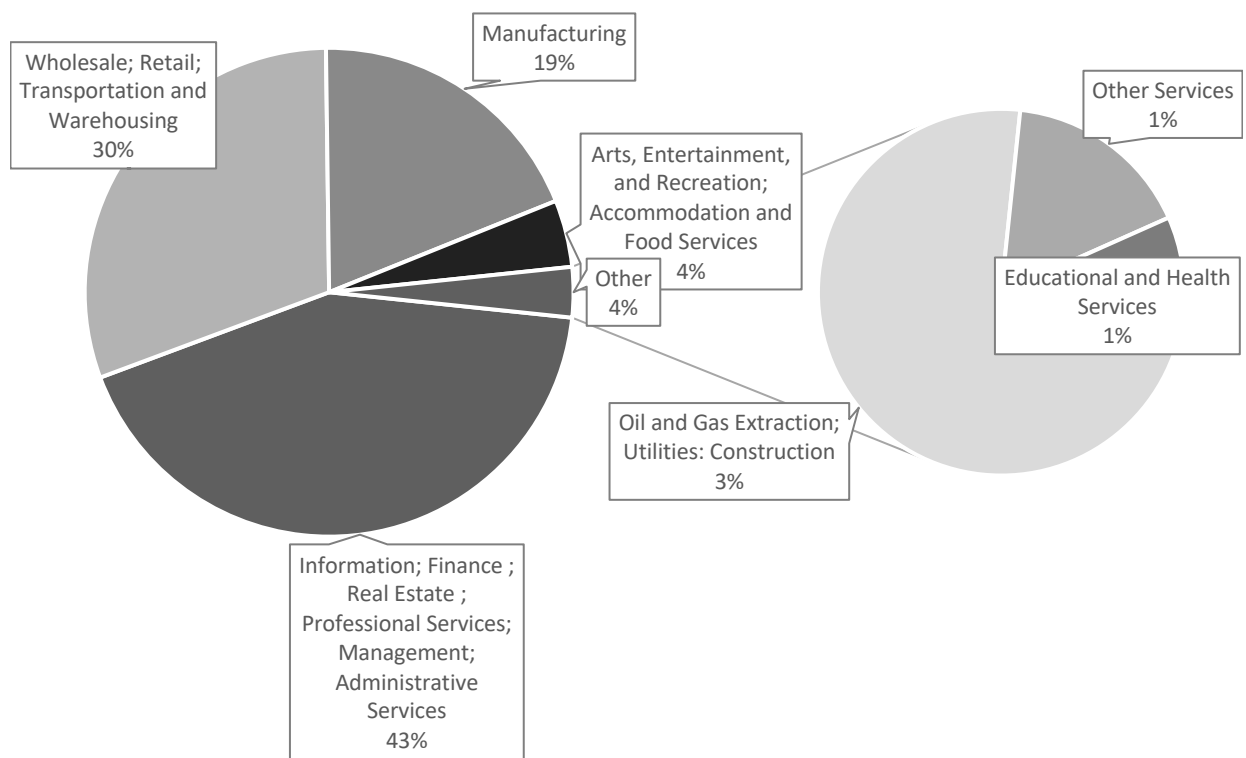
¹⁰ The U.S. Bureau of Labor Statistics firm size classes are used to explore firm scale, as indicated at <https://www.bls.gov/bdm/bdmfirmsize.htm>.

covered by foreign firms' endeavors: about 20 percent of firms operate in manufacturing, 30 percent of firms in trade and logistics, and 40 percent provide support services.

Figure 3.1 shows foreign firms' representation across sectors and identifies percentages of firms pursuing each object of activity from a total of 361 firms operating across seven main sectors in New Hampshire. The proportions demonstrate that these firms operate across stages of value chains, with good representations in primary and support value chain activities. This indicates a high level of integration of foreign subsidiaries' activities within domestic industries. Thus, foreign firms play important roles in the vitality of state industries and are integral part of New Hampshire's business ecosystem.

Figure 3.1

Foreign Firms' Representation Across Sectors



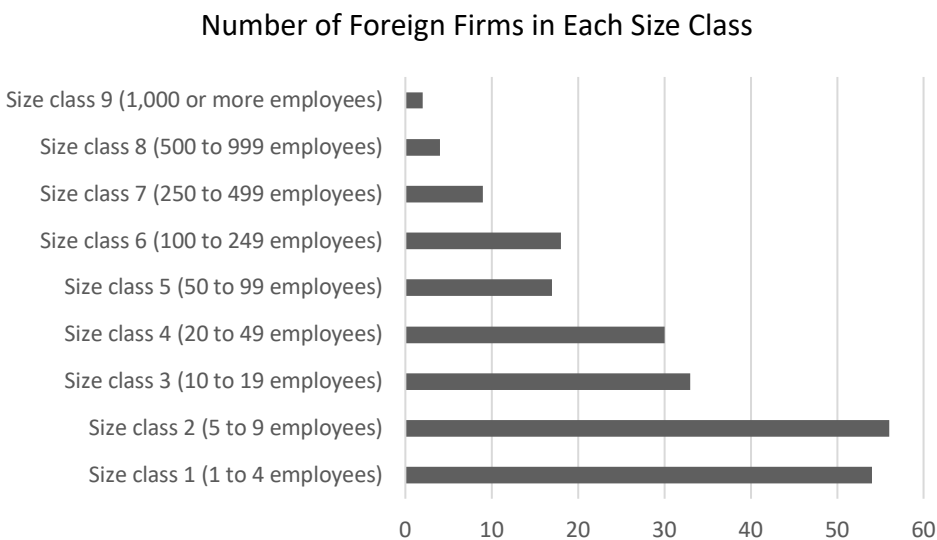
Scale and Employment of Foreign Operations Fit New Hampshire's Small Business Profile

Most foreign firms in the Granite State are very small. This indicates entrepreneurial scale and matches the New Hampshire's overall profile as a small business state. Most foreign firms employ under 10 employees. Some large companies are operating in the state. However, as presence, they do not represent a large fraction of foreign firms. A breakdown of number of firms across size classes defined by the Bureau of Labor Statistics shows the strong

manifestation of operations with smaller scale. Rather than pursuing large-scale undertakings, foreign companies may choose physical footprint and spatial reach in New Hampshire. The reduced size is likely to support connections with other local small businesses, and easy integration or collaborations with other organizations across the state.

Firm presence by employment shown in Figure 3.2 indicates that more than 60 percent of foreign entities in the state have under 20 staff members, and about a quarter of the total number of firms have fewer than four employees. In most cases, these small numbers are related to the fact that business operations are representative offices or branches of overseas companies. Accordingly, this information suggests that companies strive to be represented in the state even if they do not have large operations or run facilities here.

Figure 3.2



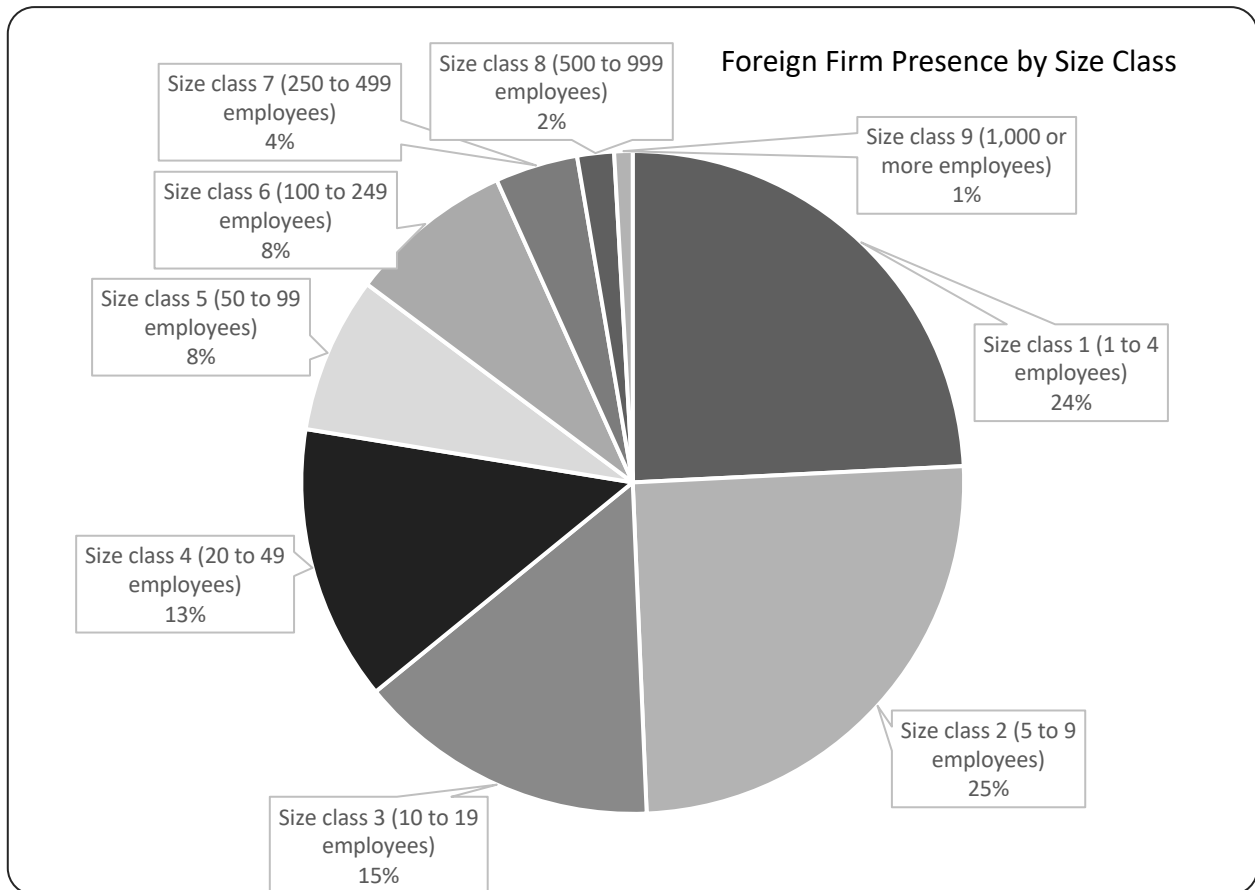
Count of sectors across which foreign firms of each size class operate shows representation of foreign operations based on scale and main object of activity. These data are compiled in Table 3.1. There is diversity in foreign firms' sizes across New Hampshire's industry sectors. The distribution of number of employees across sectors varies. Conversely, double-digit numbers of sectors are denoted in many firm size classes.

