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Applied economic analysis by the
David Eccles School of Business

Utah has benefited
from the relatively
unrestricted flow of
goods and people.

What has been the impact of globalization on Utah?

By James A. Wood, Ivory-Boyer Senior Fellow

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The Kem C. Gardner Policy Institute Advisory Board helps fund and guide research that helps people make INFORMED DECISIONS™. Each year the board prioritizes issues of importance to the Utah economy for the staff to research and share their findings. In 2017, the Advisory Board asked the Institute to examine important economic policy issues. This inaugural edition of the Gardner Business Review focuses on the impact of globalization on the Utah economy.

INFORMED DECISIONS™

Kem C. Gardner Policy Institute and the David Eccles School of Business

What has been the impact of globalization on Utah?

ANALYSIS IN BRIEF

What has been the impact of globalization in Utah? Kem C. Gardner Policy Institute senior fellow James Wood concludes the impact of globalization has been widespread and nearly all positive. A big reason for Utah’s international success is that many of the products we manufacturer are largely immune to offshoring. Utah also has a great need for labor to support our growing economy. Immigrants, rather than displacing local workers, have been a welcome source of labor supply. Data on Utah’s foreign born, refugee resettlement, international travel, and international students also reinforce the positive economic impacts of the cross-border movement of goods and people. On the whole, the Utah economy is larger and more prosperous because of globalization.

Key points include the following:

- Utah’s 2015 international goods exports (non-gold) supported \$3.5 billion in earnings and 84,367 jobs and added \$6.7 billion to Utah’s gross domestic product.
- Utah has been largely insulated from the economic shocks of free trade because Utah has a low concentration of import-vulnerable manufacturing jobs.
- Utahns generally get the advantage of low-priced imports without the cost of lost manufacturing jobs due to offshoring.
- Immigration is a vital source of labor supply for Utah employers. Utah has nearly 172,200 foreign-born workers making up 12.5 percent of Utah’s workforce.
- In 2016, international travelers deplaned at the Salt Lake City International Airport, international skier days, and international visitors to Utah’s national parks reached record levels. This travel provides a significant boost to the Utah’s tourism economy.
- There are unmistakable signs of globalization on every university and college campus in Utah. Approximately 7 percent of the 116,600 students enrolled in the Utah System of Higher Education are international students.

In summary

While some may portray free trade and open borders as threatening, the data suggest such a negative view is not warranted for Utah. Our state has not seen overall negative effects from the relatively unrestricted cross-border flow of goods and people.

At a glance: Effects of globalization on Utah, 2015

Goods	
Exports	<ul style="list-style-type: none"> • Value of exports: \$13.3 billion. • Canada, China, and Taiwan leading export countries. • Computers and electronic products leading non-gold export product: \$2.1 billion. • Economic impact of export activity: <ul style="list-style-type: none"> — Earnings impact: +\$3.5 billion (3.9% of earnings in Utah). — Jobs impact: +84,367 (4.9% of employment in Utah). — GDP impact: +\$6.7 billion (4.5% of Utah’s GDP).
Imports	<ul style="list-style-type: none"> • Value of imports: \$12.1 billion. • Leading import countries: Mexico, China, and Canada. • Leading non-gold import products: transportation equipment, miscellaneous manufactured commodities, electronic products.
People	
Immigration	<ul style="list-style-type: none"> • 245,665 immigrants, or 8.2% of Utah’s population. Fifty-one percent from Mexico. • Immigrants make up 12.5 percent of Utah’s workforce: 172,200 foreign born workers. • In 20th Century, immigrants averaged 8.2 percent of Utah’s population. • The immigrant population tripled in the 1990s, increasing by 105,000 individuals. • Immigrants paid \$466.9 million in state/local taxes in 2015.
Refugees — 2012-2015	<ul style="list-style-type: none"> • +5,700 refugees settled in past five years. • 65,000 refugees live in Utah.
Travel	<ul style="list-style-type: none"> • International travelers deplaning in Salt Lake set record of 295,846. • 312,000 international skiers, highest ever. • 1,898,295 foreign visitors to Utah’s national parks, an all-time high. <ul style="list-style-type: none"> — ¼ of all national park visitors in Utah.
Students	<ul style="list-style-type: none"> • 7,253 international students in higher education, 7% of Utah’s higher ed student population.

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What has been the impact of globalization on Utah?

Introduction

This study serves as a companion piece to the presentation given by Thomas Friedman of the New York Times at the Kem C. Gardner Policy Institute Symposium in January 2017. Mr. Friedman's presentation was a wide-ranging discussion on the acceleration of technology, climate change, and globalization and how these large forces are reshaping societies, workplaces, and geopolitics. It was a fascinating wide-angle approach that focused mainly on what the acceleration of these large forces means for the future.

This study adopts a tighter focus limited to one of the large forces—globalization—and its impact on a limited geography—Utah. The first section begins with a detailed discussion of the flow of goods to and from Utah. Trends for both exports and imports are discussed with respect to value, country, and product. In the past the import data have received little notice, but they are an important part of Utah's foreign trade story. This section also looks at the role of globalization on Utah's manufacturing sector and includes a comparison of Utah's sector to selected industrial states.

The second section examines the cross-border flows of people, focusing on trends in Utah's foreign-born population, their employment characteristics, and country of origin. This section also looks at the role of the Church of Jesus Christ of Latter-day Saints as an immigration magnet. The LDS Church has become an international church with more foreign members than U.S. members. The impact of this changing demographic on patterns of immigration is explored. This section concludes with a discussion of other types of cross-border flows of people such as international travel, the resettlement of refugees, and the growing presence of international students in Utah's system of higher education. The final section of the study summarizes the key findings and addresses the question that initiated this paper: what has been the impact of globalization on Utah?

Globalization and Cross-Border Flows of Goods

At the most fundamental level, globalization is the cross-border flow of goods, people, and money. This has long been the traditional definition, though recently it has been expanded to include ideas, information, and innovation. This study will focus primarily on the impact of the flow of goods and people to and from Utah. Subjects such as globalization's impact on income inequality, the spread of innovation and ideas, worker

safety, the environment and the dissemination of disease are important areas of inquiry at the national or international level, but less relevant for a state-level study. In some cases, the impacts of globalization simply can't be measured at the state level, or the state as a potential party to globalization is too far removed, i.e. globalization's effects have dissipated by the time they reach the state level and become impossible to "tease out" from local economic data. In this paper, we will use the best available data to determine the effects of the cross-border flow of goods and people on Utah's people and economy.

The importance of the cross-border flow of goods dates back to the early settlement of the Salt Lake Valley and the economic expansion of the Utah Territory. For much of Utah's early history, the state struggled with a balance of payments problem as imports far exceeded exports, as chronicled by Leonard Arrington in *Great Basin Kingdom*.¹ A large volume of imports was required to establish the pioneer economy of the nineteenth century. At the time, trade was primarily confined to regional and national markets, although church members migrating to the state from Europe were encouraged to bring "many articles in excess of personal needs." This program, then known as "free" imports, was tantamount to an import substitution program aimed at the chronic shortage of cash and balance of payments problem of the early Mormon settlement.

In today's economy, the concept of balance of payments is reserved for national and international economies rather than state economies. And of course, in our discussion of globalization and the Utah economy, trade refers to international exports and imports. We begin with Utah's export sector.

Utah Exports: Trends in Export Value, Countries and Products

For forty-five years, international exports have been part of the state's economic development program. In 1970, Utah's Regional Export Council and what is now the Governor's Office of Economic Development published the state's first export directory, identifying 159 exporting companies and their export products listed in English, German, Japanese, and Spanish. Since 1970, there have been many trade missions, conferences, export directories, and studies devoted to expanding Utah's export industry. Two of the most recent studies were published by the Kem C. Gardner Policy Institute, *The Economic Impacts of Utah's International Goods Exports, 2014* and the *Salt Lake Inland Port Market Assessment*.

Gold and Utah's export sector. A single export category, primary metals has dominated Utah's export value for years. To be more specific unwrought gold (less pure gold usually in gold bars) accounts for well over ninety percent of the value of Utah's primary metals exports. Unwrought gold is refined at the Japanese owned Asahi Refining facility (formerly Johnson Mathey), located in West Valley City. Gold exports, while substantial in export value, require only a few hundred employees at Asahi Refining to produce five billion dollars of export value.

The dominance of gold as an export leaves any analysis of Utah's exports subject to the extreme price volatility of gold. In 2011, when gold was above \$1,800 per ounce, the export value of gold shipped from Utah was \$8.5 billion and Utah's export value hit a record \$15.3 billion, with gold accounting for 56 percent of the total value of exports.

Gold's unique properties as an export product justifies often treating it separately from export goods. Changes in the value of exports driven by changes in the price of gold do not reflect increases in output, employment, or productivity of the workforce and the Utah economy, unlike changes in the export value of goods such as computer and electronic products, chemicals, and transportation equipment.

Exports by value. The inflation-adjusted value of non-gold goods exported from Utah has grown from \$3.2 billion in 2000 to \$7.7 billion in 2015, an increase of 142 percent. And when combined with gold, the total value of Utah exports in 2015 was \$13.3 billion in 2015 (see Table 1). Only six other states have had higher rates of export growth (see Table 2).

Export growth in Utah is outperforming most states by a significant margin, and over the past fifteen years Utah's ranking among all states in total value of exports has risen from 33rd to 27th. The rise in the rankings is due in large part to the steady growth in the value of non-gold export goods (see Figure 2).

Ninety-five percent of Utah's export activity flows from Utah's three metropolitan areas: Salt Lake, Provo-Orem, and Ogden-Clearfield. These metropolitan areas are the location of almost all of the 3,544 companies in Utah with international exports. Fifty-seven percent of the value of non-gold goods exported from Utah originated in the Salt Lake Metropolitan Area, 23 percent in the Provo-Orem Metropolitan Area, and 15 percent in the Ogden-Clearfield Metropolitan Area.²

The number of firms exporting in Utah today is a far cry from the 159 Utah firms identified as exporters in 1970. Of the exporting firms in Utah, 3,000 are small and medium-sized enterprises (SME). The U.S. Department of Commerce defines an SME as an enterprise with less than 500 employees. The small and medium-sized exporters in Utah account for 34 percent of the

Table 1
Value of Utah International Exports
(billions of 2015 dollars)

	Goods	Gold	Total	Gold as % of total
2000	\$3.2	\$2.7	\$5.9	45.4%
2001	\$3.1	\$4.4	\$7.5	58.0%
2002	\$3.3	\$6.9	\$10.2	67.4%
2003	\$3.3	\$4.8	\$8.1	59.0%
2004	\$3.9	\$4.5	\$8.4	53.7%
2005	\$4.7	\$5.6	\$10.3	54.4%
2006	\$4.5	\$5.4	\$9.9	54.5%
2007	\$4.9	\$5.8	\$10.7	53.9%
2008	\$5.9	\$5.6	\$11.5	48.5%
2009	\$5.2	\$6.8	\$11.9	56.7%
2010	\$6.3	\$7.2	\$13.6	53.4%
2011	\$6.4	\$9.3	\$15.7	59.3%
2012	\$6.7	\$8.9	\$15.6	57.2%
2013	\$7.3	\$7.3	\$14.6	49.8%
2014	\$7.6	\$3.6	\$11.2	32.4%
2015	\$7.7	\$5.6	\$13.3	41.8%
% Chg.	142.5%	107.4%	125.4%	---

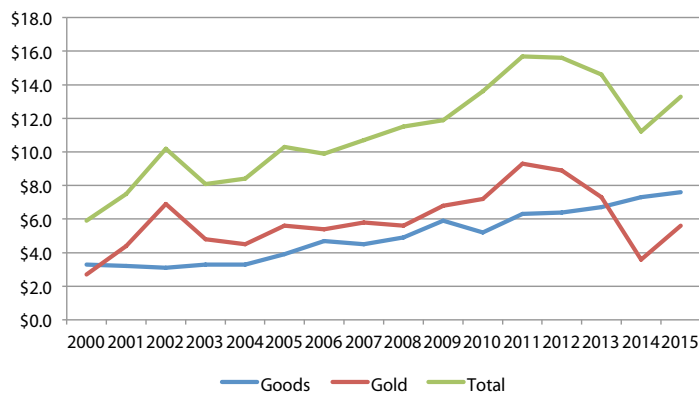
Note: Export value were adjusted using the BLS price index for exports. Gold export values were calculated from the BLS PPI for gold.
Source: U.S. Department of Commerce, International Trade Administration, Trade Stats Express.

Table 2
Top Ten States in Percent Increase in Value of Exports
(less value of primary metals for Utah and Nevada)
(millions of 2015 dollars)

	2000	2015	% Change
North Dakota	\$750.5	\$3,879.9	417.0%
Hawaii	\$463.8	\$1,896.4	308.9%
Mississippi	\$3,268.1	\$10,849.7	232.0%
South Carolina	\$10,269	\$30,936.7	201.2%
Nevada	\$1,755.9	\$4,446.0	153.2%
Iowa	\$5,354.3	\$13,217.2	146.9%
Utah	\$3,193.9	\$7,745.6	142.5%
Louisiana	\$20,161.0	\$48,680.8	141.5%
Kentucky	\$11,525.4	\$27,642.7	139.8%
Tennessee	\$13,898.8	\$32,596.5	134.5%

Note: export values were adjusted using the BLS price index for exports. Gold export values were calculated from the BLS PPI for gold.
Source: Office of Trade and Economic Analysis (OTEA), Industry and Analysis, International Trade Administration, U.S. Department of Commerce.

Figure 1
Value of Utah International Exports
 (2015 dollars)



Source: U.S. Department of Commerce, International Trade Administration, Trade Stats Express.

value of Utah’s export goods. Utah’s SMEs annually have sales of several billion dollars to foreign markets.