Table 3.1 Number of Industry Sectors Represented in Each Firm Size Class

<i>Firm Size Class</i>	<i>No. of Sectors Represented</i>
1	20
4	19
2	18
3	15
6	12
5	12
7	7
8	4
9	2

The comparison of foreign firms by number of employees is depicted in Figure 3.3 to conclude on the presence of mostly small-scale operations across the state.

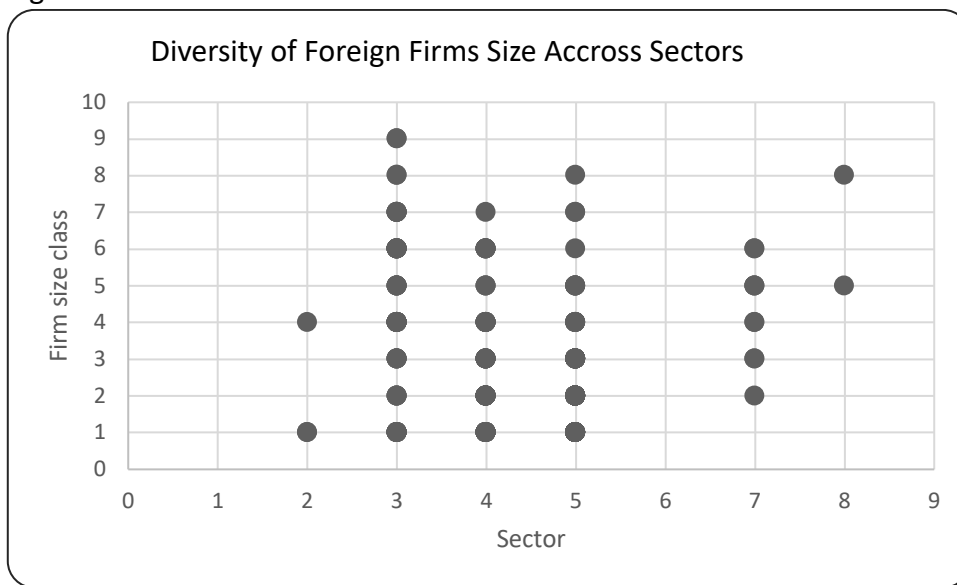
Figure 3.3



Overall, foreign firms in our sample are active in six out of the nine key sectors, with no significant activities in agriculture, forestry, fishing and hunting sector and no notable

representation in public administration or health services. Foreign firms' presence throughout sectors has diversity of scale, as presented in Figure 3.4. Markedly, foreign firms employ New Hampshire residents in a variety of industries and occupations, and support labor development across most key sectors in the state. Highest range and diversity in scale of operations can be seen in manufacturing. Similarly, the services subsectors attract foreign ventures of varying sizes. Trade and logistics facilities also vary in employment levels. Scale is more uniform in mining, oil extraction and construction subsectors. The ranges of firms' sizes may reflect common scale of operations in particular industries, as well as strategic choices about staffing and ratios of full-time versus part-time employees. Firm size classes account only for full-time employment.

Figure 3.4



Note: Sector descriptions corresponding to the sector numbers on the horizontal axis are as follows:

Sector	Description
1	Agriculture, Forestry, Fishing and Hunting
2	Mining, Quarrying, and Oil and Gas Extraction; Utilities: Construction
3	Manufacturing
4	Wholesale Trade; Retail Trade; Transportation and Warehousing
5	Information; Finance and Insurance; Real Estate and Rental and Leasing; Professional, Scientific, and Technical Services; Management of Companies and Enterprises; Administrative and Support and Waste Management and Remediation Services
6	Educational Services; Health Care and Social Assistance
7	Arts, Entertainment, and Recreation; Accommodation and Food Services
8	Other Services (except Public Administration)
9	Public Administration

Diversity and Concentration Characterize Industry Presence of Foreign Business in New Hampshire

The presence of foreign firms in New Hampshire industries shows high level of representation in finance and insurance. Our sample identifies foreign subsidiaries with operations in at least 20 main industries recognized by the US NAICS classification. Overall, data synthesized in Table 3.2 indicates that foreign firms are present mainly in services, followed by strong relative numbers in trade, and, thirdly, in manufacturing.

Table 3.2 Foreign Subsidiaries Representations by Activity Types

<i>Sector</i>	<i>Frequency</i>
Services	48%
Retail and Wholesale	30%
Manufacturing	19%
Utilities	2%
Information	1%
Construction	1%

In relative numbers, banking operations connected to international companies are highly noticeable in the state. This may be related to the strong networks of large multinational banks across international locations. The finding demonstrates New Hampshire individual and organization residents' access to finance and insurance systems supported by global operations. The data also indicate that retail trade has good relative representation of foreign firms, followed by manufacturing, as depicted in Table 3.3. The findings reveal foreign business interests in accessing local markets and expanding distribution in the state. In addition, foreign companies support manufacturing in New Hampshire, with a noticeable presence across high-tech industry segments.

Table 3.3 Distribution of Operations Across Industries in New Hampshire

<i>NAICS Code</i>	<i>Industry</i>	<i>Frequency</i>
52	Finance and Insurance	28%
44	Retail Trade	16%
33	Manufacturing	13%
42	Wholesale Trade	11%
54	Professional, Scientific, and Technical Services	7%
32	Manufacturing	5%
56	Administrative and Support and Waste Management and Remediation Services	5%
72	Accommodation and Food Services	4%
45	Retail Trade	3%
22	Utilities	2%
31	Manufacturing	1%
51	Information	1%
48	Transportation and Warehousing	1%
53	Real Estate and Rental and Leasing	1%
23	Construction	1%
81	Other Services (except Public Administration)	1%
62	Health Care and Social Assistance	Under 1%
59	Miscellaneous Retail	under 1%
55	Management of Companies and Enterprises	under 1%
49	Transportation and Warehousing	under 1%
	<i>Total</i>	100%

Frequency counts across industries classified by NAICS two-digit codes supports the relative concentration in some industries, with low number of operations in others. Although the banking sector may be more represented, manufacturing presence is relatively important. Bank affiliates throughout the state show a network of finance and insurance international connections and integration with global banking systems. Relative numbers in retail trade indicate integration in larger distribution systems and access to local customers. A good presence of manufacturing suggest that the state offers access to production labor that attracts international business interest. Other factors may also motivate manufacturing operations, such as access and development of technology, opportunities for innovation and potential for partnering with other organizations. The focus of foreign companies in and across these three key industries (finance, retail and manufacturing) support relevancy of international activities in the state and the importance that foreign business has for the availability of financing, the growth of markets and the vitality of production in New Hampshire.

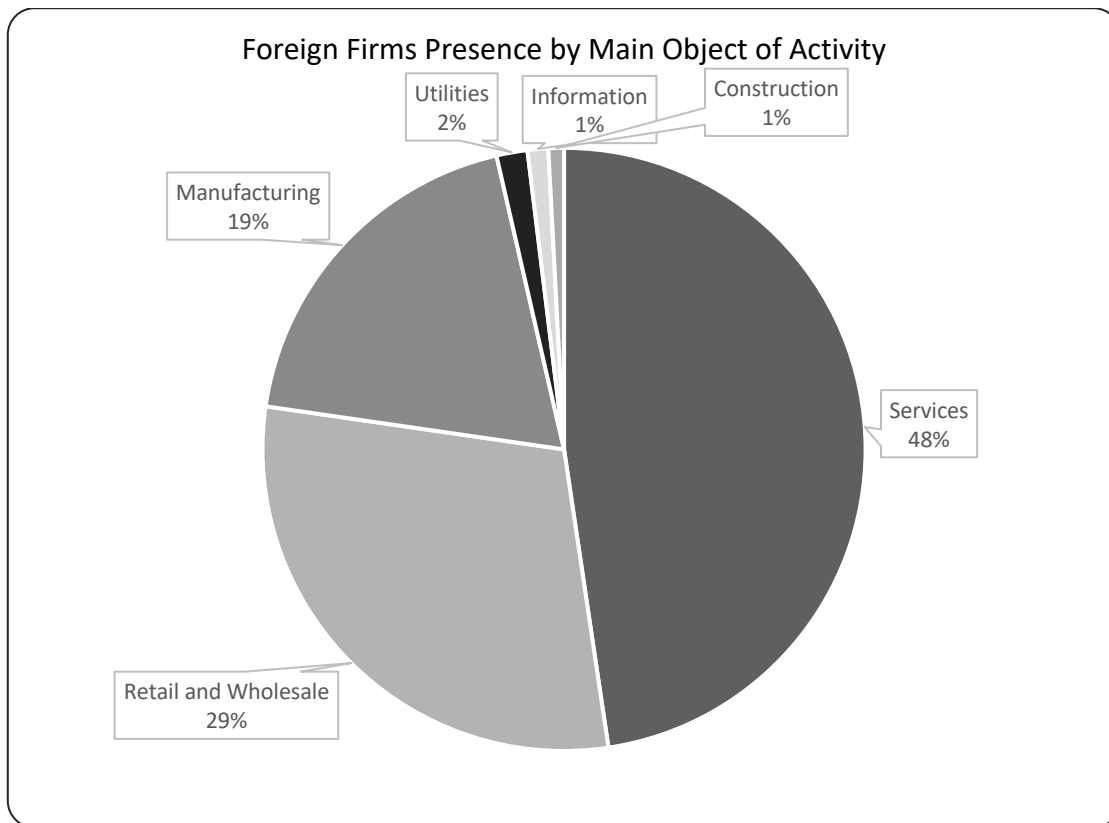
As specified in the firm’s presence data, foreign-related operations in New Hampshire are highly concentrated in one (finance and insurance) industry and somewhat focused on less than

a dozen industry segments, mainly in trade and services. Less notable foreign business presence spans half the industries. Industries such as utilities, some manufacturing (mechanical, physical, or chemical transformation of materials, substances, or components into new products), construction, logistics and other kinds of services do not attract major overseas presence.

Services dominate the distribution of foreign entities, with almost half of the firms operating in this sector. Across industries, services, along with retail/wholesale and manufacturing sectors are preferred by international businesses. Foreign companies likely participate in key projects in utilities, information technology and construction, but not with a wide-spread presence.

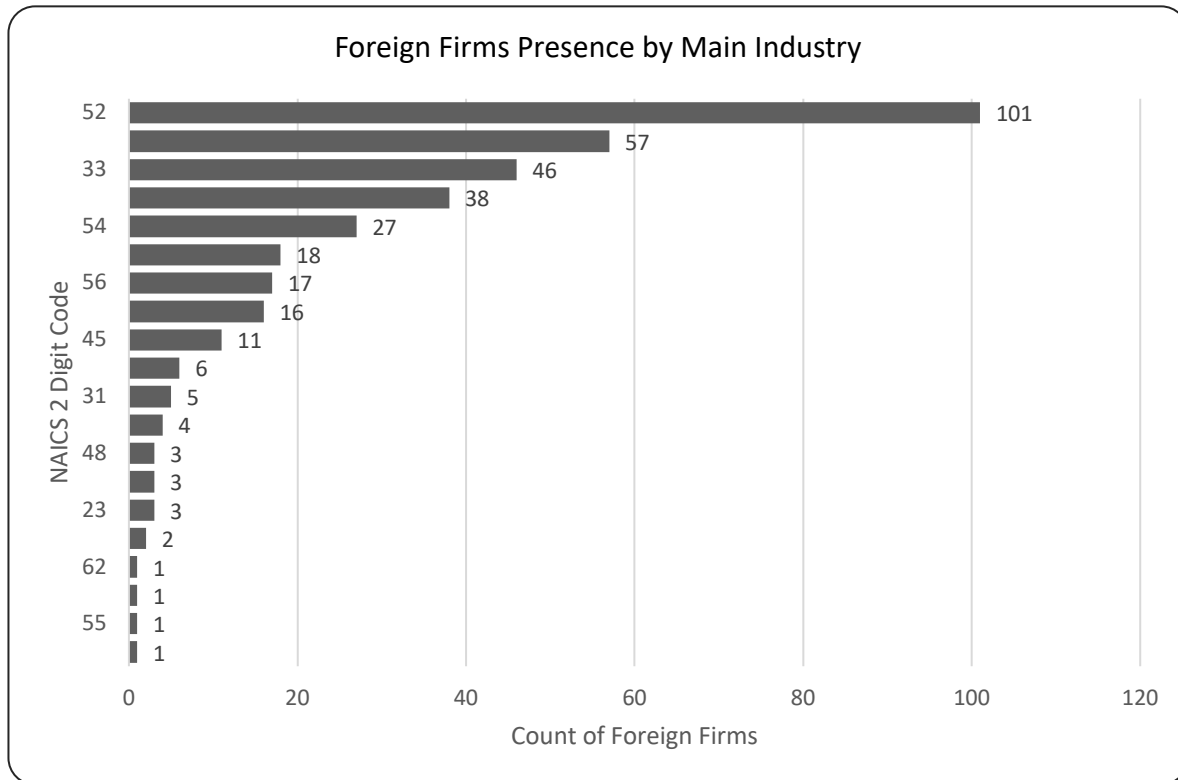
Figure 3.5 shows foreign firms' distribution in industries, with relative percentages in fields as proportion of count in each field in the total number of foreign firms. High concentration in services, trade and manufacturing is evident in comparison to utilities, information, and construction.

Figure 3.5



The number of foreign-related businesses in each of the main industries depicted in Figure 3.6 shows variability in presence across industries, and concentration in several fields. As mentioned above, the concentration is critical, as the top industries by presence relate directly to finance, markets, and production in the state.

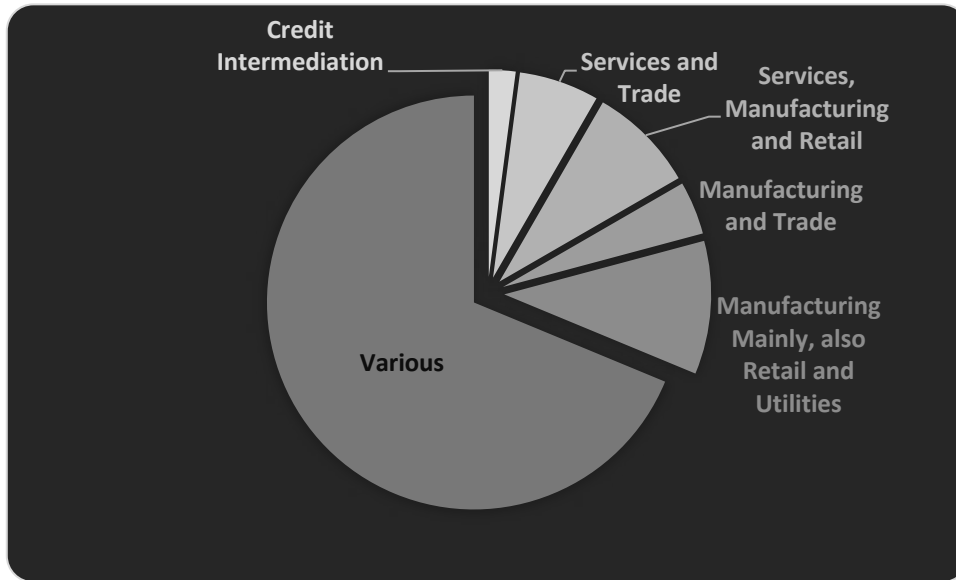
Figure 3.6



Foreign Business in New Hampshire Has Variety and Range of Purpose

Additional detail in industry presence within industry sub-sectors shows how activities of foreign firms are directly intermingled across sectors. The data signals that activities are transversely crossing value and supply chain stages. In most industry sub-sectors, foreign firms represent less than 5 percent of the total number of foreign firms. Credit intermediation, as a sub-sector of the finance and insurance industry, points out once again to high level of concentration of foreign firms in this field. Aside from this two-digit percentage representation, all other representations in industry sub-sectors are low, in the single digit. Figure 3.7 identifies the number of times each percentage of representation in an industry sub-sector occurs in the sample. The data indicates rich diversity of business activity.

Figure 3.7 Distributions of Representation Percentages Across Industry Sub-Sectors



Subsector distribution of firm presence shows concentration but also more wide-spread range of foreign activities within each industry. The distribution signals relevant variety and range of purpose. The rich and varied presence within each industry suggests that the state offers a multitude of motivations for overseas companies. The range of industry sub-sectors may point to the vigor of international firms’ business networks and relationships. Foreign firms’ presence may be one compelling factor in some business leader’s orientation towards the state. A diverse international business presence may attract more attention from other overseas companies.

As shown in Table 3.4, the proportion of firms in each industry sub-sector indicates that there is important presence within most industries. While some of the counts for individual sub-sectors are low, across the industry these numbers suggest diverse activities and good coverage of the industry’s many types of endeavors.

Table 3.4

<i>NAICS Code</i>	<i>Industry Description</i>	<i>Frequency</i>
522	Credit Intermediation and Related Activities	26%
541	Professional, Scientific, and Technical Services	7%
423	Merchant Wholesalers, Durable Goods	7%
448	Clothing and Clothing Accessories Stores	7%
561	Administrative and Support Services	4%
334	Computer and Electronic Product Manufacturing	4%
721	Accommodation	4%
445	Food and Beverage Stores	4%