Exports by country. The number of trading partners and volume of trade have expanded substantially for Utah and the nation due to the wave of free trade agreements that began with the signing of NAFTA 23 years ago. Utah’s trading partners can be divided into three categories: gold export countries, NAFTA partners, and Asian countries.

Gold export countries. Utah’s two leading export countries in 2015 were the United Kingdom and Hong Kong. Of the \$3.0 billion in exports to the United Kingdom, \$2.85 billion in value was gold; a 93 percent share. Gold also had a 93 percent share of the \$1.95 billion in exports to Hong Kong. These two countries account for a very large share (85 percent) of Utah’s gold exports and 37 percent of the total value of Utah exports.

NAFTA trading partners. The next group of export countries is the NAFTA trading partners: Canada and Mexico. These two important partners captured nearly 21 percent of Utah’s non-gold exports in 2015. Canadian exports have centered on transportation equipment and chemicals, while exports to Mexico also include a large share of transportation goods. Nearly one-third of the value of exports (non-gold) to Mexico in 2015 was transportation equipment, a high percentage of these exports being airbags and safety systems for motor vehicles manufactured by Autoliv’s plant in Ogden, Utah.

Asian export countries. A third major group of export countries are Asian countries: China, Taiwan, Japan, South Korea, Philippines and, recently, Singapore. These six countries have been among Utah’s leading export countries since 2000. The principal products exported to Asian countries are computer and electronics products, chemicals, transportation equipment, and primary metals.

Table 3
Utah Export Value by Country – Excludes Primary Metals
 (millions of 2015 dollars)

	2000	2015	Absolute Change	Percent Change	AAGR
China	\$40.1	\$839.3	\$799.2	1,994.3%	22.5%
Taiwan	\$86.9	\$710.2	\$623.3	717.3%	15.0%
Mexico	\$126.8	\$603.5	\$476.7	375.8%	11.0%
Canada	\$694.6	\$1,095.4	\$400.8	57.7%	3.1%
Singapore	\$68.2	\$343.9	\$275.7	404.5%	11.4%
South Korea	\$160.9	\$356.0	\$195.1	121.3%	5.4%
Netherlands	\$187.0	\$364.0	\$177.0	94.6%	4.5%
Germany	\$129.7	\$265.2	\$135.5	104.5%	4.9%
Japan	\$485.5	\$540.9	\$55.4	11.4%	0.7%
United Kingdom	\$155.1	\$191.0	\$35.9	23.2%	1.4%
Philippines	\$130.6	\$112.6	-\$18.0	-13.8%	-1.0%
Belgium	\$90.9	\$72.8	-\$18.1	-19.9%	-1.5%
Ireland	\$122.7	\$43.7	-\$79.0	-64.4%	-6.7%

Source: U.S. Department of Commerce, International Trade Administration, Trade Stats Express.

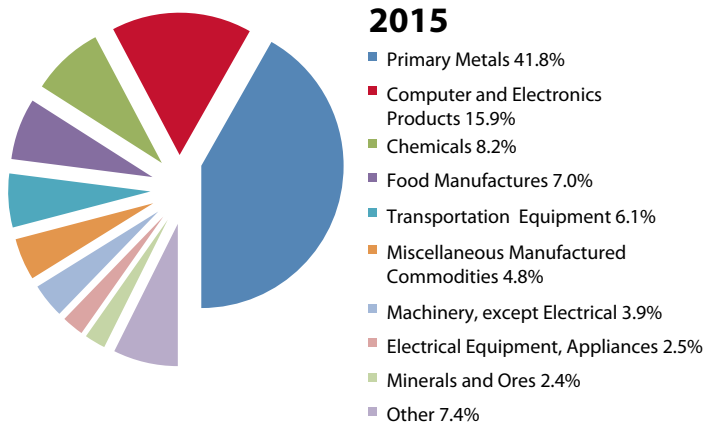
Table 4
Share of Utah Exports by County

	2000	2015	Percent Share 2000	Percent Share 2015
China	\$40.10	\$839.30	1.3%	10.2%
Taiwan	\$86.90	\$710.20	2.8%	8.7%
Mexico	\$126.80	\$603.50	4.1%	7.4%
Canada	\$694.60	\$1,095.40	22.4%	13.4%
Singapore	\$68.20	\$343.90	2.2%	4.2%
South Korea	\$160.90	\$356.00	5.2%	4.3%
Netherlands	\$187.00	\$364.00	6.0%	4.4%
Germany	\$129.70	\$265.20	4.2%	3.2%
Japan	\$485.50	\$540.90	15.7%	6.6%
United Kingdom	\$155.10	\$191.00	5.0%	2.3%
Philippines	\$130.60	\$112.60	4.2%	1.4%
Belgium	\$90.90	\$72.80	2.9%	0.9%
Ireland	\$122.70	\$43.70	4.0%	0.5%
Other Countries	\$621.00	\$2,651.50	80.0%	67.6%
Total	\$3,100.00	\$8,190.00	100.0%	100.0%

Source: U.S. Department of Commerce, International Trade Administration, Trade Stats Express.

The composition of export countries. From 2000 to 2015, 13 countries at one time or another have been ranked among Utah’s top ten export (non-gold) countries (see Table 3). In 2000, three countries—the Philippines, Ireland, and Belgium—were all among Utah’s top ten export countries, but by 2015 these three countries had fallen outside the top tier and replaced by China, Taiwan, and Singapore. This shift signals one of the

Figure 2
Share of Exports by Product Type in Utah, 2015



Source: U.S. Department of Commerce, International Trade Administration, Trade Stats Express.

most important export trends in Utah over the past 15 years: the emergence of Asia and particularly China, Taiwan, and Singapore as major export countries for Utah businesses.

The boom in Asian exports. Exports to China have increased from \$40 million in 2000 to \$839 million in 2015, a nearly two thousand percent increase, and an average annual growth rate of 22 percent. China's share of Utah's exports has grown from 1.3 percent in 2000 to 10.2 percent in 2015 (see Table 4). Although the increase in exports to Taiwan don't match that of China's, the increase is still spectacular. Over the 15 year period, exports to Taiwan rose from \$87 million to \$710 million, a 717 percent increase and an average annual growth rate of 15 percent. Taiwan's share of Utah exports has increased from 2.8 percent in 2000 to 8.7 percent in 2015. Singapore has also had a substantial increase in exports activity with a 404 percent increase in 15 years.

Table 5
Change in Value of Exports in Utah by Major Industry
 (2015 dollars)

NAICS	Sector	2000	2015	Percent Change
313	Primary Metal Manufacturing	\$2,667,694,004	\$5,561,591,925	108.5%
334	Computer and Electronic Products	\$644,707,715	\$2,121,358,415	229.0%
325	Chemicals	\$204,421,649	\$1,095,470,454	435.9%
311	Food Manufactures	\$211,503,908	\$932,164,143	340.7%
336	Transportation Equipment	\$742,522,230	\$812,048,287	9.4%
339	Miscellaneous Manufactured Commodities	\$231,078,848	\$634,472,512	174.6%
333	Machinery, Except Electrical	\$275,209,472	\$522,126,325	89.7%
335	Electrical Equipment, Appliances & Components	\$140,052,438	\$330,602,146	136.1%
212	Minerals & Ores	\$205,690,343	\$317,451,887	54.3%
	Other	\$413,440,790	\$979,935,324	137.0%
	Total	\$5,736,321,396	\$13,307,221,418	132.0%

Source: U.S. Department of Commerce, International Trade Administration, Trade Stats Express.

Exports by product

Utah's export products, include a wide range of manufactured goods. Computer and electronics products account for 15.9 percent of the state's export value, followed by chemicals, food, and transportation equipment (see Figure 2). These four product types, along with gold, make up 80 percent of the value of Utah's exports in 2015.

The growth in Utah exports over the past 15 years has been driven principally by the increase in chemicals, food, and computer and electronics exports. In inflation-adjusted dollars, chemical exports increased by 435 percent, growing from \$204 million in 2000 to almost \$1.1 billion in 2015. Food and computer and electronics products have also had substantial increase in value of exports (see Table 5).

Composition of exports products. While the types of major export products have not changed from 2000 to 2015, the rapid growth of some sectors, particularly chemicals and food products, has led to a shift in the product share of exports. Primary metals and transportation equipment have both lost some share while chemical products has doubled its share, from four percent in 2000 to eight percent in 2015 (see Table 6). A similar gain is recorded for food products whose share of exports has increased from four percent to seven percent.

To better understand the Utah export market, we need to look in more detail at each of the major export sectors; that is to breakdown or disaggregate the major sector into its subsectors. The objective here is to go a layer or two deeper than the typical discussion of Utah's exports. For each major export sector, the subsectors are identified. Then, using Department of Workforce Services data, the likely firms engaged in a specific subsector's export activity are identified.

Table 6
Change in Percent Share of Export Products in Utah

	2000	2015
Primary Metals	46.5%	41.8%
Computer and Electronics Products	11.2%	15.9%
Chemicals	3.6%	8.2%
Food Manufactures	3.7%	7.0%
Transportation Equipment	12.9%	6.1%
Miscellaneous Manufactured Commodities	4.0%	4.8%
Machinery, except Electrical	4.8%	3.9%
Electrical Equipment, Appliances	2.4%	2.5%
Mineral and Ores	3.6%	2.4%
Other	7.2%	7.4%

Source: U.S. Department of Commerce, International Trade Administration, Trade Stats Express.

Table 7
Utah Exports of Primary Metal Products by Subsector, 2015

NAICS	Subsector	Amount
331	Primary Metals	\$5,561,591,925
3311	Iron & Steel & Ferrous Metals	\$47,728,940
3312	Steel Products	\$748,923
3313	Alumina & Aluminum	\$10,527,912
3314	Nonferrous Metals	\$5,487,141,331
3315	Foundries	\$15,444,819

Source: U.S. Census Bureau, USA Trade Online.

Major sector: primary metals. The primary metals export sector is unique due to the dominance of the nonferrous metals subsector, which was nearly 99 percent of the export activity of the sector and is almost entirely comprised of unwrought gold (see Table 7).

Subsector: nonferrous metals. The nonferrous metal exported from Utah is unwrought gold, which generally is gold cast as bars before it is fabricated into jewelry or some other use. Over 80 percent of the unwrought gold exported from Utah goes to two destinations: the United Kingdom and Hong Kong. The exact use of the gold shipped from Utah is not known, but presumably most of it is fabricated into jewelry for the European and Chinese markets. Utah's \$5.5 billion in nonferrous metals exports represents nearly 20 percent of the value of the U.S. nonferrous metals exports in 2015. Utah ranks second among all states in nonferrous metals export. Only New York, with \$7.8 billion in nonferrous metals exports in 2015, surpassed Utah. Nevada was the third ranked state with \$4.2 billion in nonferrous metals exports in 2015.

Major sector: chemical exports. Chemicals, the fastest-growing sector, is comprised of seven subsectors or product types (see

Table 8
Utah Exports of Chemical Products by Subsector, 2015

NAICS	Subsector	Value	Share
325	Chemicals	\$1,095,470,454	100.0%
3251	Basic Chemicals	\$103,947,670	9.5%
3252	Resins, Synthetic Rubber	\$17,191,891	1.6%
3253	Pesticides, Fertilizer	\$63,726,679	5.8%
3254	Pharmaceuticals	\$273,430,699	25.0%
3255	Paints, Coatings	\$4,606,629	0.4%
3256	Soaps, Cleaning Compound	\$330,572,495	30.2%
3259	Other	\$301,994,391	27.6%

Source: U.S. Census Bureau, USA Trade Online.

Table 9
Largest Companies in Utah's Chemical Sector, 2015

Company	Employment	City
USANA	500-999	West Valley
Sun Products	500-999	Salt Lake City
Compass Minerals	250-499	Ogden
Thatcher Group	250-499	Salt Lake City
Watson Laboratories	250-499	Salt Lake City
RB Manufacturing	250-499	Salt Lake City
Pierce Biotechnology	250-499	Wellsville
Nature's Sunshine	250-499	Pleasant Grove
Hyclone Labs	250-499	Logan
Cornerstone Nutritional Labs	250-499	Ogden

Source: Utah Department of Workforce Services.

Table 8). Three subsectors—soaps and cleaning compounds, pharmaceuticals, and other chemical products—account for a large share of the sector's exports. In 2015, soaps and cleaning compounds had \$330 million in exports and pharmaceuticals had \$273 million.

Subsector: pharmaceuticals. Using the NAICS categories shown in Table 8 for each product type, the major chemical export firms in Utah were identified (see Table 9). It's very likely (but we can't know for sure without firm-specific data), that the nine firms listed are the major exporters of chemical products in Utah. Three of the firms—USANA, Nature's Sunshine, and Cornerstone Nutritional Labs—produce dietary, nutritional, and herbal supplements, and are classified as pharmaceutical firms. A fourth pharmaceutical company, Watson Pharmaceuticals, now part of Actavis Generics, a global pharmaceutical company headquartered in Dublin Ireland, almost certainly exports products from its Salt Lake City facility to international markets. Actavis Generics is an interesting case of the globalization of a Utah high-tech start-up. In 1985, two professors from the University of Utah's Department of Pharmaceutics, William Higuchi and Sung Wan Kim along with business partner, Dinesh Patel

Table 10
Utah Exports of Computer and Electronics by Subsector, 2015

NAICS	Subsector	Value	Share
334	Computer and Electronic Products	\$2,121,358,415	100.0%
3341	Computer Equipment	\$151,320,572	7.1%
3342	Communications Equipment	\$77,108,060	3.6%
3343	Audio & Video Equipment	\$36,361,096	1.7%
3344	Semiconductors and Other	\$1,231,107,041	58.0%
3345	Navigational/measuring	\$610,463,292	28.8%
3346	Magnetic & Optical	\$14,998,354	0.7%

Source: U.S. Census Bureau, USA Trade Online.