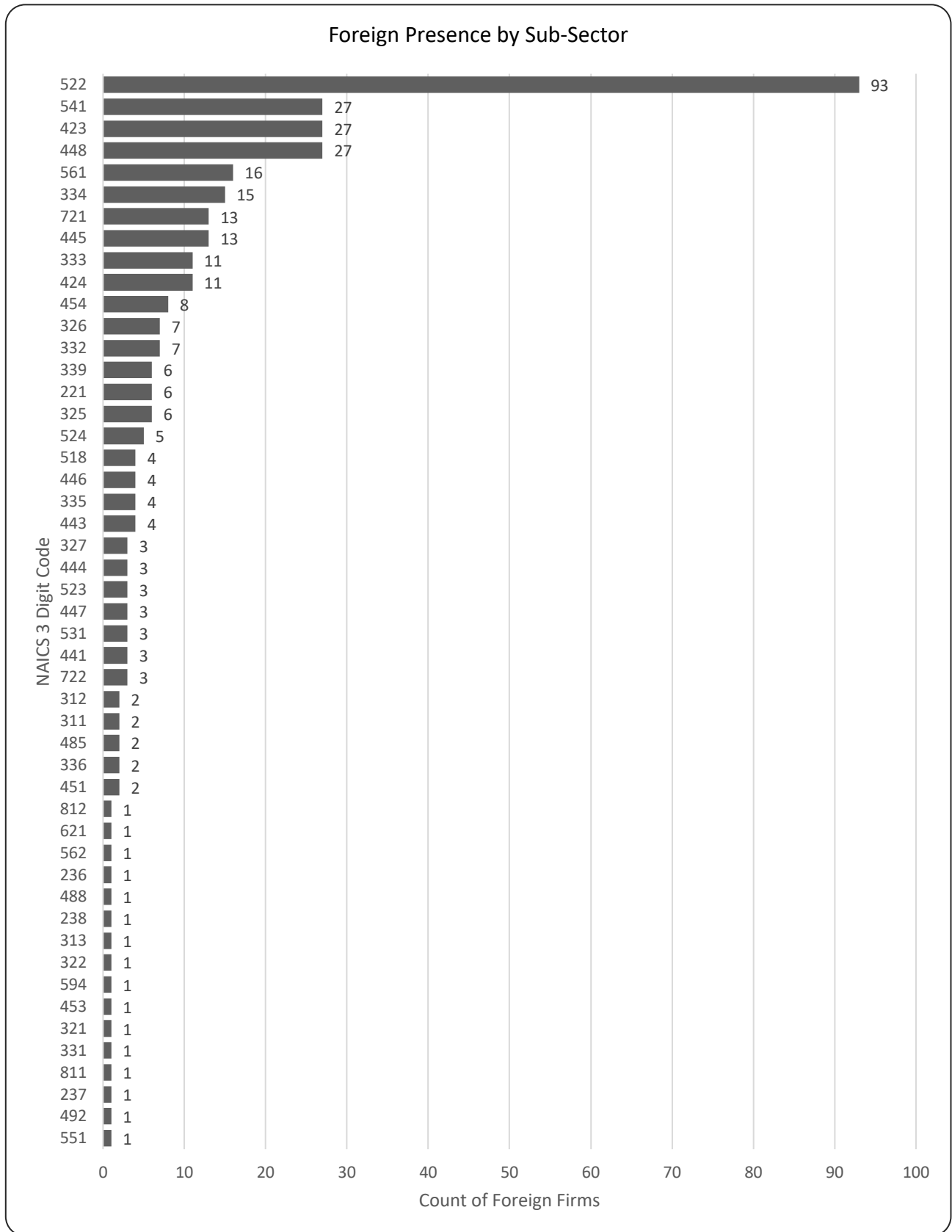
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333	Machinery Manufacturing	3%
424	Merchant Wholesalers, Nondurable Goods	3%
454	Nonstore Retailers	2%
326	Plastics and Rubber Products Manufacturing	2%
332	Fabricated Metal Product Manufacturing	2%
339	Miscellaneous Manufacturing	2%
221	Utilities	2%
325	Chemical Manufacturing	2%
524	Insurance Carriers and Related Activities	1%
518	Data Processing, Hosting, and Related Services	1%
446	Health and Personal Care Stores	1%
335	Electrical Equipment, Appliance, and Component Manufacturing	1%
443	Electronics and Appliance Stores	1%
327	Nonmetallic Mineral Product Manufacturing	1%
444	Building Material and Garden Equipment and Supplies Dealers	1%
523	Securities, Commodity contracts, and Other Financial Investment	1%
447	Gasoline Stations	1%
531	Real Estate	1%
441	Motor Vehicle and Parts Dealers	1%
722	Food Services and Drinking Places	1%
312	Beverage and Tobacco Product Manufacturing	1%
311	Food Manufacturing	1%
485	Transit and Ground Passenger Transportation	1%
336	Transportation Equipment Manufacturing	1%
451	Sporting Goods, Hobby, Book and Music Stores	1%
812	Personal and Laundry Services	Under 1%
621	Ambulatory Health Care Services	Under 1%
562	Waste Management and Remediation Services	Under 1%
236	Construction of Buildings	Under 1%
488	Support Activities for Transportation	Under 1%
238	Specialty Trade Contractors	Under 1%
313	Textile Mills	Under 1%
322	Paper Manufacturing	Under 1%
594	Miscellaneous Shopping Goods Stores	Under 1%
453	Miscellaneous Store Retailers	Under 1%
321	Wood Product Manufacturing	Under 1%
331	Primary Metal Manufacturing	Under 1%
811	Repair and Maintenance	Under 1%
237	Heavy and Civil Engineering Construction	Under 1%
492	Couriers and Messengers	Under 1%
551	Management of Companies and Enterprises	Under 1%
	<i>Total</i>	100%

The diverse presence of foreign firms within industries once again demonstrates the high level of integration that foreign businesses have with a wide range of lucrative activities in the state. For successful operations, it can be expected that these firms collaborate and partner with local, domestic, and non-domestic companies and institutions and are intricate part of New Hampshire business.

The data in Figure 3.8 confirms the foreign business presence concentration in the credit intermediation activities, followed by strong relative representations in professional, scientific, and technical services sector, in merchant wholesalers of durable goods activities, and in operation of stores. The wide-spread distribution in other industries shows the span and reach of foreign presence in the state's manufacturing sector across many industries sub-sectors.

Figure 3.8



Part 4. FDI Location Choice in New Hampshire Counties: Country of Origin, Parent Company Industry, and Subsidiary Value Chain Activity

4.1 Country of Origin Analysis

As of September 2022, the State of New Hampshire attracted the Foreign Direct Investment (FDI) from a total of 176 parent companies headquartered in 23 countries. Figure 4.1 below presents a heat map for the FDI countries of origin in terms of their count of foreign subsidiaries in New Hampshire. The North America is the most heated area, followed by Europe, East Asia, Middle East, and Australia.

Figure 4.1 Country of Origin for FDI in New Hampshire in 2022, by Count of Subsidiaries

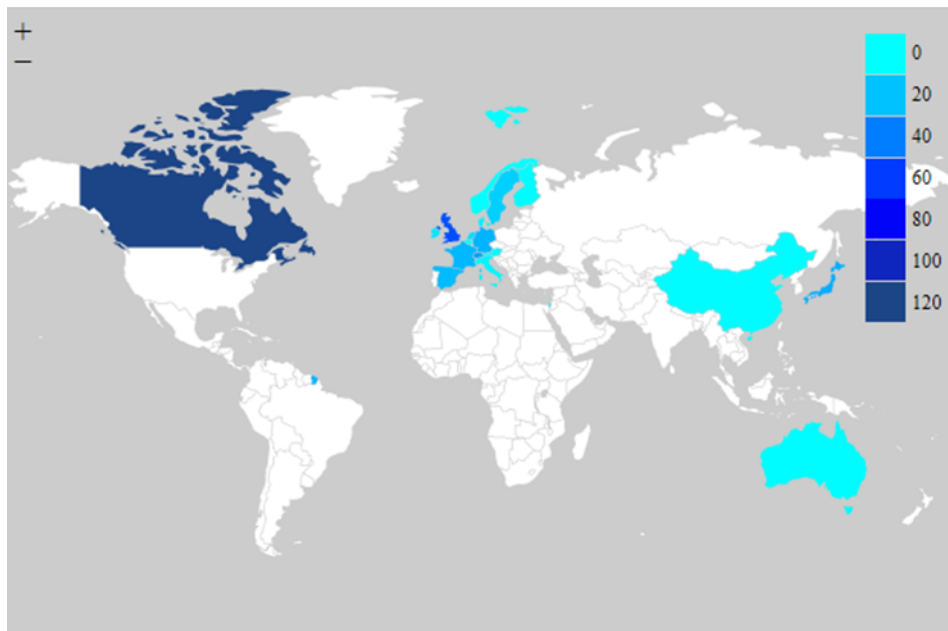
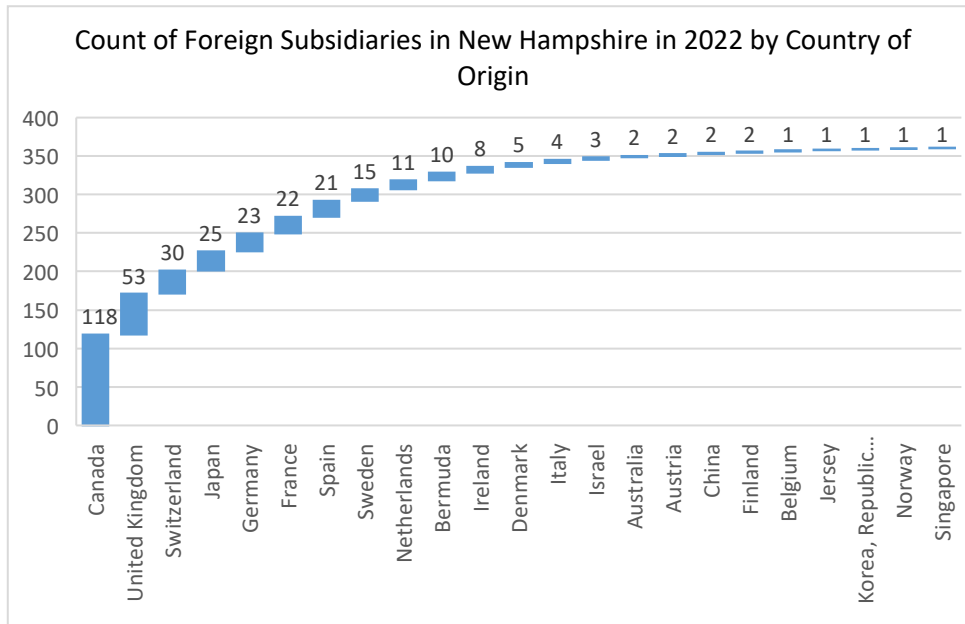


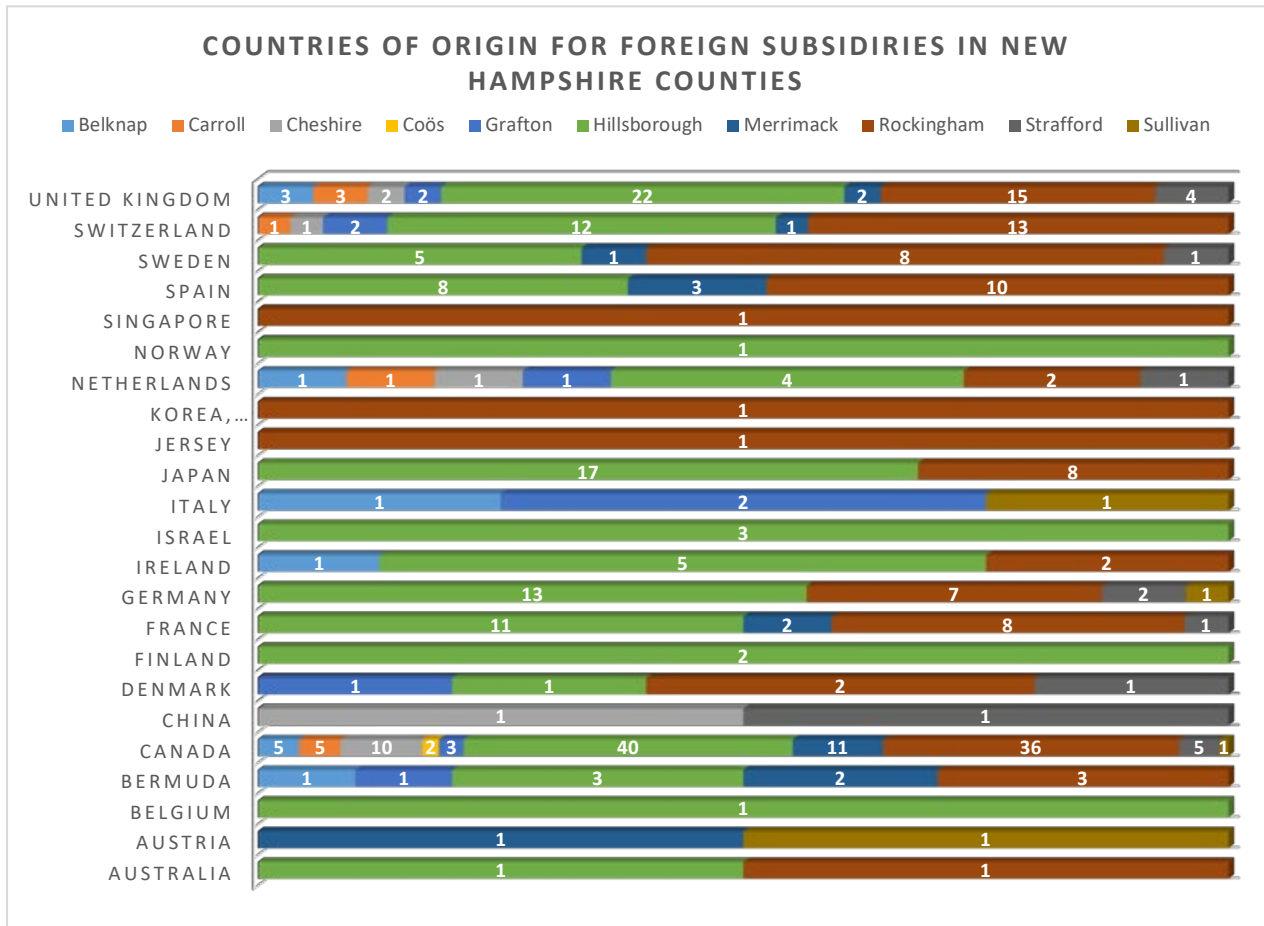
Figure 4.2 below scrutinizes the foreign subsidiaries in New Hampshire by their countries of origin. Canada has a dominating lead with 118 (or one third) out of the 361 foreign subsidiaries. Eight other countries each have more than 10 subsidiaries in New Hampshire, among which seven are European countries led by the United Kingdom with 53 (or 15 percent) subsidiaries and Switzerland with 30 (or 8 percent). Four countries in the Pacific Coast of Asia (Japan, China, Korea and Singapore) contribute 29 (or 8 percent) subsidiaries, primarily due to Japan who solely has 25 (or 7 percent) subsidiaries. Israel in the Middle East and Australia are the origins for 3 and 2 of New Hampshire's foreign subsidiaries, respectively.

Figure 4.2



A further examination of the countries of origin for foreign subsidiaries in New Hampshire is conducted to reveal in what counties these parent companies invest. As illustrated in Figure 4.3 below, Canada is the only country of origin whose companies have foreign subsidiaries in all of the ten New Hampshire counties, among which Hillsborough and Rockingham capture one third and 30 percent of the Canadian subsidiaries, respectively. The British companies have foreign subsidiaries in eight counties of New Hampshire (except for Coös and Sullivan). The parent companies in Netherlands (Switzerland, Bermuda) have subsidiaries in seven (six, five) counties. Germany, France, Sweden, and Denmark each owns subsidiaries in four New Hampshire counties. All of these countries of origin choose either Hillsborough or Rockingham as their preferred investment destination.

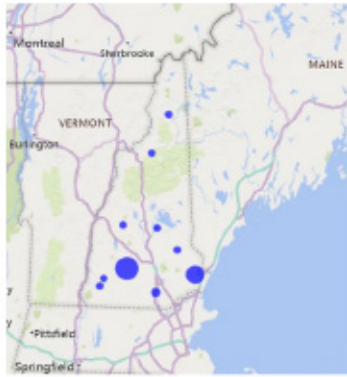
Figure 4.3



4.2 County Analysis

When the foreign subsidiaries are scatter plotted among the counties in New Hampshire, a pattern of FDI agglomeration is revealed. The bubbles in Figure 4.4 vary in size because they measure the count of foreign subsidiaries for each county. The foreign subsidiaries cluster along the Massachusetts-New Hampshire border and the coast area. They spill over to the central part of the state. The FDI presence in the North Country is attributed to the border effect from Canada.

Figure 4.4. Distribution of Foreign Subsidiaries in New Hampshire Counties in 2022



The foreign subsidiaries are unevenly distributed among all of the ten New Hampshire counties, as illustrated in Figure 4.5 below. The two southern counties, Hillsborough and Rockingham, have a dominating share of three quarters of all foreign subsidiaries. Adding the 4 percent share of Cheshire, the state’s southern border owns near 80 percent of all foreign subsidiaries. The four central counties, namely Merrimack, Strafford, Belknap and Carroll, benefit from the FDI spillover and capture a total of 17 percent of the state’s foreign subsidiaries. Along the state’s west boundary, three counties (Grafton, Coös and Sullivan) accounts for the rest 5 percent of the pie.

Figure 4.5

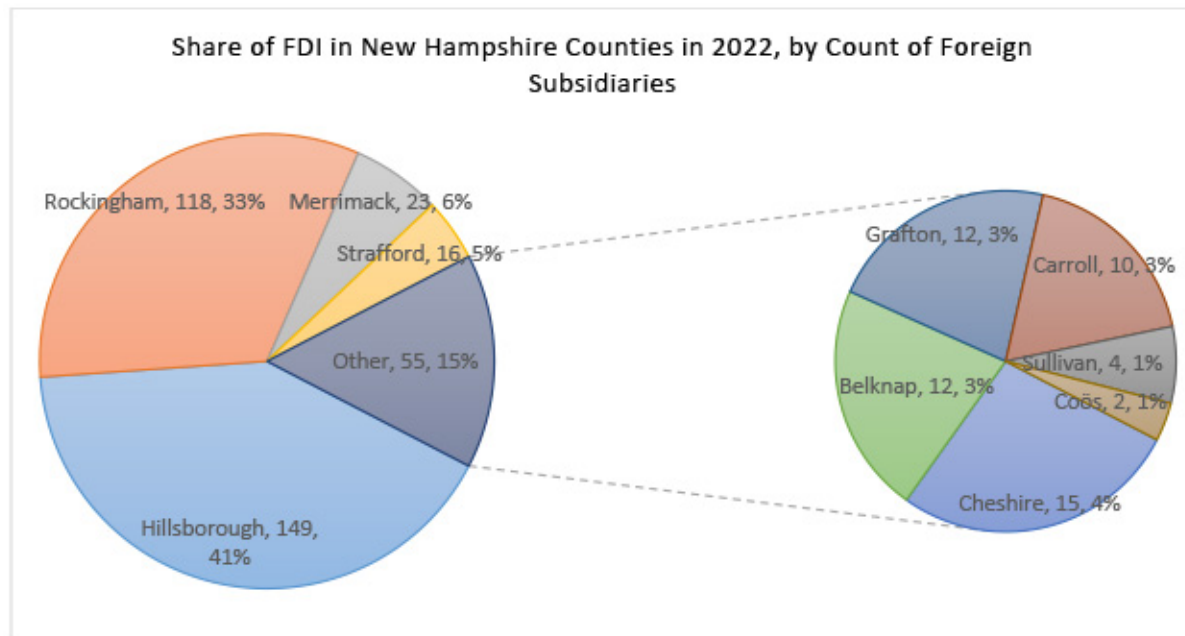
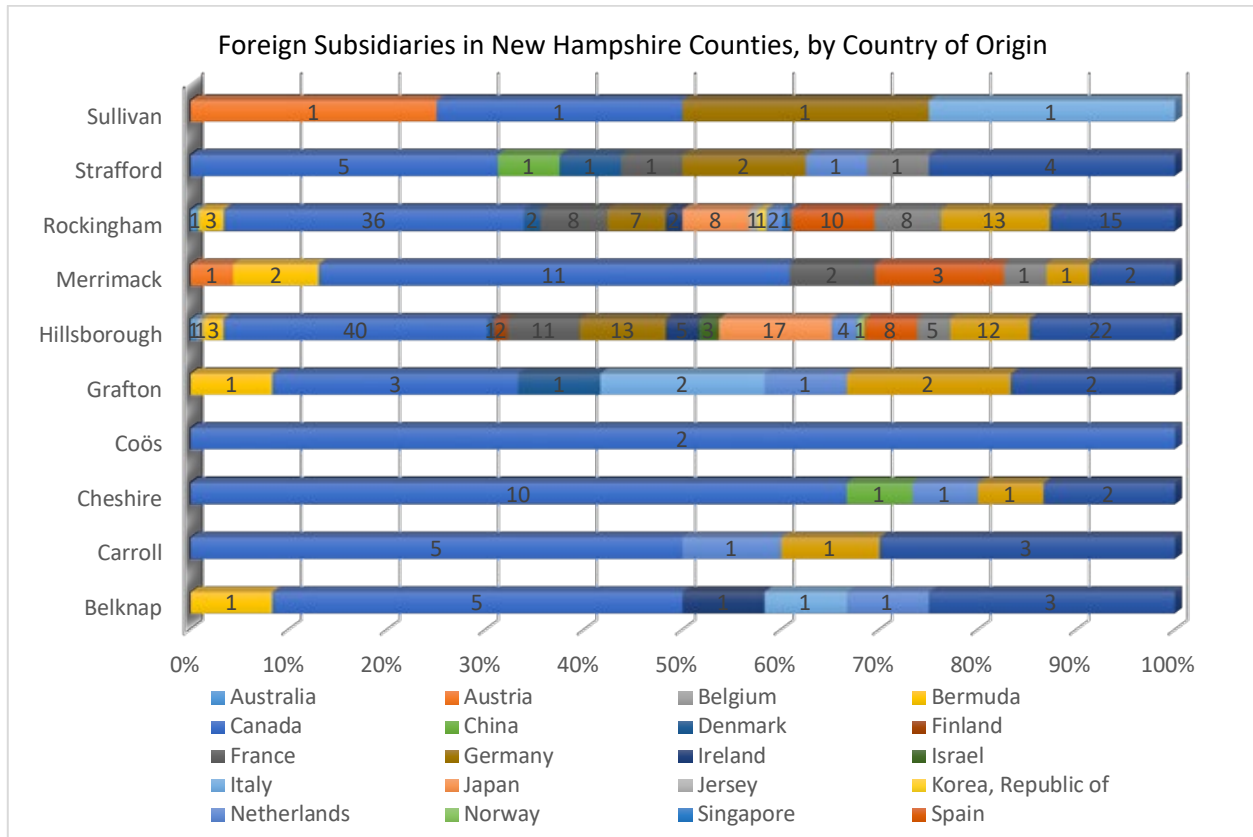