Table 11
Largest Companies in Utah's
Computer and Electronics Sector, 2015

Company	Employment	City
L-3 Communications	3000-3999	Salt Lake City
I-M Flash	1000-1999	Lehi
Northrop Grumman	500-999	Salt Lake City
Varian Medical	500-999	Salt Lake City
Inovar	250-499	Logan
TTM Technologies	250-499	Logan
Campbell Scientific	250-499	Logan
NLX Corporation	100-249	Ogden

Source: Utah Department of Workforce Services.

Table 12
Utah Transportation Equipment Exports by Subsector, 2015

NAICS	Subsector	Value	Share
336	Transportation Equipment	\$812,048,287	100.0%
3363	Motor Vehicle Parts	\$377,671,281	46.5%
3364	Aerospace Products	\$352,352,257	43.4%
	Other	\$82,024,749	10.1%

Source: U.S. Census Bureau, USA Trade Online.

and local venture capitalists, started TheraTech. The company developed advanced, controlled-release drug delivery products. Rapid growth enabled the company to go public in 1992. Six years later, the company was purchased by Watson Pharmaceuticals for \$306 million. In 2013, Watson Pharmaceuticals merged with Actavis in a \$5.5 billion deal that allowed Watson, now Actavis, "to play on a global stage" as the CEO Paul Bisaro noted. In 2015, Actavis acquired Allergan, creating a \$23 billion diversified global pharmaceutical company with commercial reach across 100 countries.

In 30 years, TheraTech went from a risky local start-up to part of a global multibillion dollar pharmaceutical company. Actavis Generics' Salt Lake facility is located in the University of Utah's

research park. The Salt Lake facility has recently undergone a \$44 million expansion and currently employs about 400 people producing pharmaceutical products for a global market.

Subsector: soaps and cleaning compounds. The highest-value chemical products exported from Utah are soaps and cleaning compounds, with export value in 2015 of \$330 million. Sun Products undoubtedly plays a major role in these exports. Sun Products acquired Huish Detergents, a Salt Lake Company, in 2008. Huish Detergents, founded in 1975, was a major producer of laundry detergent, fabric softeners, and other household care products. Sun Products expanded the market for Huish Detergents to North America, particularly Canada (Toronto) where Sun Products has a manufacturing facility.

Major sector: computers and electronics exports. In 2015, the value of computer and electronics exports was \$2.1 billion. Two subsectors, semiconductors and navigational/measuring equipment, had an 80 percent share of these exports (see Table 10).

Subsector: semiconductors. Semiconductors exports are almost certainly driven by products from IM Flash Technologies located in Lehi. IM Flash Technologies produces flash memory for use in consumer electronics, removable storage, and handheld communication devices. The company employs between 1,500 and 2,000 employees. Excluding the gold exports from Asahi Refining, IM Flash Technologies is the highest value export firm in Utah and very likely the firm with the largest number of employees engaged in producing for the export market (see Table 11).

Subsector: navigational/measuring equipment. Exports of navigational/measuring equipment totaled \$610 million in 2015. These exports are likely primarily products from two large companies: L3 Communications and Northrop Grumman. Both of these companies have the six digit NAICS designation of 334511 navigational/measuring equipment. These companies have operated in Utah for a number of years, though previously L3 operated as Lockheed and Northrop Grumman as Litton. Given the size of these two firms and their employment, they are most likely the major export firms in the navigational equipment subsector.

Major sector: transportation equipment exports. Exports of transportation equipment have been the slowest growing of Utah's major export sectors. In the past 15 years, exports of transportation equipment have increased by only nine percent, growing from \$742 million in 2000 to \$812 million in 2015 (see Table 12). Exports of transportation equipment are dominated by two product types that account for 90 percent of the export value of the sector: motor vehicle parts and aerospace products.

Subsector: motor vehicle parts. Most of the motor vehicle parts exported from Utah are produced by Autoliv, a manufacturer of automotive safety devices including airbags (see Table 13). Autoliv

Table 13
Largest Companies in Utah's Transportation Equipment Sector, 2015

Company	Employment	City
Autoliv	4000-4999	Ogden, Brigham City
ATK Space Systems	1000-1999	Clearfield
Utility Trailer	1000-1999	Clearfield
Exelis	250-499	Salt Lake City
The Boeing Company	500-999	Salt Lake City
Thiokol Corp	500-999	Promontory

Source: Utah Department of Workforce Services.

Table 14
Utah Exports of Food and Kindred by Subsector, 2015

NAICS	Subsector	Value	Share
311	Food and Kindred Products	\$932,164,163	100.0%
3114	Fruits and Vegetable Preservatives	\$99,304,984	10.7%
3116	Meat Products	\$212,175,138	22.8%
---	Other Food and Kindred Products	\$142,443,590	15.3%
3119	Food NESOI*	\$478,240,451	51.2%

*NEOSI – Not elsewhere specified or included.
 Source: U.S. Census Bureau, USA Trade Online.

is Utah's second largest manufacturer in terms of employment with almost 3,000 employees, and has facilities in Weber and Box Elder Counties. Autoliv was formed in 1997 from a merger with the Swedish company Autoliv AB and Morton Automotive Safety Products, a division of Morton International. Autoliv has a 40 percent share of the global market for automotive airbags.

Airbag exports comprise 80 percent of the \$377 million in exports of motor vehicle parts. Half of the \$300 million in airbag exports go to Mexico. It's no coincidence that this export growth to Mexico, buoyed by NAFTA, has occurred as the country's automobile production has doubled since 2005. In 2016, motor vehicle assembly plants in Mexico produced 3.5 million vehicles compared 1.5 million vehicles 10 years earlier.³

Subsector: aerospace products and parts. In 2015, \$352 million of aerospace products were exported from Utah to international markets. Given the volume of transportation exports, most of these exports were likely produced by Utah's three largest aerospace firms: ATK Space Systems, Boeing and Thiokol Corporation. All three firms have a global presence.

Major sector: food products. The exports of food products have had exceptional growth over the past fifteen years, but it is difficult to identify the products and firms participating in this growth. Over half of all food exports are in the category of "food not elsewhere specified or included" (NESOI). In 2015, the

Table 15
Largest Companies in Utah's Food and Kindred Products Sector, 2015

Company	Employment	City
EA Miller	1000-1999	Hyrum
Nestle Prepared Foods	1000-1999	Springville
West Liberty Food	500-999	Tremonton
Daily's Premium Meats	250-499	Salt Lake City
Smithfield Hog Production	250-499	Milford
Norbest	250-499	Moroni
Smithfield Farmland	250-499	Salt Lake City

Source: Utah Department of Workforce Services.

exports of food products totaled \$932 million, up 340 percent from the \$211 million in 2000 (see Table 14).

Subsector: meat products. EA Miller a large beef processing firm in Hyrum, Utah, which operates as a subsidiary of JBS Swift & Company and is very likely the major Utah exporter of meat (see Table 15). EA Miller was founded by a Cache Valley family in 1935, but today is owned by JBS S.A., a Brazilian company that is the world's largest processor of fresh beef. Two other meat producers are Smithfield Farmland, which operates a case-ready fresh pork facility in Salt Lake City and the Smithfield Hog Production facility in Milford, the largest hog farm in the west. Both Smithfield operations almost certainly export some of their Utah products to international markets. Smithfield Farmland and Smithfield Hog Production are divisions of Smithfield Foods a global food company and the world's largest pork processor. Smithfield Foods was purchased in 2013 by China's Shuanghui International for \$4.7 billion, at the time the largest Chinese takeover of any American company.

West Liberty Foods, which located in Utah in 2006, operates a large meat processing plant in Tremonton, Utah. Most of West Liberty's production is sold in the domestic market. Daily's Premium Meats, a national firm, operates a bacon processing plant in Salt Lake, and Norbest in Moroni, Utah produces processed turkey. Some of the products from these facilities are likely included in the \$212 million of meat products exported from Utah.

Subsector: food preparations NESOI. The only large (1,000+ employees) food preparation operation in Utah is Nestle in Springville. The Springville facility is one of Nestle's 47 manufacturing facilities in the U.S. Nestle is an international food and drink company headquartered in Switzerland and is the largest food company in the world. By a process of elimination, Nestle is very likely a participant in the \$478 million of prepared foods exported from Utah in 2015.

Table 16
Major Export Products
(millions)

Product	Export Value	Major Company Likely to Engage in Exports
Gold, nonmonetary, unwrought	\$5,118	Asahi Refining
Memories, electronic integrated circuits	\$1,115	I-M Flash
Food preparations	\$474	Nestle
Civilian aircraft parts	\$302	Boeing
Safety airbags	\$292	Autoliv
Medical needles, catheters, etc.	\$227	Merit Medical
X-Ray products	\$203	unknown
Refined copper cathodes	\$197	unknown
Nonelectrical articles of graphite or carbon	\$168	unknown
Medicaments NESOI	\$154	USANA, Nature's Way
Beauty & skin care preparations	\$147	Nu Skin
Bituminous coal	\$143	Castle Valley Coal, Canyon Fuels Company, Utah American Energy

Source: U.S. Census Bureau, USA Trade Online.

Harmonized system of classification. The product information above uses the NAICS (North American Industry Classification System), which is the standard classification system for federal statistical agencies. A second classification system, the Harmonized System (HS), is an internationally standardized system that classifies traded products. Using the HS data, a list of the major export products from Utah in 2015 is shown in Table 16. Included in the table are major Utah companies that are likely engaged in export of the named product. The major products using the HS data are very similar to the NAICS data, but the HS data do add a few products as major exports: X-Ray products, medical needles and catheters, and bituminous coal.

Exports and Free Trade Agreements

The U.S. presidential election focused a harsh light on free trade agreements, particularly NAFTA and the unsigned Trans-Pacific Partnership (TPP). President Trump claimed NAFTA was “the worst trade deal the U.S. ever signed,” and both Clinton and Trump were opposed to TPP. But over the past 20 years, free trade agreements have played an important role in the acceleration of global trade for Utah.

The World Bank reported that the value of global trade has grown by 283 percent since 1994, from \$4.3 trillion to \$16.5 trillion in 2015. In addition to facilitating growth, trade agree-

ments establish trade standards, protect intellectual property rights, promote environmental protections, expand foreign markets, and result in lower prices for U.S. consumers. Those against free trade agreements highlight job layoffs due to low-priced foreign imports, lost industrial production, and downward pressure on wages.

Since the signing of NAFTA in 1994, the U.S. has become a partner in 13 other free trade agreements that cover 17 countries. In addition, the U.S. is currently negotiating bilateral trade agreements with 13 countries, multilateral agreements with five South African Countries, and the Transatlantic Free Trade Agreement (TAFTA) with the European Union. Free trade agreements are one factor affecting the shift in export shares by country.

Nearly half of the \$2.2 trillion in U.S. export goods in 2015 went to free trade markets. In Utah, free trade markets have a smaller share of export activity. Twenty-six percent of Utah’s \$13.3 billion in exports in 2015 went to 20 free trade markets according to International Trade Administration’s State Report. And by far the most important free trade markets for Utah are Mexico and Canada, our two NAFTA partners. These two countries account for \$2.35 billion of Utah’s total exports and have seen a \$1.5 billion increase in exports in the past ten years. Other trade agreement countries that have seen sizeable increases in Utah exports since 2005 are South Korea, an increase of \$252.2 million and Singapore, an increase of \$231.6 million.

The TPP was to be a trade agreement among 12 Pacific Rim countries that included 800 million people and 40 percent of global output. The TPP, with the United States included, would have been the largest trade agreement in history. The U.S. withdrawal from TPP is an opportunity lost—an opportunity that would have likely created a few thousand jobs in Utah and generated perhaps as much as \$200 million in wages.

Utah’s export data leave little question that free trade agreements have fostered and supported higher levels of export activity. “Tearing up NAFTA,” as Trump has threatened, would have detrimental consequences for Utah’s manufacturing sector. In the following section, some of the firms most vulnerable to a renegotiated or rejected NAFTA are identified.

The 20 countries in the free trade agreement to which the U.S. is a partner are: Mexico, Canada, Australia, South Korea, Singapore, Israel, Jordan, Bahrain, Morocco, Oman, Chile, Columbia, Peru, Costa Rica, the Dominican Republic, El Salvador, Guatemala, Honduras, Nicaragua, and Panama. The TPP countries that remain in discussions are: Australia, Brunei, Canada, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore, and Vietnam.

Table 17
Estimated Economic Impacts of Utah's Goods Exports, 2015

NAICS Code	Commodity	Earnings (millions)	Employment (jobs)	Value-added (millions)
334	Computer & Electronic Products	\$998.1	21,318	\$1,908.2
336	Transportation Equipment	\$438.4	8,936	\$749.0
311	Food & Kindred Products	\$428.9	13,157	\$782.5
325	Chemicals	\$419.7	9,738	\$818.6
339	Miscellaneous Manufactured Commodities	\$258.4	6,375	\$495.6
331	Primary Metal Manufacturing	\$247.2	5,455	\$484.4
333	Machinery, Except Electrical	\$224.4	5,139	\$402.4
335	Electrical Equipment, Appliances & Components	\$115.1	2,577	\$234.9
212	Minerals & Ores	\$89.9	2,184	\$240.6
332	Fabricated Metal Products, NESOI	\$86.0	2,227	\$156.0
326	Plastics & Rubber Products	\$63.8	1,730	\$118.4
111	Agricultural Products	\$37.2	1,454	\$67.6
337	Furniture & Fixtures	\$21.8	609	\$37.7
327	Nonmetallic Mineral Products	\$18.4	565	\$36.3
312	Beverages & Tobacco Products	\$17.8	546	\$32.5
313	Textiles & Fabrics	\$16.7	552	\$26.2
322	Paper	\$10.9	265	\$19.6
323	Printed Matter and Related Products, NESOI	\$10.2	292	\$18.1
316	Leather & Allied Products	\$9.0	384	\$14.4
314	Textile Mill Products	\$9.0	298	\$14.2
315	Apparel & Accessories	\$7.1	295	\$11.4
324	Petroleum & Coal Products	\$3.3	88	\$6.6
112	Livestock & Livestock Products	\$2.2	86	\$4.0
321	Wood Products	\$1.5	47	\$2.4
113	Forestry Products, NESOI	\$0.7	34	\$1.3
114	Fish, Fresh/Chilled/Frozen & Other Marine Products	\$0.3	14	\$0.5
211	Oil & Gas	\$0.01	0.4	\$0.04
Total Impacts		\$3,536.0	84,367	\$6,683.4
State Totals		\$90,129.5	1,863,692	\$147,108.0
Impact Share of State Total		3.9%	4.5%	4.5%

NESOI = not elsewhere specified or included.

Source: Kem C. Gardner Policy Institute analysis of Census Bureau data using the Bureau of Economic Analysis' RIMS II multipliers, and Bureau of Economic Analysis regional data (state totals).

Economic Impact of Utah's Exports of Goods

We close this discussion with estimates of the economic impact of exports on the Utah economy in 2015. Utah's international goods exports (non-gold) in 2015 supported \$3.5 billion in earnings and 84,367 jobs, and added nearly \$6.7 billion to Utah gross domestic product (see Table 17). These economic impacts account for the direct employment and earnings at Utah export related firms as well as the indirect employment and earnings created at local firms supplying inputs (goods and services) to the export company. And in turn, employees of the export producing firms as well as employees of local suppliers (indirect impacts) spend a portion of their earnings on local goods and services, creating another round of employment and earnings impacts (induced impacts). Combined, these three impact categories—direct, indirect, and induced—comprise the total earnings and employment impacts, which account for 3.9 percent of earnings in Utah, 4.9 percent of the employment, and 4.5 percent of the Utah's economic output or gross state product.

The largest economic impact of exports accrues to the “big four” export sectors—computer and electronics products, food and kindred products, chemicals, and transportation equipment. Exports of computer and electronics products generated 21,300 jobs and \$998.1 million in earnings. Next most significant was exports of food and kindred products, which created 13,150 jobs and \$429 million in earnings.

Imports to Utah: Impacts and Trends

International imports are often given short shrift in discussions of Utah's foreign trade. This is due in part to the difficulty of measuring the impact of imports. Whereas exports present a relatively clear connection between increased trade activity and jobs, the case for imports is much less clear. Imports are more likely to be associated with job losses than job gains, and maligned as cheap foreign goods competing with American made products. Take for example the case of “Made in China” sweater sold in Walmart. What part of retail price of the sweater is due to Chinese production of the sweater, and what part of the retail price is due to value added by U.S. domestic transportation, retail marketing, sales, and profit?

The Federal Reserve Bank of San Francisco, in a research brief published in 2011, found that for “every dollar spent on an item labeled “Made in China” 55 cents go for services produced in the U.S.⁵ In other words, the U.S. content of “Made in China” is 55 percent.” And that 55 percent generates jobs in the U.S. economy. Now, some might argue that if the sweater were

Table 18
Value of Imports with Utah as State of Destination
(2015 dollars)

	2008	2015	% Change
Primary Metals Manufacturing (unwrought gold)	\$2,428,491,847	\$3,543,357,680	45.9%
Transportation Equipment	\$553,154,380	\$2,547,475,241	360.5%
Miscellaneous Manufactured Commodities	\$694,735,679	\$819,634,557	18.0%
Computer and Electronics Products	\$355,104,380	\$718,350,683	102.3%
Goods Return to Canada	\$259,753,801	\$545,100,402	109.9%
Chemicals	\$362,586,839	\$509,962,898	40.6%
Electrical Equipment	\$208,261,119	\$487,452,265	134.1%
Machinery	\$660,217,927	\$458,091,706	-30.6%
Fabricated Metal Products	\$223,168,124	\$318,286,279	42.6%
Food Manufacture	\$93,284,476	\$315,054,792	237.7%
Other	\$1,289,823,000	\$1,838,250,287	42.5%
Total	\$7,128,581,572	\$12,101,016,790	69.8%

Source: U.S. Census Bureau, USA Trade Online.

“Made in the U.S.” 100 percent of economic benefit would be domestic rather than only 55 percent. But in that case, the sweater would be much more expensive, which raises another important but difficult to quantify benefit of imports: lower prices as well as a wider variety of goods. But to calculate the economic benefits for the typical Utah household of lower prices and greater consumer choice would be a formidable task, as would estimating the local retail jobs and income created by “Made in China” products. Such an analysis is well beyond the scope of this study

Utah Imports by Product

Imports, for our purposes, are defined as those products where Utah is “the state of destination,” the state where goods are initially delivered. Hence, imported consumer goods that arrive, for example, in California and end up in the Walmart distribution network and are then shipped to a Utah store are not considered imports—Utah was not “the state of destination”.

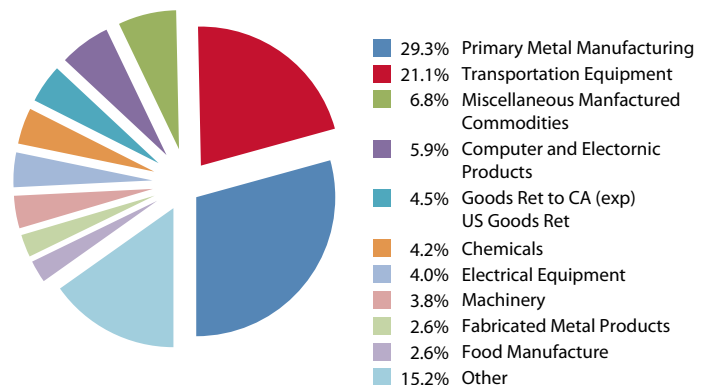
In 2015, Utah’s imports totaled \$12.1 billion and the state ranked 30th among all states in value of imports. Although not a particularly meaningful measure, Utah ran a trade surplus in 2015 with exports exceeding imports by \$1.2 billion. Since 2008 (the earliest state import data available), total imports have grown by 70 percent in inflation-adjusted dollars. The most important shift in imports is the growth in transportation equipment, which grew from \$553 million in 2008 to \$2.5 billion in 2015, an increase of 360 percent (see Table 18). Unwrought gold has the largest share of imports with 19 percent in 2015, a slight decline from 2008 (see Table 24 and Figure 3). It is a bit of a surprise that unwrought gold ranks as Utah’s number one import and immediately raises

Table 19
Change in Share of Utah Imports by Product

	2008	2015
Primary Metal Manufacturing	34.1%	29.3%
Transportation Equipment	7.8%	21.1%
Miscellaneous Manufactured Commodities	9.7%	6.8%
Computer and Electronic Products	5.0%	5.9%
Goods Ret to CA (exp) U.S. Goods Ret	3.6%	4.5%
Chemicals	5.1%	4.2%
Electrical Equipment	2.9%	4.0%
Machinery	9.3%	3.8%
Fabricated Metal Products	3.1%	2.6%
Food Manufacture	1.3%	2.6%
Other	18.1%	15.2%
Total	100.0%	100.0%

Source: U.S. Census Bureau, USA Trade Online.

Figure 3
Utah Imports by Product, 2015



Source: U.S. Census Bureau, USA Trade Online.

the question of whether the unwrought gold is an intermediate good for Utah's unwrought gold exports.

Imports and manufacturing supply chain. While exports carry an aura of economic growth, imports often carry an undertone of job loss, tariffs and protectionism. As discussed above, these negative perceptions are mistaken to some degree, depending on the state under discussion. Imports can be very beneficial to the local economy, not only supplying a large variety of low priced goods but also in supplying the intermediate goods required by manufacturers. Today, many products manufactured in Utah are made up of parts and pieces from all over the globe. To remain cost competitive, local firms must participate in these cross-border supply chains. Most of the products imported to Utah, i.e. imports with Utah as the state of destination, appear to be intermediate goods for Utah's manufacturing sector (also discussed below).

Imports by Country

Sixty percent of Utah's imports are from three countries: Mexico, China, and Canada (see Table 20). All three countries may be in the crosshairs of President Trump's trade policy. During the campaign and since his election, President Trump has suggested a 20 percent tariff on imports from Mexico, a renegotiation of NAFTA, and a punitive 45 percent tariff on Chinese goods. Any of these measures could increase consumer prices as well as the prices of intermediate goods used by Utah manufacturers. Higher priced intermediate goods may make the manufacturers less competitive and could ultimately negatively impact employment in Utah's manufacturing sector. The worst case would be a trade war ignited by aggressive tariffs and protectionism by the U.S., which could cost the economy thousands of jobs.

Imports of primary metals. Just over half of the primary metals imported to Utah come from Mexico, while Peru, Columbia, Guatemala, and Nicaragua account for another 40 percent (see Table 21). For each country, the primary metals imports are almost entirely nonferrous metals. Ninety-nine percent of the nonferrous metals imported are unwrought gold. We don't know, due to issues of confidentiality, the precise use of the unwrought gold imports. Are they an intermediate goods for Utah's primary metals exporters, or is some amount used in jewelry manufacture (O.C. Tanner Company) or another use? We can't be sure, but given the volume and value of the primary metals imports—nearly two billion dollars from Mexico and another billion dollars from South American and Central American countries—it seems very likely that they are in some form or fashion intermediate goods to Utah's \$5.5 billion in gold exports.

Table 20
Value of Imports to Utah by Country, 2015

Country	Value	Share
Mexico	\$3,337,642,705	27.6%
China	\$2,231,509,256	18.4%
Canada	\$1,823,493,979	15.1%
Brazil	\$715,687,465	5.9%
Taiwan	\$493,240,419	4.1%
Peru	\$352,918,930	2.9%
Colombia	\$328,134,654	2.7%
Guatemala	\$309,388,108	2.6%
Nicaragua	\$205,855,001	1.7%
Germany	\$188,920,395	1.6%
Other	\$2,114,225,878	17.5%
Total	\$12,101,016,790	100.0%

Source: U.S. Census Bureau, USA Trade Online.

Table 21
Primary Metals Imported to Utah by Country, 2015

Country	Value	Share
Mexico	\$1,937,533,295	54.7%
Peru	\$348,061,629	9.8%
Columbia	\$323,681,898	9.1%
Guatemala	\$308,651,663	8.7%
Nicaragua	\$204,777,696	5.8%
Other	\$420,651,499	11.9%
Total	\$3,543,357,680	100.0%

Source: U.S. Census Bureau, USA Trade Online.

Table 22
Transportation Equipment Imported to Utah by Country, 2015

Country	Value	Share
Mexico	\$1,060,860,604	41.6%
Brazil	\$693,065,391	27.2%
Canada	\$295,426,853	11.6%
Taiwan	\$222,023,196	8.7%
China	\$102,856,933	4.0%
France	\$55,017,281	2.2%
Other	\$118,224,983	4.6%
Total	\$2,547,475,241	100.0%

Source: U.S. Census Bureau, USA Trade Online.

Imports of transportation equipment. Transportation equipment is Utah second largest import sector, and again Mexico ranks first in value of imports. In 2015, imports of transportation equipment from Mexico totaled one billion dollars: a 41 percent share of all transportation equipment imports (see

Table 23
Change in Value of Imports to Utah by Country and Product
(2015 dollars)

	2008	2015	Percent Change	Absolute Change
Mexico	\$879,717,981	\$3,337,642,705	279.4%	\$2,457,924,724
Primary Metals	\$332,872,609	\$1,937,533,295	482.1%	\$1,604,660,686
Transportation Equipment	\$191,999,602	\$1,060,860,604	452.5%	\$868,861,002
Other	\$124,627,094	\$339,248,806	172.2%	\$214,621,712
China	\$1,403,200,782	\$2,231,509,256	59.0%	\$828,308,474
Misc. Manufactured Commodities	\$403,132,393	\$419,561,173	4.1%	\$16,428,780
Computer and Electronic Products	\$115,348,700	\$275,477,795	138.8%	\$160,129,095
Furniture and Fixtures	\$113,990,130	\$191,428,702	73.9%	\$77,438,572
Fabricated Metal Products NESOI	\$97,855,998	\$170,205,857	73.9%	\$72,349,859
Apparel Manufacturing Products	\$51,523,071	\$129,337,362	151.0%	\$77,814,291
Leather & Allied Products	\$85,984,969	\$118,775,476	38.1%	\$32,790,507
Plastics and Rubber Products	\$42,450,302	\$112,670,020	165.4%	\$70,219,718
Transportation Equipment	\$40,618,409	\$102,856,933	153.2%	\$62,238,524
Other	\$452,296,810	\$711,195,938	57.2%	\$258,899,128
Canada	\$1,700,567,364	\$1,823,493,979	7.2%	\$122,926,615
Transportation Equipment	\$181,036,877	\$295,426,853	63.2%	\$114,389,976
Goods Ret to CA (Exp); US Goods Ret & Reimps	\$111,782,924	\$283,370,287	153.5%	\$171,587,363
Food Manufactures	\$46,664,509	\$184,531,082	295.4%	\$137,866,573
Chemicals	\$208,800,895	\$170,996,276	-18.1%	-\$37,804,619
Other	\$1,152,282,158	\$889,169,481	-22.8	-\$263,112,677
Brazil	\$25,682,694	\$715,687,468	2,686.7%	\$690,004,774
Transportation Equipment	\$174,269	\$693,065,391	*	\$692,891,122
Other	\$25,508,425	\$22,622,077	-11.3%	-\$2,886,348
Taiwan	\$236,590,035	\$493,240,419	108.5%	\$256,650,384
Transportation Equipment	\$82,421,647	\$222,023,196	169.4%	\$139,601,549
Misc. Manufactured Commodities	\$43,763,717	\$86,160,058	96.9%	\$42,396,341
Computer and Electronic Products	\$42,979,508	\$72,835,238	69.5%	\$29,855,730
Fabricated Metal Products NESOI	\$18,702,444	\$51,356,672	174.6%	\$32,654,228
Other	\$48,722,719	\$60,865,255	24.9%	\$12,142,536
Peru	\$651,559,140	\$352,918,930	-45.8%	-\$298,640,210
Primary Metals	\$647,010,397	\$348,061,629	-46.2%	-\$298,948,768
Other	\$4,545,743	\$4,857,301	6.8%	\$308,558
Columbia	\$134,533,117	\$328,134,654	143.9%	\$193,601,537
Primary Metals	\$130,255,419	\$323,681,898	148.5%	\$193,426,479
Other	\$4,277,698	\$4,452,756	4.1%	\$175,058
Nicaragua	\$10,301	\$205,855,001	*	\$205,844,700
Primary Metals	0	\$204,777,696	---	\$204,777,696
Other	\$10,301	\$1,077,305	*	\$1,067,004
Guatemala	\$181,240,734	\$309,388,108	70.7%	\$128,147,374
Primary Metals	\$176,735,358	\$308,651,663	74.6%	\$131,916,305
Other	\$4,506,376	\$736,445	-83.7%	-\$3,768,931
Germany	\$148,401,218	\$188,920,395	27.3%	\$40,519,177
Machinery, Except Electrical	\$60,897,172	\$38,891,965	-36.0%	-\$22,005,207
Computer and Electronics	\$8,696,261	\$33,332,866	283.3%	\$24,636,605

*Exceeds several thousand percent.
Source: U.S. Census Bureau, USA Trade Online.