Figure 4.6 below reveals the country of origin for the foreign subsidiaries in each county. Hillsborough’s foreign subsidiaries come from 17 countries. The top 5 countries of origin are Canada (27 percent), the United Kingdom (15 percent), Japan (11.4 percent), Germany (9 percent), and Switzerland (8 percent). The top 4 of Rockingham’s 16 countries of origin are Canada (31 percent), the United Kingdom (13 percent), Switzerland (11 percent), and Spain (8.5

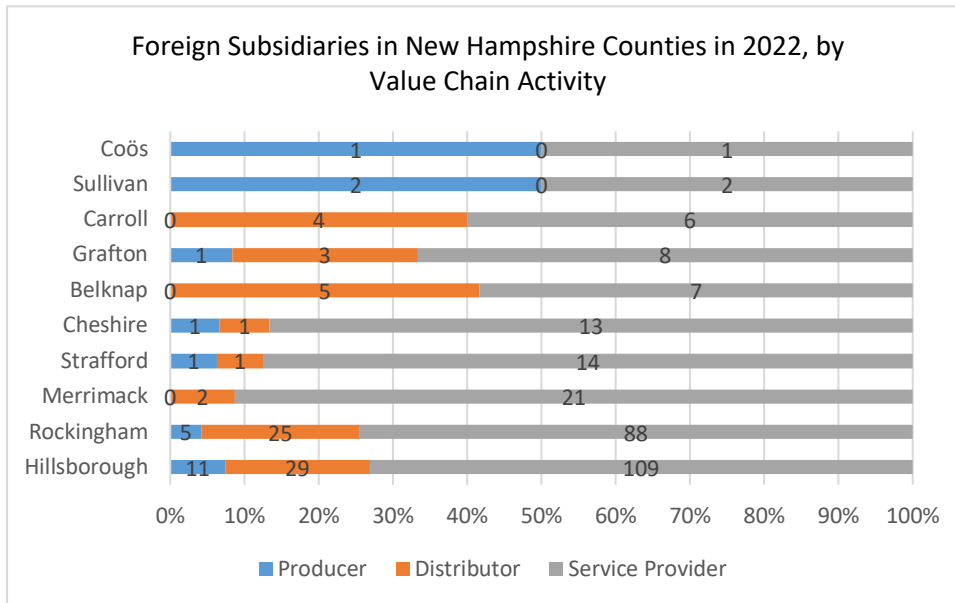
percent). Merrimack and Strafford each has 8 countries of origin for their foreign subsidiaries, and both have Canada as their Number 1 source of FDI, followed by Spain (the United Kingdom), and the United Kingdom (Germany), in the Top 3, respectively. Grafton, Belknap, Cheshire, and Carroll each has 7, 6, 5, and 4 countries of origin, and they all have Canada and the United Kingdom listed as the top two FDI sources. The foreign subsidiaries in Sullivan are evenly originated from Austria, Canada, Germany, and Italy, while Canada is the sole country of origin for the foreign subsidiaries in Coös.

Figure 4.6



When the New Hampshire counties are profiled by their foreign subsidiaries across the value chain activities, a geographic pattern in the relative importance of value chain activities is revealed. The foreign subsidiaries in the southern counties (Hillsborough, Rockingham, Merrimack, Strafford, and Cheshire) are dominated by the service providers. A main reason is their proximity to Massachusetts which is the economic center of the region. The proportion of distributors (retailers and wholesalers) among the foreign subsidiaries significantly increases and is almost the same with service providers for the inner center counties (Belknap, Grafton, and Carroll). This highlights the importance of the central New Hampshire as the shopping center for the northern area and as their gateway to the bigger southern market. For the North Country and Sullivan, the share of producers is equal to the share of service providers among their foreign subsidiaries, suggesting the potential to grow the manufacturing FDI in this area. Figure 4.7 below details the data.

Figure 4.7



4.3 Industry and Value Chain Activity Analysis

The parent companies of New Hampshire’s foreign subsidiaries engage in a total of 14 NAICS 2-Digit industries across all of the four economic sectors. As shown in Figure 4.8 below, near 60 percent of these parent companies are in the Secondary Sector, followed by the Tertiary Sector (25 percent) and the Quaternary Sector (17 percent). Figure 4.9 further illustrates the distribution of these parent companies by industries. In the Secondary Sector, the manufacturing industry (NAICS 31-33), with a 55 percent share, is the largest single industry of New Hampshire subsidiaries’ parent companies, followed by the utilities industry (NAICS 22, 2 percent) and the constructions industry (NAICS 23, 0.5 percent).

In the Tertiary Sector, the wholesale trade industry (NACIS 42) and the retail trade industry (NACIS 44) each has 7 percent of the parent companies, followed by the finance and insurance industry (NAICS 52, 6 percent) and the information sector (NAICS 55, 3 percent). The Quaternary Sector is also referred to as the Knowledge Sector, in which the professional, scientific, and technical services industry (NAICS 54) is the second largest single industry (next to the manufacturing) with a share of 11 percent of all parent companies, followed by the administrative and support services industry (NAICS 56, 5 percent) and the management of companies and enterprises industry (NAICS 55, 1 percent). Only one parent company from the mining, quarrying, and oil extraction industry (NAICS 21) is in the Primary Sector.

Figure 4.8

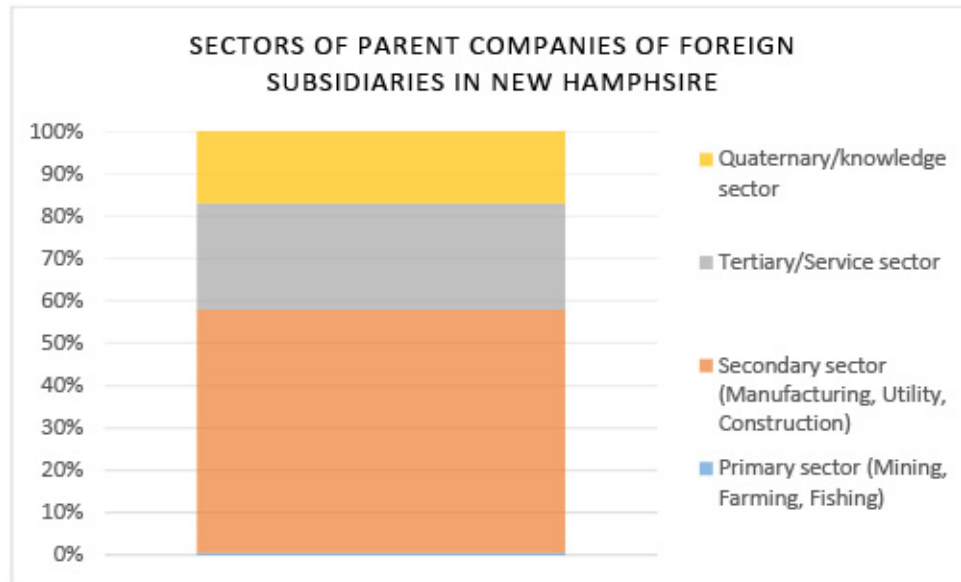
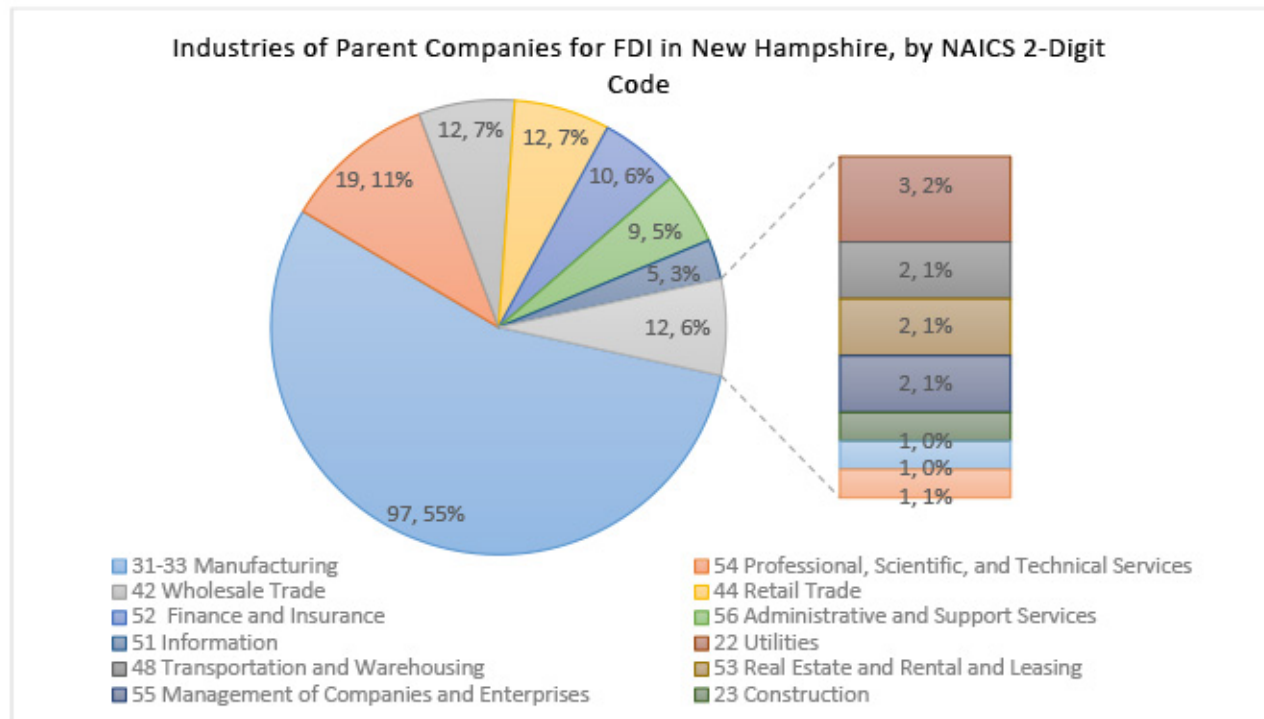


Figure 4.9



The foreign subsidiaries in New Hampshire contribute to all value chain activities of the state's economy. As shown in Figure 4.10 below, three quarters of them provide services to consumers and businesses, 19 percent facilitate the distribution of products via retail and/or wholesale trade, and 6 percent produce value added finished products from the raw materials.