Table 22). A closer look at these imports shows that they are almost entirely motor vehicle parts (\$605.8 million) and motor vehicles (\$453.9). Almost all of the \$606 million in *motor vehicle parts* is safety airbags and steering columns undoubtedly purchased by Autoliv in Ogden as an intermediate product.

Three quarters of the \$454 million in *motor vehicles* imports from Mexico is tractors for semi-trailers. The likely destination is C.R. England, headquartered in Salt Lake City, Utah and/or Utility Trailer headquartered in Clearfield, Utah. C.R. England is the world's largest refrigerated transportation carrier and has a large fleet of semi-trailers. Utility Trailer is a national company with a manufacturing facility in Clearfield with over 1,000 employees producing several types of trailers for transporting goods.

In terms of value, Brazilian transportation equipment imports rank second to Mexico. In 2015 Brazilian imports totaled \$693 million. All of the Brazilian imports were classified as aerospace products and parts. Brazil emerged suddenly as a major importer in 2014, with aerospace imports of \$560 million compared to only \$26 million two years prior. USA Trade Online shows that almost all of the transportation imports from Brazil are fixed wing aircraft. These aircraft are finished goods for the aircraft markets. The aircraft are likely produced by Embraer, a Brazilian aerospace conglomerate that produces commercial, military, executive, and agricultural aircraft. The company is the third largest airplane manufacturer in the world after Airbus and Boeing. The aircraft are likely purchased by SkyWest Airlines, headquartered in St. George, Utah.

Transportation equipment imports from Canada, as was the case with Brazil, are almost all aerospace products and parts. The detailed import data show that the Canadian transportation imports are also fixed wing aircraft, but lighter aircraft than the Brazilian aircraft. Taiwan is another major importer to Utah. The Taiwanese transportation equipment imports, as was the case with Brazil and Canada, are finished products, but in this case primarily bicycles and bicycle parts.

Tariffs on Mexican imports of transportation equipment would likely raise the cost of the intermediate goods (airbags) for Utah's second largest manufacturer, Autoliv, and the cost of semi-trailers for Utah's largest trucking company, C.R. England. Brazil, Canada, and Taiwan, the other major import countries, are presently not threatened with tariffs.

Change in Imports by country 2008-2015. Of the top ten importers to Utah, Mexico has registered the largest increase in imports. Over the seven year period, imports from Mexico increased by nearly \$2.5 billion, including a \$1.6 billion increase in unwrought gold imports and a nearly \$900 million increase in transportation equipment (see Table 23). Chinese imports have seen the second largest increase, with imports up \$828 million led by a \$160 million increase in computers and electronics.

Compared to Mexico, the increase in Chinese imports are much more evenly distributed and spread among a wide variety of import products. Brazil ranks third in import growth with the growth driven almost entirely by the increase in transportation equipment. As discussed above, the Brazilian transportation equipment imports are comprised almost entirely of aerospace fixed wing aircraft. Taiwanese imports gained \$256 million over the 2008-2015 period, doubling in size. And finally Canada, a major U.S. trading partners, has seen little growth in imports to Utah with only a seven percent increase since 2008, a gain of \$122 million in imports.

Imports and economic impact on Utah's manufacturing sector

No doubt free trade and low-priced imports have economic advantages, but they also have caused some serious economic damage for some states. Most notably those states with high concentrations of apparel manufacturing, furniture manufacturing, steel production, and automobile manufacturing. Utah, however has been insulated from the economic shocks of free trade. Fortunately, the state's economic base, at least in recent times, has been well diversified and not dependent on those industries most vulnerable to imports. Over the past 20 years, Utah employment in five import vulnerable manufacturing sectors has declined in two sectors: iron and steel manufacturing and apparel manufacturing. Overall total employment in these five sectors over the past 20 years has fallen from 12,223 in 1995 to 8,416 in 2015 (see Table 24). In relative terms a large decline but in absolute terms less than one-half of one percent of the state's nonagricultural employment and three percent of Utah's manufacturing employment.

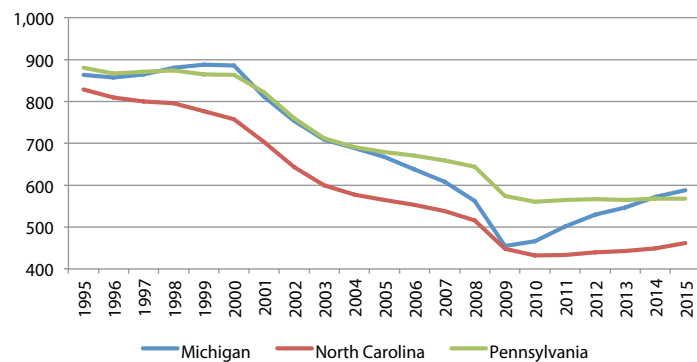
The decline of Utah's iron and steel industry is probably the most prominent example of the impact of foreign imports on a local manufacturing. In the 1990s, Geneva Steel faced stiff competition from foreign steel makers who were unfairly subsidizing steel production then "dumping" their products in the U.S. The U.S. steel industry, including Geneva Steel, filed complaints with the U.S. International Trade Commission, which has the authority to impose tariffs on imports that are improperly dumped in the U.S. The subsidized steel imports were coming from geographically dispersed countries ranging from Finland to Romania to Mexico to Japan, Korea, and Taiwan. As a result of the complaints, tariffs were imposed on steel imports from the "dumping" countries to protect U.S. steel companies. The tariffs protected and benefited jobs and incomes in Utah for a time but in the end the tariffs were not enough to save Geneva Steel. The company filed for bankruptcy in 1999. Ultimately foreign competition played a role, along with other market conditions,

Table 24
Employment Change in Selected Import Vulnerable Manufacturing Sectors in Utah

	Employment 1995	Employment 2015	Change in Jobs
Iron & Steel Mill	3,306	472	-2,834
Textile Mill Products	573	1,256	683
Apparel Manufacturing	4,620	1,345	-3,275
Furniture Manufacturing	3,724	5,343	1,619
Automobile Manufacturing	0	0	0
Total	12,223	8,416	-3,807

Source: Utah Department of Workforce Services.

Figure 4
Manufacturing Employment in Selected States



Source: U.S. Bureau of Labor Statistics.

in the demise of Utah’s iron and steel industry, an industry that was born during World War II.

Manufacturing employment and imports: Michigan, North Carolina, and Pennsylvania. Ninety percent of the export-related jobs in Utah are in the manufacturing sector.⁴ Just how well-positioned Utah has been with regard to foreign imports is highlighted by a comparison of Utah’s manufacturing sector with Michigan, North Carolina, and Pennsylvania. Historically, these three states have had high concentrations of import vulnerable manufacturing jobs: Michigan (automobile manufacturing),

Table 25
Change in Manufacturing Employment in Selected States 1995-2015
 (in thousands)

	1995	2010	2015	Percent Change 1995-2010	Absolute Change 1995-2010	Percent Change 1995-2015	Absolute Change 1995-2015
Michigan	863.7	465.9	587.3	-46.1%	-397.8	-32.0%	-276.4
North Carolina	828.3	432.2	460.1	-47.8%	-396.1	-44.4%	-368.2
Pennsylvania	880.6	560.0	568.3	-36.4%	-320.6	-35.5%	-312.3
Utah	116.9	111.1	123.6	-5.0%	-5.8	+5.7%	+6.7
U.S.	17,241.0	11,528.1	12,317.6	-33.1%	-5,712.9	-28.6%	-4,923.4

Source: U.S. Bureau of Labor Statistics.

Table 26
Subsector Employment in Utah Manufacturing Industry, 2015

	Employment	% Share
Miscellaneous Manufacturing*	18,013	14.6%
Food Manufacturing	15,750	12.7%
Fabricated Metal Products	13,462	10.9%
Computer and Electronics	12,706	10.3%
Transportation Equipment	12,882	10.4%
Chemical Manufacturing	9,162	7.4%
Other	41,750	33.7%
Total	123,725	100.0%

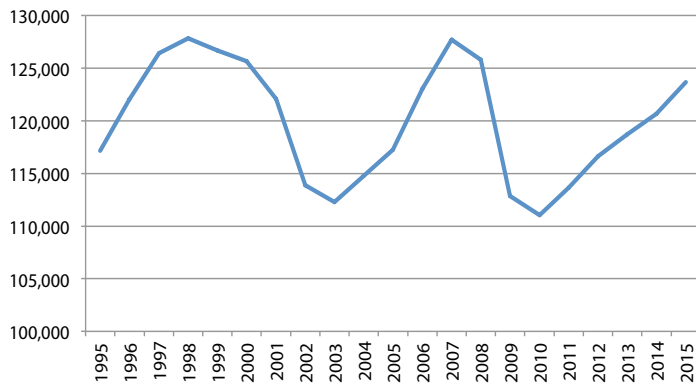
*includes a wide range of products that cannot be readily classified in NAICS subsectors.
 Source: Utah Departments of Workforce Services.

North Carolina (furniture and apparel manufacturing), and Pennsylvania (steel and iron manufacturing).

The deterioration of manufacturing employment in Michigan, North Carolina, and Pennsylvania is shocking. Not coincidentally, they are all states that President Trump won but was projected to lose. Over the past 20 years, manufacturing jobs have declined by 44 percent in North Carolina (see Table 25). In Michigan, where conditions have been slightly better, job losses amount to over a quarter of a million in 20 years—a 32 percent decline. Pennsylvania’s performance falls in the middle with a 35 percent decline and a loss of over 300,000 jobs.

The job losses in these state have been devastating, as depicted by the trends lines in Figure 4. But only a portion of the job losses can be attributed to foreign trade. Technological change has had a much greater impact on manufacturing employment. Globalization has become a scapegoat for manufacturing’s troubles. Not that trade is blameless: it shares some of the blame for job losses, particularly trade with China. David Autor (MIT), David Dorn (University of Zurich), and Gordon Hanson (University of California San Diego) estimate in a recent working paper published by the National Bureau of Economic Research that, from 1999 to 2011, U.S. trade with China eliminated 560,000

Figure 5
Manufacturing Employment in Utah



Source: Utah Department of Workforce Services.

manufacturing jobs, about 10 percent of all the manufacturing jobs lost over this period. Most of the other jobs lost were due to technology advances and automation. They note:

“China’s emergence as a great economic power has induced an epochal shift in matters of world trade. Simultaneously, it has challenged much of the received empirical wisdom about how labor markets adjust to trade shocks. Alongside the heralded consumer benefits of expanded trade are substantial adjustment costs and distributional consequences. These impacts are most visible in the local labor markets in which the industries exposed to foreign competition are concentrated. Adjustment in local labor markets is remarkably slow, with wages and labor-force participation rates remaining depressed and unemployment rates remaining elevated for at least a full decade after the China trade shock commences...At the national level, employment has fallen in U.S. industries more exposed to import competition, as expected but offsetting employment gains in other industries have yet to materialize.”⁶

Despite optimistic estimates by free trade proponents, this “remarkably slow” adjustment to trade with China has had significant effect on states with import-vulnerable manufacturing sectors. And NAFTA, the critics argue, has caused wage stagnation and the loss of as many as 600,000 to 850,000 manufacturing jobs. Since NAFTA was signed in 1994, the balance of trade with Mexico has swung from a surplus of a few billion dollars to a deficit of tens of billions.

Utah’s manufacturing sector. Although Utah’s manufacturing sector has had its ups and downs, the sector is currently in the sixth consecutive year of growth. Total employment in 2015 was 124,000 and was 6,700 jobs higher than in 1995 (see

Figure 5). Utah’s manufacturing sector appears to be much less vulnerable to both technological change and globalization than manufacturing in North Carolina, Pennsylvania, and Michigan.

There is no single subsector that dominates Utah manufacturing. The subsector with the largest share of employment is miscellaneous manufacturing, followed by food manufacturing, which includes only two firms with over 1,000 employees: E.A. Miller and Nestle Prepared Foods Company (see Table 26). The relatively smooth or even distribution of the types of manufacturing firms in Utah, along with the muted presence or absence of import vulnerable firms (steel, furniture, textiles, apparel, and auto manufacturing), have insulated Utah’s manufacturing sector from most of the negative impacts of globalization and low-priced foreign imports.

Offshoring and the Utah economy

Offshoring is the practice of locating some or all of the processes of a company overseas to generally take advantage of lower labor costs, thus producing a more competitively priced finished good. This competitive price finished goods often turns up as a low-priced import competing with U.S. domestic production.

Utahns generally get the advantage of low-priced imports without the cost of lost manufacturing jobs due to offshoring. There have been just a few cases of offshoring in Utah: the 2015 transfer of 170 jobs from the Levolor plant in Ogden to the company’s operation in Mexico, and the closure in 2008 of the La-Z-Boy furniture manufacturing facility in Tremonton, laying off 630 workers. The closure was part of a nationwide reorganization for the company that included moving 1,200 jobs to Mexico. Besides a few minor cases spread over several years, there has been no large scale exit of major Utah manufacturers to low wage countries. Even Utah’s call center industry seems unaffected. Call centers have continued to thrive in Utah with no major cases of offshoring as employment has increased from 14,500 in 2001 to 17,300 in 2015.

While some might identify Geneva Steel as an example of the offshoring, it does not fit the traditional pattern of offshoring. First Geneva Steel filed for bankruptcy and permanently shuttered operations then subsequently sold mill equipment for \$40 million to the Chinese firm of Qingdao Iron & Steel Group. It was not a case of pulling up stakes and moving employment to China. But as noted earlier, Geneva Steel is one example of a Utah company hurt by globalization and low priced, subsidized foreign steel.

Globalization and Cross-Border Flows of People

The cross-border flow of goods via foreign trade is a fundamental feature of globalization, as is the cross-border flow of people. This section focuses on the flow of people via immigration, resettlement of refugees, international travel, and the presence of international students.

Foreign-born Population in Utah

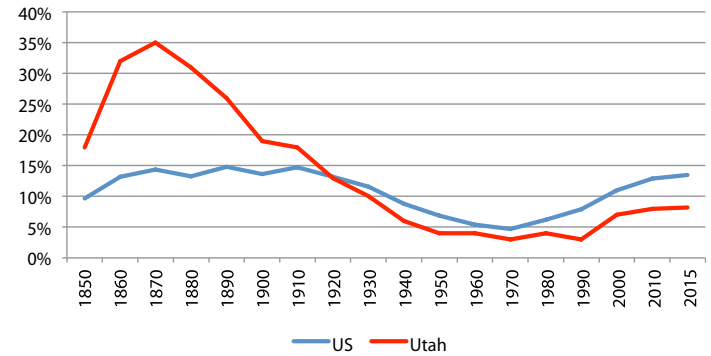
As was the case with trade, immigration was an important feature of the economic development of Mormon country. In 1849, just two years after early Mormon pioneers reached the Salt Lake Valley, The Church of Jesus Christ of Latter-day Saints established the Perpetual Emigration Fund (PEF). Using both Church assets and private contributions, the PEF provided financial assistance for the immigration of converts to the Utah Territory. By the early 1850s, as many as 30,000 English converts were eager to immigrate. While the primary motive of the PEF was the “theological principle of the gathering,” a secondary motive was to “bring companies of mechanics and artisans from the British Isles to the Valley. Over the 38 year history of the PEF, the fund helped over 100,000 converts immigrate, including 87,000 from England and Northern Europe.”⁷ The organization of European converts for the emigration to Utah was “the most successful example of regulated immigration in United States history.”⁸ This immigration became an indispensable source of labor supply for the Utah Territory, forming a strong economic link between immigration and labor supply that is present in Utah today.

Causes of migration. Migration is a complex process that has been part of human history for centuries, but since the middle of the twentieth century the rate of migration has accelerated, extending and deepening the process of globalization. Utah’s immigration experience in the 1990s was not unique. Nationally and globally the decade of the 1990s, and the first half of the 2000s, was an era of historically high rates of international migration that amplified globalization.

Some of the causes that have triggered the increase in the cross-border flows of people to the U.S. and Utah include:⁹

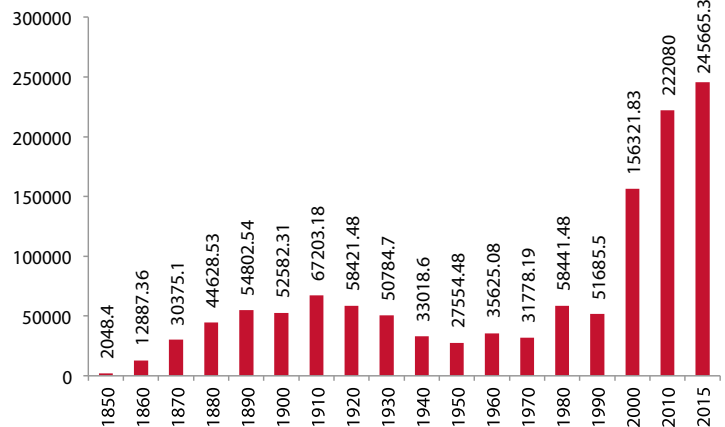
- (1) The U.S. Immigration Act of 1990, which amended the Immigration and Nationality Act of 1965 and increased the number of immigrants allowed to enter the U.S. annually to 700,000.
- (2) The shift from the cold war and inter-state conflicts to civil wars and intra-state conflicts as in Yugoslavia, Sudan, Rwanda, Syria, etc. These civil wars have driven the number

Figure 6
Foreign-born as Percent of Population



Source: U.S. Census Bureau.

Figure 7
Foreign-born Population in Utah



Source: U.S. Census Bureau, Resident Population and Apportionment of U.S. House of Representatives and U.S. Census Bureau, Immigration and Naturalization Service.

of refugees worldwide to a record level of 65 million people seeking resettlement in foreign countries.

- (3) The perverse consequences at times of foreign trade agreements. After NAFTA went into force in 1994, corn produced by U.S. agribusiness was sold in Mexico below local corn prices. Millions of Mexican farmers suffered, many lost their farms, and hundreds of thousands sought economic security by emigrating north to the U.S.
- (4) Labor shortages in agriculture and construction that have prodded U.S. firms in these industries to recruit low cost labor from foreign countries, particularly Mexico and Central American Countries.
- (5) The improvement in transportation and communications technology that have eased and simplified the process of immigration. For example, technology has enabled immi-

grants to easily send remittances to their home country, providing an additional incentive for some family members to migrate to high wage countries to support their remaining family in low wage countries. Remittances by immigrants from the U.S. to Mexico alone exceed \$20 billion annually. Overall, immigrants in the U.S. sent \$133 billion in remittances to their home countries in 2015.¹⁰

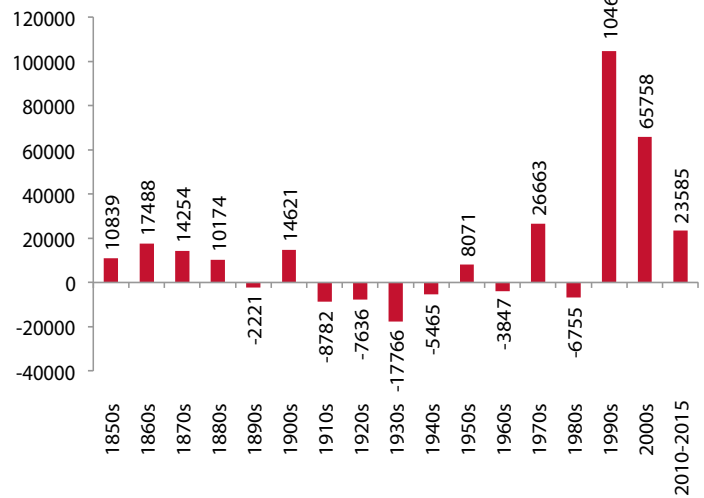
- (6) U.S. employment opportunities and high rates of employment growth from 1990 to 2006 served as economic magnets attracting poor migrants from developing countries.

Measuring foreign-born immigration. The extraordinary increase in the cross-border flows of people since 1990 is captured in demographic data. The immigration data confirm that the last 25 years has been a period of unmistakably heightened globalization as immigration and Utah’s foreign-born population experienced the largest increase in the past one hundred years.

Share of population. From the 1850s to the 1920s, the share of the foreign-born population in Utah was well above the national share. At the peak in 1870, 35 percent of Utah’s population was foreign-born, compared to only 15 percent for the nation (see Figure 6). The sizeable gap between Utah and the U.S. from 1850 to 1890 was due, in large part, to the success of the Perpetual Emigration Fund (PEF) however, in 1887 the Edmunds-Tucker Act forced the disincorporation of the PEF. The Edmunds-Tucker Act was federal legislation focused on restricting some practices, primarily polygamy, of the Church of Jesus Christ of Latter-day Saints. In 1890, 26 percent of the Utah population was foreign-born. For the next 100 years, the foreign-born share of Utah’s population fell consistently, finally reaching bottom at three percent in 1990. During the 1990s, both Utah and the nation experienced a rapid acceleration in immigration. By 2000, the share of the foreign-born population in Utah had grown to seven percent, and by 2015 to 8.2 percent. Nationally the foreign-born population—43.2 million individuals—was 13.5 percent of the U.S. population in 2015.

Number of foreign-born in Utah. Utah had a wave of immigration during the last half of the 19th century, followed by many decades of sluggish or declining numbers of the foreign-born. Surprisingly, the absolute number of foreign-born individuals in Utah of 54,803 in 1890 exceeded the number of foreign-born in 1990 of 51,686 (see Figure 7). But during the 1990s, the foreign-born population in Utah tripled, reaching 156,000 by 2000. The number of foreign-born individuals continued to increase over the next 15 years, and by 2015 was approaching a quarter of a million people, almost five times higher than in 1990.

Figure 8
Numeric Increase in Foreign-born Population in Utah by Decade



Source: U.S. Census Bureau, Resident Population and Apportionment of U.S. House of Representatives and U.S. Census Bureau, Immigration and Naturalization Service.

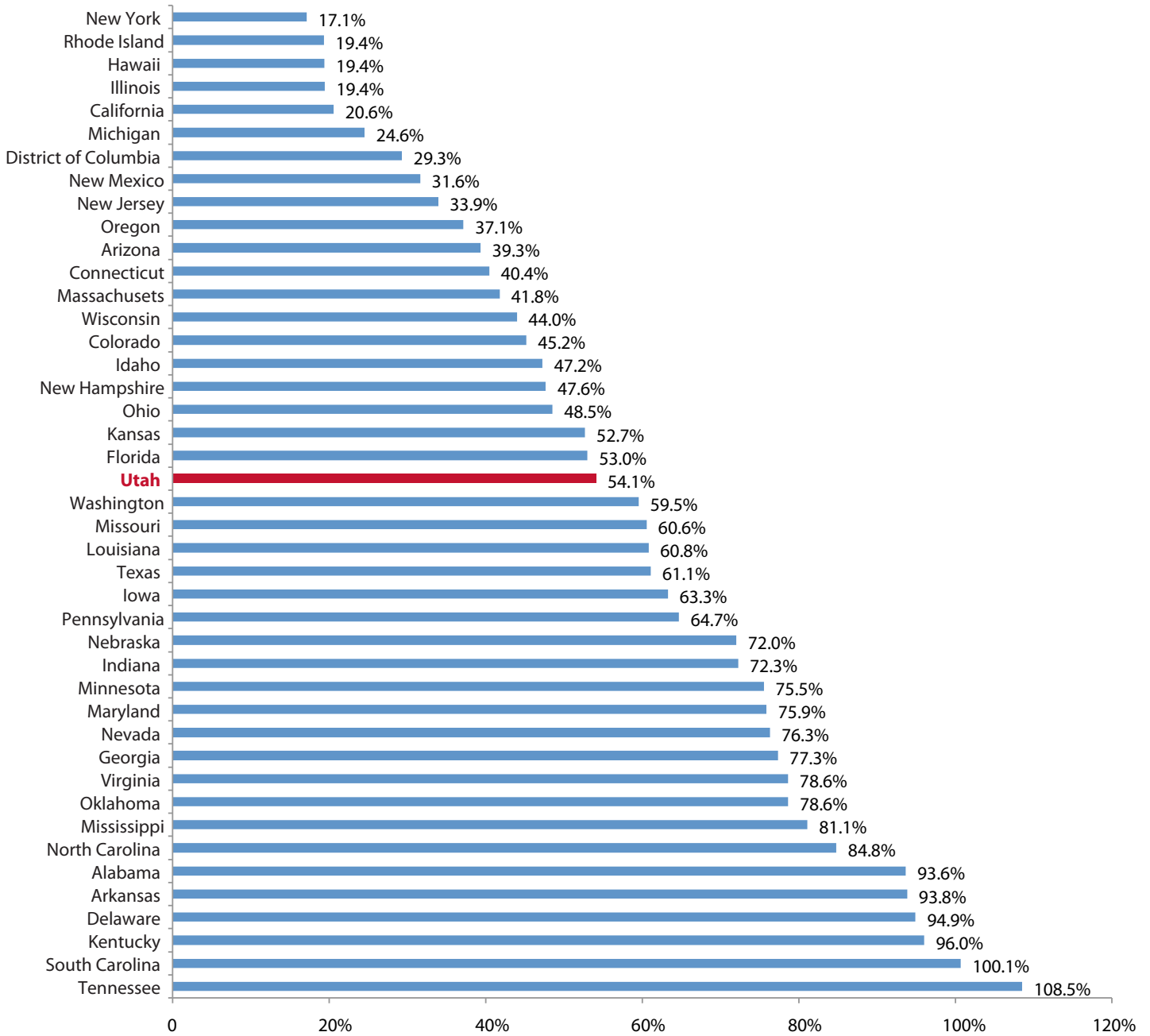
Numeric Increase of foreign-born persons. Measuring the change in the number of foreign-born individuals by decade shows that the 1990s were far and away the period of the greatest immigration in Utah’s history. There was no gradual lead-up to the record setting decade but rather a sudden surge in migration experienced in Utah as well as nationally and globally. During this historic era, the number of foreign-born in Utah increased by nearly 105,000 persons over the decade, a striking contrast to previous decade of the 1980s when the foreign-born population declined by nearly 7,000 (see Figure 8).