Figure 4.10

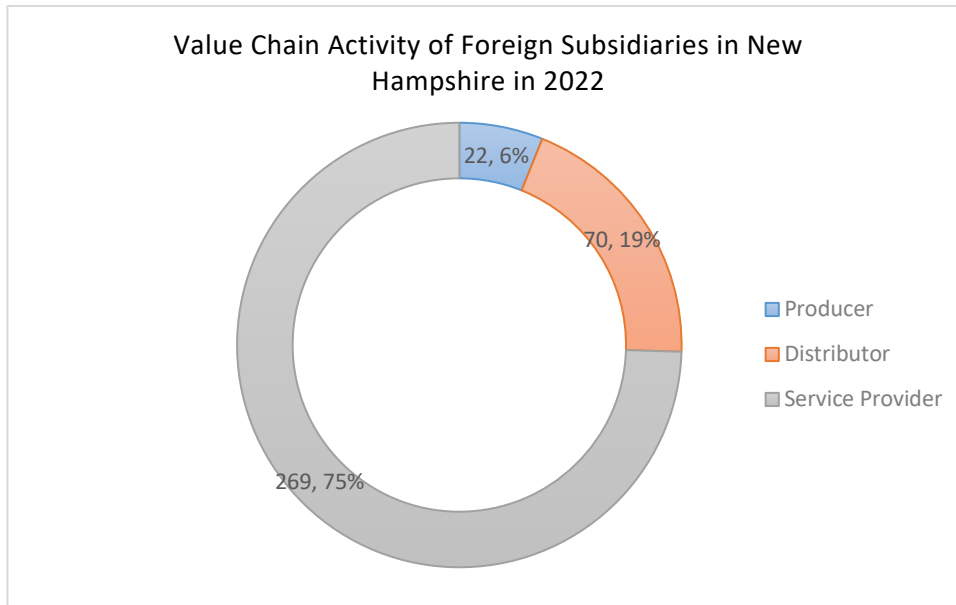
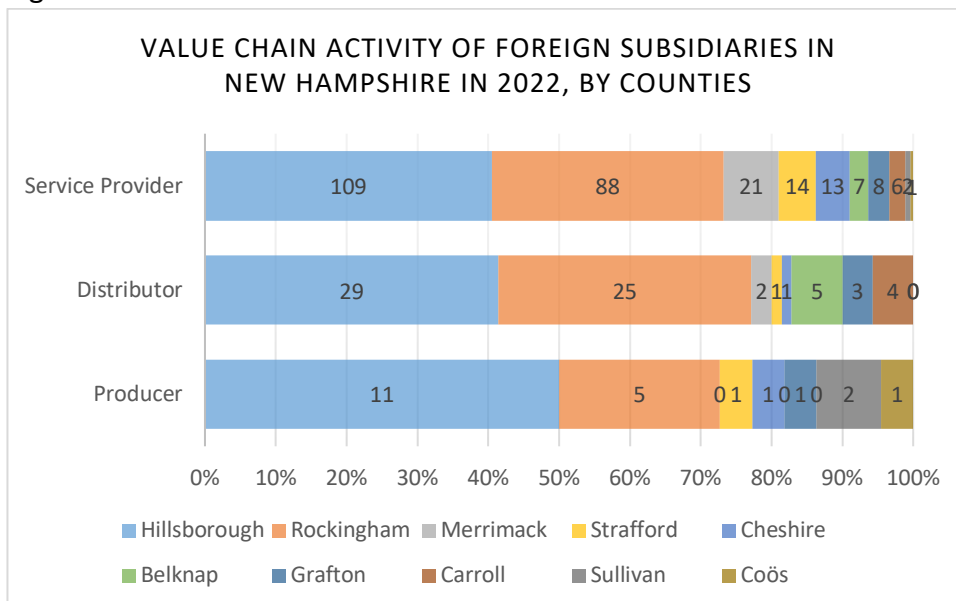


Figure 4.11 below describes the value chain activities of New Hampshire foreign subsidiaries by their county locations and reveals an FDI agglomeration pattern. The two southern border counties (Hillsborough and Rockingham) have a dominant lead with a joint share of around 75% in all of the three categories. From this FDI cluster, 18 percent of the service providers spill over to the neighboring counties (Merrimack, Strafford and Cheshire), 17 percent of the distributors further spill over to the inner center counties (Belknap, Grafton, and Carroll), and 18 percent of the producers even spill over to the state’s northwest border (Sullivan, Coös, and Grafton).

Figure 4.11



Part 5. Impact of COVID-19 pandemic disruption: Comparison between 2018 and 2022

The 2018 New Hampshire Foreign Direct Investment Report provided an overview as well as a deep-dive into data on foreign business presence in the state. At that time, the authors, Drs. Wright and Wu, were remarking on the large number of industries where foreign firms had a presence, the concentration of international activity in finance, and the fact that the vast majority of business entities with international ties were small in scale.

Four years on and at the tail end of a pandemic that brought significant global disruption, the data shows the resilience of foreign business in New Hampshire. These firms continue to be widely represented across industries. In fact, the number of industry sub-sectors across which foreign firms in New Hampshire operate are the same as in the past half-decade. Finance and insurance is still the industry with most relative international representation. The percentage of foreign firms that are in finance and insurance is almost the same as in pre-pandemic times. Just like in pre-2020s years, overseas companies in the state are represented by small firms with fewer than 20 employees.

The end of 2010's report found a somewhat larger sample of businesses with foreign ownership interest in New Hampshire than currently. The reduction is important, about 20%. This could be explained in two ways. It is possible that there are fewer foreign firms in New Hampshire. As reported in New Hampshire Foreign Direct Investment reports in intervening years since the 2018 report, foreign businesses in the state have engaged in significant activities of expansion, acquisitions, process improvement and, also, contraction. These activities, together with the effects of the pandemic disruption, may have led to lower numbers of foreign firms. However, such a conclusion only reflects presence (number of foreign firms), and not actual scale of operations. The employment numbers may be skewed by the use of temporary or part-time employment. In sum, many confounding factors may be at play in reaching a supposition on an actual decrease in foreign firms' presence. An alternative explanation to the lower sample size may simply be that the reporting and availability of data is more constrained. Disrupted information channels during the pandemic may impact how the secondary data used in the current report is communicated and collected.

Foreign business continues to be one of the drivers of New Hampshire's economic growth. Firms with international connections are represented at many stages of the supply chain and across many industries. The proportions of service providers, producers and distributors are comparable with the pre-pandemic distributions. This indicates the closeness of the integration of foreign firms in local supply and value chains, giving these firms a basic role in the development of the local ecosystem. The data also supports the idea that foreign firms continuously add value to products and services in the state.

Three key aspects indicate how international business affects overall business climate in New Hampshire. First, there is a diverse representation across industry sectors and sub-sectors. International business permeates most parts of the state's business and economic development. Second, overseas links exist along and across value and supply chains. The data

illustrates how international business and global connections persist and add value to products and services. Foreign firms partner with domestic entities and support the viability of activities that produce and distribute value. Finally, international business is represented by firms that are comparable in size to local companies. Foreign firms in New Hampshire are just like any other firms in the state: diverse in object of activity, integrated in local and global supply chains, and entrepreneurial. The “foreignness” associated with these firms should not evoke a sense of difference or separation from local business development. Just like all other firms, international firms continue to provide employment in many industries and across areas of expertise, strive for innovation and resilience in supply chains, and add to the entrepreneurial business mix in the state.

Part 6. Conclusion

The current New Hampshire Foreign Direct Investment Report examines foreign subsidiaries in New Hampshire amid the challenges of the COVID-19 pandemic. The resulting insights can help economic development professionals and foreign and domestic local businesses to ready their organizations for promoting our state to other overseas companies and for finding relevant partners now that normalcy is returning.

New Hampshire attracts foreign direct investment from 23 countries across continents. Border-effects are at play, with Canada playing an important role as a country-of-origin for many foreign enterprises. Companies from the UK and European countries also have a relative significant number of subsidiaries in the state. Foreign subsidiaries distributions across New Hampshire counties identify two clusters or agglomerations of these firms along the Massachusetts-New Hampshire border and the southern coastal area. Spillover effects may determine some of the foreign firms' presence in surrounding regions. Some of the foreign direct investment presence in the northern part of the state can be ascribed to the border effect with Canada.

International companies in manufacturing, service and knowledge sectors are active with subsidiaries in New Hampshire. Foreign subsidiaries contribute to all value chain activities of the state's economy. Distributions across the value chain activities vary across areas. Proximity to Massachusetts may explain representations in services and manufacturing in counties that are closer to this neighbouring state. Positioning of central and southern areas towards shopping justifies the presence of foreign affiliates with this object of activity in the respective counties. Counties further north may have good potential for growth in manufacturing foreign direct investment.