For much of the twentieth century, Utah’s immigration history was one of decline. For four decades, from 1910 to 1950, the number of foreign-born individuals fell in each decade, most precipitously in the 1930s when the number of foreign-born dropped by almost 18,000, undoubtedly due to high levels of unemployment during Great Depression.

During the 2000-2010 decade, the growth of the foreign-born population decelerated from the record 1990s but did nevertheless chalk up an increase of 66,000, the second highest increase for any decade in the state’s history. Data for the first half of the decade suggest that growth will shrink a bit in the 2010-2020 decade; probably to less than 50,000 foreign-born individuals.

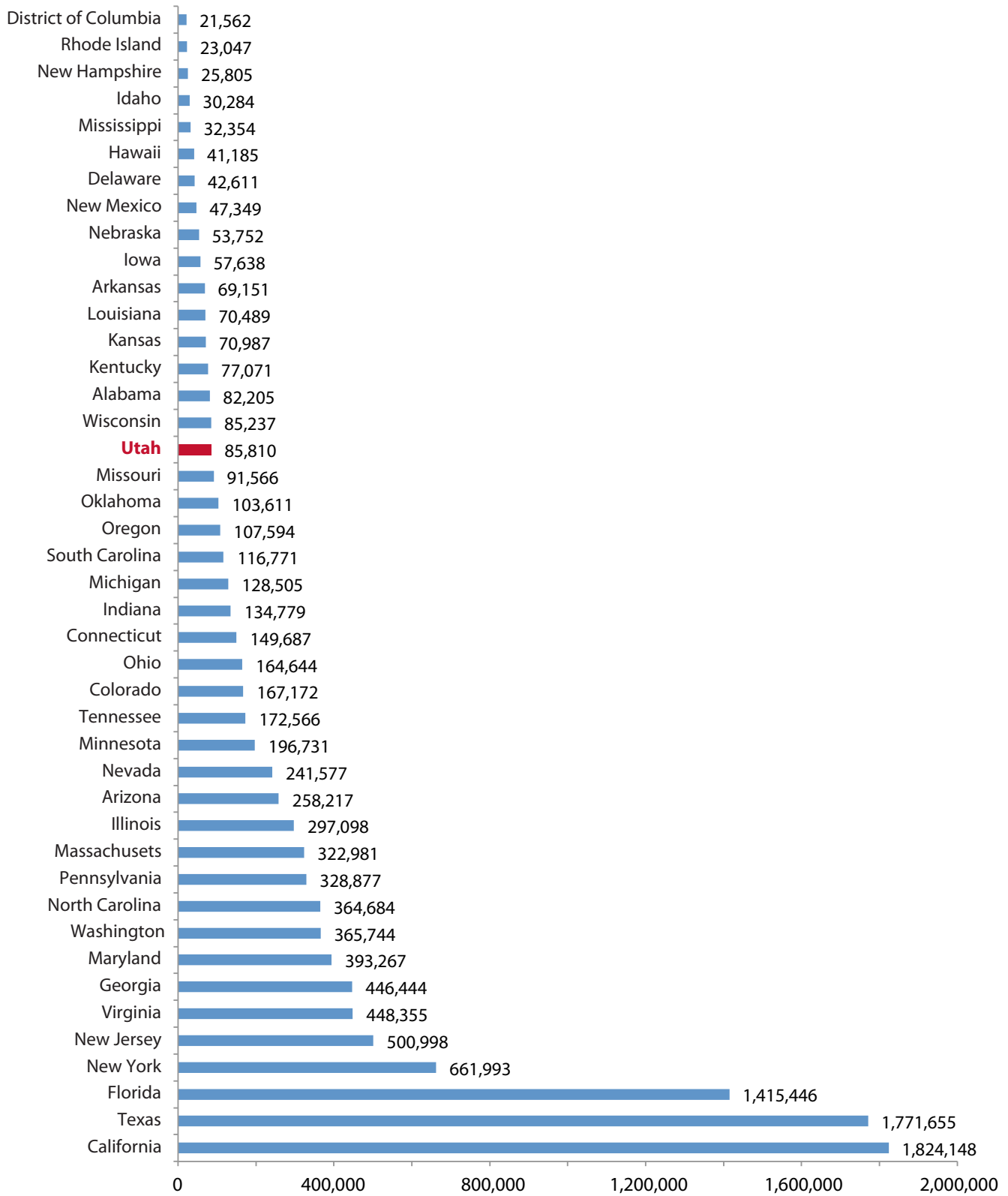
Utah compared to other states. Since 2000, the foreign-born population in Utah has increased by 54 percent. The state ranks “in the middle of the pack” at 23rd among all states in the percent increase of foreign-born persons since 2000, just ahead of Florida and behind Washington (see Figure 9). Utah’s numeric increase in foreign-born since 2000 of 85,800 ranks 27th

Figure 9
Percent Change in Foreign-born Population 2000-2015



*Does not include several states with insufficient data; Alaska, Montana, Wyoming, North Dakota, South Dakota, Vermont, Maine, and West Virginia.
 Source: U.S. Census Bureau.

Figure 10
Numeric Change in Foreign-born Population 2000-2015



*Does not include several states with insufficient data; Alaska, Montana, Wyoming, North Dakota, South Dakota, Vermont, Maine, and West Virginia.
 Source: U.S. Census Bureau.

Table 27
Foreign-born Workers in Utah by Industry, 2015

Industry	Foreign-born Workers by Industry	Total Employment	Foreign-born Share of Industry Employment
Agriculture*	14,385	20,550	70.0%
Manufacturing	31,430	123,725	25.4%
Professional, scientific, and administrative and waste management	20,690	174,885	11.8%
Accommodation and food services, arts and entertainment	20,532	140,465	14.6%
Health care and educational services	19,269	312,709	6.2%
Construction	18,953	85,856	22.1%
Retail Trade	14,846	158,723	9.4%
Finance and insurance, and real estate	7,265	79,723	9.1%
Other	7,265	39,178	18.5%
Transportation and warehousing & utilities	6,002	68,897	8.7%
Wholesale Trade	3,633	50,003	7.3%
Agriculture	3,001	5,447	55.1%
Public administration	2,843	77,178	3.7%
Information	2,053	35,777	5.7%
Total	172,167	1,373,116	12.5%

*Farm employment estimate is U.S. Dep from U.S. Department of Agriculture, Census of Agriculture 2012. Share of farm workers foreign-born taken from national statistics. Source: U.S. Census Bureau, American Community Survey Table S0501, and Utah Department of Workforce Services.

among all states (see Figure 10). Compared to Utah, Colorado has had about twice the numeric increase in foreign-born, and Nevada and Arizona have each had about three times the numeric increase. So, while recent immigration trends in Utah have been historic for Utah, some comparable western states have had higher rates of relative and absolute growth in the foreign born population.

Immigration, employment opportunities, and labor supply.

It is no coincidence that the two decades with highest rates of foreign-born population growth in Utah—the 1970s with an annual growth rate of 6.3 percent and the 1990s with an annual growth rate of 11.7 percent—are the same decades with high

rates of employment growth. The number of jobs in Utah during the 1970s increased by 54 percent, and in the 1990s by 49 percent, considerably higher than any of the other post World War II decades.

Immigration is a vital source of labor supply for Utah employers. Utah has nearly 172,200 foreign-born workers making up 12.5 percent of Utah’s workforce, slightly below the national rate of 16.7 percent

Some summary statistics of immigrants and the Utah workforce are below, see also Table 27: ^{11,12}

- Foreign-born workers make up seventy percent of those working in Utah’s agricultural sector (20,550).
- Thirty-one percent (14,400) of the foreign-born workers in agriculture are undocumented.
- There are 31,430 foreign-born workers in Utah’s manufacturing sector, one quarter of those employed in manufacturing.
- Fourteen percent (4,400) of the foreign-born manufacturing workers are undocumented.
- There are 19,000 foreign-born workers in construction, 22 percent of all construction workers.
- Eighteen percent (3,400) of the foreign-born construction workers are undocumented.
- There are 75,000 undocumented foreign-born workers in Utah, five percent of the Utah’s employed workforce and forty-four percent of all foreign-born workers.
- There were 100,000 undocumented foreign-born persons in Utah in 2015.

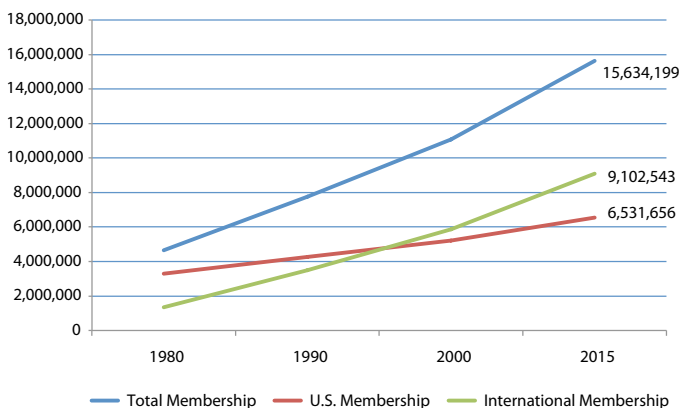
Any comprehensive deportation effort by the federal government to remove all unauthorized persons could cripple Utah’s agricultural industry with a loss of as many as 4,500 workers, almost one quarter of the farm workforce. The construction industry would also be seriously affected with the loss of 4,000 to 5,000 workers. These two industries are currently suffering from severe labor shortages. Deportation of just a portion of the undocumented workers would reduce output and increase prices for housing and food.

Table 28
Membership of the Church of Jesus Christ of Latter-day Saints

	1980	1990	2000	2015
Church Total Membership (all countries)	4,639,822	7,761,179	11,068,861	15,634,199
U.S. Membership	3,293,758	4,267,291	5,208,829	6,531,656
International Membership	1,346,064	3,493,888	5,860,032	9,102,543
International Membership as Percent Share	29%	45%	53%	58%

Source: Church of Jesus Christ of Latter-day Saints.

Figure 11
Membership of the Church of Jesus Christ of Latter-day Saints



Mormon Church membership and immigration. Without question, the Church of Jesus Christ of Latter-day Saints was a strong magnet for immigration during the second half of the 19th century. Has the Mormon Church played a similar role in the recent acceleration of immigration, which happens to coincide with the extraordinary international growth of the Mormon Church?

Table 29
Members of the Church of Jesus Christ of Latter-Day Saints In Latin America

	1980	1990	2000	2015	AAGR 1980-2015
Central America and Mexico					
Mexico	248,266	617,455	884,071	1,394,708	5.1%
Belize	0	1,101	2,701	5,152	NA
Costa Rica	4,942	15,795	31,127	46,116	6.6%
Dominican Republic	2,994	31,355	73,280	129,017	11.4%
El Salvador	14,884	38,125	86,758	122,799	6.2%
Guatemala	20,625	124,916	179,258	261,013	7.5%
Haiti	78	4,544	9,266	21,414	17.4%
Nicaragua	2,438	8,596	34,791	92,152	10.9%
Panama	2,716	20,355	37,133	51,818	8.8%
Total Central America and Mexico	296,943	861,141	1,335,684	2,119,037	5.8%
Total South America	396,032	1,359,309	2,548,991	3,905,136	6.7%
Total Latin America	692,975	2,220,450	3,884,675	6,024,173	6.4%

Source: Church of Jesus Christ of Latter-days Saints.

Table 30
Percent of Foreign-born Population in Selected Western States from Mexico and Central America, 2015

	Mexico	Central America	Combined
Utah	42.3%	6.8%	49.1%
Arizona	57.6%	2.9%	60.5%
California	40.0%	8.2%	48.2%
Colorado	44.1%	5.1%	49.2%
Nevada	40.4%	9.3%	49.7%
Oregon	37.2%	4.1%	41.3%
Washington	24.5%	3.5%	28.0%

Source: U.S. Census Bureau, American Community Survey, Table B05006.

As recently as 1980, seventy percent of the membership of the Mormon Church was living in the U.S. At the time, the Mormon Church was a predominantly U.S. church with membership concentrated in Mountain West and Pacific States. Twenty years later, over half the membership was living outside the U.S. (see Table 28 and Figure 11). During this 20 year period, no other region of the world experienced a greater increase in Mormon membership than Latin America (Central America, Mexico, and South America). Latin American membership increased by almost 1.7 million from 1980 to 2000. Today the Latin American membership of 3.9 million is almost eight times higher than it was in 1980, and the region now makes up about 40 percent of the Mormon Church membership (see Table 29).

Has this international growth in the Mormon Church been a key factor in immigration to Utah? As mentioned above, Utah ranks 23rd among all states in the relative increase in foreign-born persons. It's "middle of the pack" ranking does not indicate an unusually high rate of immigration or suggest that religious affiliation is a major driver of immigration. But what about the composition of the foreign-born? While the relative increase in foreign-born might be close to typical growth, is the composition of immigrants heavily concentrated among countries where there has been rapid growth in Mormon Church membership?

A comparison of the share of foreign-born population from Mexico and Central America does not show that Utah's composition of Mexican and Central American immigrants is unusual or atypical. Forty-nine percent of Utah's foreign-born population in 2015 was from Mexico and Central America, very close to the shares in California, Colorado, and Nevada (see Table 30). Hence, the composition of the foreign-born in Utah does not indicate that the Mormon Church has played an outsized role, at least with respect to immigration from Mexico and Central America.

Table 31
Place of Birth for Foreign-born in Utah, 2015

	Number of Persons	% Share
Europe	22,758	9.3%
Asia	48,888	20.0%
Africa	8,416	3.4%
Oceania	8,306	3.4%
Mexico, Central America, Caribbean	124,447	50.9%
South America	23,519	9.6%
North America	8,079	3.3%
Total	244,413	100.0%

Source: U.S. Census Bureau, American Community Survey, Table B05006.