The present study, along with previous reports, can help economic development experts and business leaders in the state in three critical areas:

1. **Develop an understanding of the areas in which foreign businesses contribute to the state's domestic product.** Data show that most of these businesses are active and highly integrated in global finance and credit intermediation systems. Thus, foreign subsidiaries contribute to availability of funds in the state. In addition, these firms contribute to distribution of products and are part of the customer-facing part of the supply chain. Finally, foreign firms are active in manufacturing, producing a wide range of products across low, medium and high-tech industries.
2. **Gain insights on the potential of finding partners with overseas affiliations in particular sectors and sub-sectors in the state.** The data indicates that many potential foreign partners exist in financing, distribution, professional services and across many manufacturing sectors. As foreign businesses representation has remained constant, their success may inspire other international companies for looking at New Hampshire as a favorable location for their operations.

3. **Restore promotion and development plans to pre-pandemic levels via partnerships with local foreign businesses.** Foreign subsidiaries in the state maintained representations across industries and value chain activities, supporting the notion that these internationally-affiliated firms have high resilience levels and a strong desire to operate locally.

Three key findings are important to every New Hampshire citizen's perception of foreign business in the state:

1. **Foreign firms are as local as domestic firms.** Most of these businesses are entrepreneurial small firms that are highly integrated in the business ecosystem. These firms are here for the long run. Whilst the non-US parents' strategies may change, most local subsidiaries stay in New Hampshire for the long-term. Despite the disruption caused by the pandemic, the current study finds that representations across activities and sectors have remained the same as before the pandemic.
2. **Foreign subsidiaries contribute to employment opportunities in many industries, from professional services to manufacturing jobs.** A few firms are large in scale and employ many employees in both producing and administrative positions. Most businesses have geographical state presence with small-scale operations. The diversity in activities suggests that staff opportunities vary widely.
3. **Foreign subsidiaries seek to maintain representation in the state.** The state is a location of interest for International business, if not via operations, through representative offices and small branches charged with distribution of international or global products and brands.

Common understanding has been that the pandemic drove many leaders to focus on solving immediate interruptions and on dealing with the challenges of day-to-day operations when supplies and staff are limited. However, the data examined in this report may signal that, in the face of disruption, foreign businesses have continued to maintain good presence in the state. Now it is time to renew commitments to building a culture of integration in the local business environment. Overall performance and supply-chain management improve when parties have deeper, non-transactional, relations. Due to international representations and connections across value chain primary and secondary activities, the potential for optimization of relationships is high.

The analyses provided in this report strive to serve leaders with research, advice, and inspiration for performance-targeted solutions in both economic development and business expansion. The work combines the disciplines of research, economics, and strategy to empower people who can make local economic and business growth possible. The result is a public research study that offers credible and independent investigations on issues that matter to state private and corporate residents.

About the Authors

Dr. Roxana Wright is Professor of Management and currently teaches undergraduate and Master of Business Administration courses in strategy and operations management, as well as doctoral courses for the Doctor of Education program. She has authored publications and conference presentations focused on firm performance, supply chain management, and strategies of multinational enterprises. Recently, Dr. Wright has produced research on applications of business development concepts, such as a unique study on business resilience activities and an empirical examination of the multinational company's geographic footprint.

Professor Wright is winner of the PSU 2022 Distinguished Graduate Teaching Award. Her mission is to guide students towards realizing their full potential. She is passionate about translating current research and theory into applied consulting projects and studies in which students provide ideas and solutions to organizations.

Before joining Plymouth State University, Professor Wright taught at Southern New Hampshire University and Keene State College. Professor Wright received her B.S. in Accounting from Transilvania University in Romania, M.B.A. from Plymouth State University, and Doctorate in Business Administration with a focus on Strategy from Southern New Hampshire University.



Dr. Chen Wu is associate professor of economics and director of Business Graduate Programs. Professor Wu teaches a variety of economics courses and business statistics at both undergraduate and graduate levels. He is dedicated in applying advanced empirical research to inform policy. His qualifications and research are in public economics, regional economics, and international economics.

Dr. Wu's refereed research portfolio includes a number of notable publications in peer-reviewed Web of Science SSCI and ESCI indexed journals, and presentations in national conferences including the American Economic Association and the Economic Science Association. His studies include topics such as foreign direct investment and international trade, as well as the impact of foreign direct investment and related policies on local economies.

Before joining Plymouth State University, Professor Wu taught at Colgate University and the University of Oklahoma. He received a B.S. in Public Administration and B.A. in Law from the Tianjin University of Finance and Economics (China), and a Ph.D. in Economics from the University of Oklahoma.



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Disclaimer

The findings of the study are based solely on our data samples. The analysis relies on the accuracy of data reported by Uniworld Online and the exactness of information provided by the references used in the report. The outcomes represent a snapshot of the current situation. The terminology, the terms and the context of the analysis are as defined by the authors. While we are confident that the report provides meaningful information to executives and organizations, our analysis is not driven by any agenda beyond what is stated in the report.

Terminology

FOREIGN DIRECT INVESTMENT (FDI)

FDI is an investment made to acquire lasting interest in enterprises operating outside of the economy of the investor. The investor's purpose is to gain an effective voice in the management of the enterprise. The foreign entity or group of associated entities that makes the investment is termed the "direct investor". The unincorporated or incorporated enterprise—a branch or subsidiary, respectively, in which direct investment is made—is referred to as a "direct investment enterprise". Some degree of equity ownership is almost always considered to be associated with an effective voice in the management of an enterprise; a threshold of 10 per cent of equity ownership qualifies an investor as a foreign direct investor.ⁱ In this report, FDI is defined as investments of companies from outside the US into firms operating in New Hampshire.

FOREIGN PARENT COMPANY

A parent company is a company that controls other, smaller businesses by owning an influential amount of voting stock or control.ⁱⁱ

FOREIGN SUBSIDIARY

A foreign subsidiary is a partially or wholly owned company that is part of a larger corporation with headquarters in another country.ⁱⁱⁱ When the subsidiary operates in a different country, it is called a foreign subsidiary.^{iv} In this report, foreign subsidiaries are signified to be firms that are part of companies with headquarters in a country other than US. For readability, this report uses the terms "foreign subsidiaries" and "foreign firms" interchangeably. "Firms" are used to signify the same, as understood in the context of the study.

MULTINATIONAL COMPANY

A multinational company is a company with subsidiaries or manufacturing bases in several countries.^v

SUPPLY CHAIN

A supply chain is a network between a company and its suppliers to produce and distribute a specific product. The supply chain represents the steps it takes to get the product or service to the customer.^{vi} The supply chain comprises the flow of all information, products, materials and funds between the different stages of creating and selling a product. The supply chain includes all functions involved in receiving and filling a customer request. These functions include product development, marketing, operations, distribution, finance and customer service.^{vii}

THE NORTH AMERICAN INDUSTRY CLASSIFICATION SYSTEM (NAICS)

The North American Industry Classification System (NAICS) is the standard used by Federal statistical agencies in classifying business establishments for the purpose of collecting, analyzing, and publishing statistical data related to the U.S. business economy.^{viii}

THE NORTH AMERICAN INDUSTRY CLASSIFICATION SYSTEM (NAICS) CODES

The NAICS industry codes define establishments based on the activities in which they are primarily engaged. NAICS codes are also used for administrative, contracting, and tax purposes. NAICS is production oriented (not product oriented) and categorizes businesses with others that have similar methods of production.^{ix} NAICS is a 2- through 6-digit hierarchical classification system, offering five levels of detail. Each digit in the code is part of a series of progressively narrower categories, and the more digits in the code signify greater classification detail. The first two digits designate the economic sector, the third digit designates the subsector, the fourth digit designates the industry group, the fifth digit designates the NAICS industry, and the sixth digit designates the national industry.^x This study uses 2, 3, 4 and 6-digit NAICS codes.

VALUE CHAIN ACTIVITY

Value chain activities are interlinked value-adding activities that convert inputs into outputs which, in turn, add to the bottom line and help create competitive advantage for a company.^{xi} Primary activities create the product or service, deliver and market it, and provide after-sale support. The categories of primary activities are inbound logistics, operations, outbound logistics, marketing and sales, and service. Support activities provide the input and infrastructure that allow the primary activities to take place. The categories are company infrastructure, human resource management, technology development, and procurement.^{xii} The study takes a general view on value chain and uses the main value chain activity to categorize foreign subsidiaries as producers, distributors or service providers.

Endnotes

ⁱ Definitions of FDI are contained in the Balance of Payments Manual: Fifth Edition (BPM5) (Washington, D.C., International Monetary Fund, 1993) and the Detailed Benchmark Definition of Foreign Direct Investment: Third Edition (BD3) (Paris, Organisation for Economic Co-operation and Development, 1996). The definition in this report is extracted from [http://unctad.org/en/Pages/DIAE/Foreign-Direct-Investment-\(FDI\).aspx](http://unctad.org/en/Pages/DIAE/Foreign-Direct-Investment-(FDI).aspx).

ⁱⁱ Definition from <https://www.investopedia.com/terms/p/parentcompany.asp>

ⁱⁱⁱ Definition quoted from <http://www.businessdictionary.com/definition/foreign-subsiary-company.html>

^{iv} Excerpts from <https://stats.oecd.org/glossary/detail.asp?ID=3315>

^v Definition from <http://lexicon.ft.com/Term?term=multinational-company>

^{vi} Adapted from <https://www.investopedia.com/terms/s/supplychain.asp>.

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- vii Excerpt from <https://www.investopedia.com/ask/answers/043015/what-difference-between-value-chain-and-supply-chain.asp>
- viii Definition quoted from <https://www.census.gov/eos/www/naics/>
- ix Definition from <https://www.sba.gov/contracting/getting-started-contractor/determine-your-naics-code>
- x Description from <https://www.census.gov/eos/www/naics/faqs/faqs.html#g5>
- xi Excerpt from <http://www.businessdictionary.com/definition/value-chain.html>
- xii Quote from Porter, M. E. (1989). From competitive advantage to corporate strategy. In Readings in strategic management (pp. 234-255). Palgrave, London. Available at http://people.tamu.edu/~v-buenger/466/Comp_Adv_to_corp_strat.pdf



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