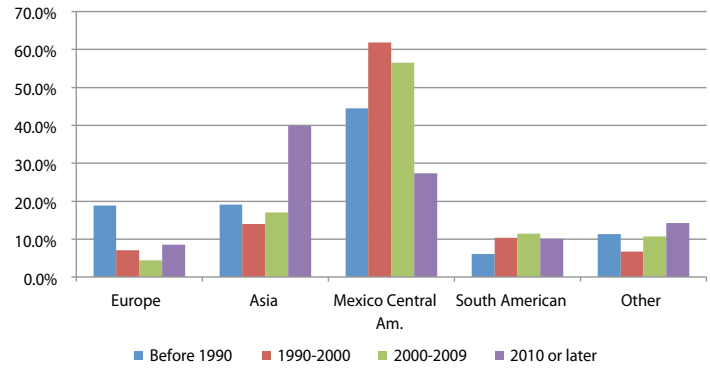
It's worth looking at some other countries to see if the data suggest a causal relationship between immigration to Utah and the Mormon Church. Brazil, Chile, Peru, and the Philippines all have over 500,000 members of the Church of Jesus Christ of Latter-day Saints, at least five percent of the Mormon Church's international membership per county.

Do immigrants from these countries have a disproportionate share of Utah's foreign-born population? Immigrants from the Philippines represent three percent of Utah's foreign-born population, while those from Brazil, Peru, and Chile each represent about 1.5 percent of the state's foreign-born population. Compared to six other western states, Utah's share of immigrants from the Philippines is far lower than California, Nevada, and Washington. Filipinos account for 14 percent of the foreign population in Nevada and about eight percent in California and Washington. In the other three states, Arizona, Colorado, and Oregon, Filipinos have about three percent of the foreign-born population—very similar to Utah's share.

In the case of the three South American countries, Brazil, Peru, and Chile, the emigrant share of the foreign-born population in Utah is above the share in the selected western states. In the other western states, the immigrants' share is only around one-half of one percent, a somewhat smaller share than Utah. Utah's disproportionate share suggests that, at least for Brazilian, Chilean, and Peruvian members of the Church of Jesus Christ of Latter-day Saints, their church membership probably increases the likelihood of immigration to Utah.

Despite the experience of Brazil, Chile, and Peru, which suggest church membership may be an immigration magnet, it would be hard to conclude from the U.S. Census "place of birth" data that the international membership of the Mormon Church has led to significantly higher rates of immigration to Utah. Given the immigration patterns of those from Mexico, Central America, and the Philippines, it seems employment opportunity is a stronger immigration magnet than religious affiliation.

Figure 12
Percent of Foreign-born in Utah by Date of Entry, 2015



Source: U.S. Census Bureau, American Community Survey Table B05007, 2015.

Table 32
Economic Contribution of Foreign-born Population in Utah

	Amount
Total Immigrants (2016)	251,630
Income	\$5.2 billion
Taxes	\$1.2 billion
State & Local Taxes	\$410.3 million
Federal Taxes	\$784.8 million
Spending Power	\$4.0 billion
Employment at Immigrant Firms	31,200
Undocumented Immigrants (2016)	106,300
Income	\$1.4 billion
Taxes	\$143 million
State & Local Taxes	\$56.6 million
Federal Taxes	\$86.8 million

Source: New American Economy, Map the Impact.

Country of Origin

Half of all foreign-born individuals in Utah are from Mexico, Central America, and the Caribbean, with Mexico accounting for an 85 percent share of the individuals from this region (see Table 31). Asians have the next largest share at 20 percent, while Europeans—the most important source of immigration during the 19th century—now represent only nine percent of Utah's foreign-born.

From 1990 through 2009, about 60 percent of Utah's foreign-born population came from Mexico and Central America, but since 2010 the composition has shifted in favor of Asia (see Figure 12). Since 2010, the percent of new immigrants from Mexico and Central America has fallen by half, while the percent from Asia has more than doubled. No one Asian country

dominates the nearly 49,000 Asian immigrants. China, India, and the Philippines each account for about 15 percent of the Asian foreign-born population.

Economic contribution of immigrants. The recent release of Map the Impact by the New American Economy provides estimates on the economic contribution of the foreign-born population in every state. The New American Economy is a nonprofit organization made up of 500 Republican, Democratic and Independent mayors and business leaders who support immigration reform. The organization has seven co-chairs including William Marriott, Chairman of the Board of Marriott Corporation, Robert Iger, CEO of Disney, and Michael Bloomberg, former mayor of New York City. The Map the Impact data for Utah show that the state’s foreign-born population has income of \$5.2 billion, pays \$1.2 billion in taxes, and own firms that employ 31,200 people. Utah’s undocumented foreign-born population totals 106,300 in 2016, earns \$1.4 billion in income, and pays \$143 million in taxes. The income of foreign-born workers makes up nine percent of the total earnings of all workers in Utah and, as shown above, the 172,200 foreign-born workers amount to one out of every eight workers in the Utah economy.

Other Flows of People: Refugees, International Travelers and International Students.

Immigration involves only one aspect of the cross-border flows of people linked to globalization. The unprecedented flight of refugees, the record number of international travelers, and the growing number of international students in the U.S. and abroad are also part of the globalization story

Refugee resettlement in Utah.

In the late 1970s, in response to the growing number of refugees from Southeast Asia, the U.S. Congress passed the Refugee Act of 1980. Since passage of this act, which was designed to provide a more flexible approach to the refugee problem, three million refugees have been resettled in the U.S. Sixty-five thousand of these resettled refugees live in Utah—2.2 percent of Utah’s population.

Two agencies, Catholic Community Services and the International Rescue Committee, coordinate the resettlement of refugees in the state. Over the past five years these two agencies have resettled an average of 1,130 refugees annually, 1.4 percent of the approximately 80,000 refugees admitted to the U.S. each year (Pew Research). Of the 5,700 refugees resettled in Utah since 2012, half are refugees from countries on President

Table 33
Home Country of Refugees Resettled in Utah 2012-2016

Somalia	1,236
Iraq	1,146
Burma	827
Congo	598
Bhutan	591
Sudan	297
Afghanistan	199
Eritrea	169
Iran	145
Burundi	99
Syria	84
Other	268

Source: Utah Department of Workforce Services.

Table 34
International Passengers, Salt Lake City International Airport

Year	Deplaned	Enplaned
2008	224,561	228,663
2009	215,914	215,390
2010	236,603	237,754
2011	210,738	210,200
2012	178,841	181,437
2013	181,589	173,806
2014	184,752	185,864
2015	281,919	275,725
2016*	295,846	N/A

*First three quarters of 2016.

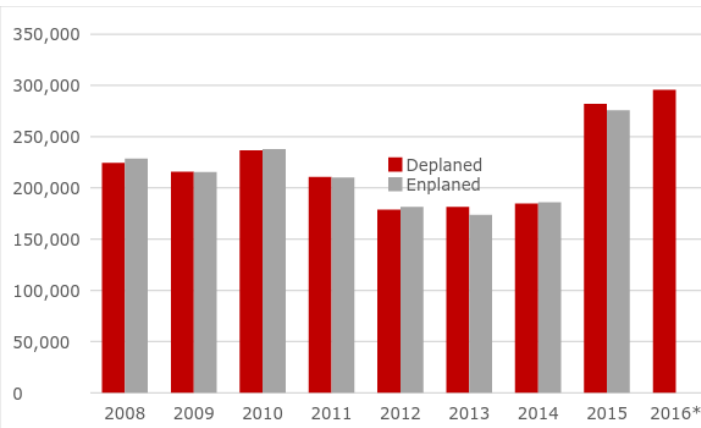
Note: In 2015 Delta Airlines added nonstop international flights to London, and Amsterdam.

Trump’s list of banned refugee countries: Somalia, Sudan, Iran, Syria, Libya, and Yemen (see Table 33).

The ban of refugees is aimed at reducing the threat of a terrorist attack. Although Utah has accepted several thousand refugees from these countries, the state has never had a terrorist incident perpetrated by a refugee from any country. This positive history with refugees accounts for Utah’s continued support and acceptance of resettlement programs. As Governor Herbert said in his 2017 inaugural speech, “Utah has always been a very welcoming state for refugees, for immigrants. We appreciated the diversity they bring, and certainly they are part of the fabric of our state.”¹³

Today’s tragic refugee crisis—21.3 million refugees—is one of the largest cross-border movements of people in history. What seems to be an unending human tragedy has created, at least for some, the threat of terrorism that’s linked to globalization.

Figure 13
International Passengers Salt Lake City International Airport



Source: Kem C. Gardner Policy Institute Analysis of Salt Lake City International Airport Data

Table 35
International Skier Visits and Spending in Utah

Ski Season	International Skier Days	International Skier Direct Spending
2010/2011	287,200	\$67.3M
2012/2013	310,500	\$82.9M
2014/2015	276,300	\$62.7M
2015/2016e	312,000	\$90.9M

e = estimate
Source: Kem C. Gardner Policy Institute analysis of RRC Associates and Ski Utah data

International Travelers and Students

The growth of international tourism is yet another case of the acceleration of cross-border flows of people linked to globalization. From 2005 through 2014, international tourism worldwide (measured by arrivals) increased from 540 million tourists to 1.2 billion tourists, an annual growth rate of 8.3 percent. For the U.S., the number of international tourist rose from 43.3 million in 1995 to 75.0 million in 2014.

International travel to states and cities is more difficult to measure, since the travel statistics are based on “port of entry” by all modes of transportation. Therefore, an international traveler who visits Utah but does not deplane at the Salt Lake City International Airport is not included in the international travel statistics. This statistical shortcoming is partially offset by traveler data collected by the Salt Lake City International Airport, Ski Utah Association, and Utah’s national parks.

Deplaning data for the Salt Lake International Airport. The number of international passengers deplaning at the Salt Lake City International Airport reached an all-time high in 2016 of 295,846, one hundred thousand passengers more than in 2014

Table 36
Visits of International Travelers to National Parks in Utah

Utah National Parks	2015-All Visitors	2015-International Visitor Estimates	Percent Share International Visitors
Arches NP	1,399,247	292,545	20.9%
Bryce NP	1,745,804	479,295	27.5%
Canyonlands NP	634,607	89,209	14.1%
Capitol Reef NP	941,029	120,129	12.8%
Zion NP	3,648,846	917,118	25.1%
Total NP Visits	8,369,533	1,898,295	22.7%

Source: Kem C. Gardner Policy Institute Analysis of National Park Service data

Table 37
Utah Credit Card Spending Shares by Top International Market, 2012-2016

Year	Canada	Western EU & U.K.	China	Mexico	Australia	All Other Countries
2012	26.7%	25.0%	4.4%	4.5%	5.1%	34.3%
2013	25.4%	23.9%	6.6%	4.8%	4.5%	34.8%
2014	24.4%	25.5%	7.9%	5.0%	3.9%	33.3%
2015	19.3%	20.8%	9.4%	4.7%	3.3%	42.5%
2016 ^P	19.3%	25.3%	12.0%	4.2%	3.4%	35.8%

^P = preliminary

Note: Estimates are based on and extrapolated from aggregate depersonalized card usage data provided for the calendar years of 2012 to 2016.
Source: Kem C. Gardner Policy Institute analysis of VisaVue® Travel data.

(see Table 334). This sudden and sizeable jump in international deplanings is almost entirely due to the addition by Delta Airlines of nonstop flights from Salt Lake to London and Salt Lake to Amsterdam.

International skier visits. In the 2015-2016 season, international skiers set a record for skier days. The 43,000 international skiers accounted for 312,000 skier days, seven percent of the market (see Table 35). This record number of international skiers and skier days contributed to the historic 2015-2016 season as the industry reported 4.4 million skier days, well above the previous record of 4.2 million days set five years earlier (Ski Utah Utah Ski & Snowboard Association). The 43,000 international skiers visiting Utah in 2015-2016 spent \$90.9 million in Utah.

International visitors to National Parks in Utah. Another measure of the extent of international travelers in Utah is visits to the state’s five national parks. In 2015, nearly one out of every four visitors to a national park in Utah was an international traveler (see Table 36). International visitors accounted for 1.9 million of the 8.4 million visits to the national parks in Utah. The most popular park was Zion National Park with 917,100 international visitors in 2015.

Table 4338
Enrollment of International Students at Utah’s Institution
of Higher Education

(public colleges and universities)

	International Students	FTE Annualized Enrollment	% Share
2005-2006	4,285	100,713	4.3%
2006-2007	3,589	98,824	3.6%
2007-2008	3,599	99,939	3.6%
2008-2009	6,756	103,617	6.7%
2009-2010	5,501	114,106	5.5%
2010-2011	6,539	121,013	6.5%
2011-2012	6,985	122,720	6.9%
2012-2013	7,963	120,339	7.9%
2013-2014	8,060	116,350	8.0%
2014-2015	7,253	116,618	7.2%
2015-2016	7,794	NA	---

Source: Utah System of Higher Education Data Book.

Top international markets. Credit card data for 2016 show the top markets for international travelers to Utah were Europe and the U.K. with a 25 percent share, followed by Canada, China, Mexico, and Australia (see Table 37). Europe and the U.K. consistently make up 40 to 50 percent of the spending by international travelers in Utah.

Although the international travel data for Utah are incomplete, the available data—deplaning of passengers, skier days, and visits to national parks—show that increased international travel to the state, a feature of globalization, gives a significant economic boost to Utah’s travel industry.

International Students. There are unmistakable signs of globalization on every university and college campus in Utah. The most recent data from the Utah System of Higher Education show that seven percent of the 116,600 students enrolled in the system (FTE annualized enrollment) are international students (see Table 38). At the University of Utah, the student body is ten percent international students, by far the highest percentage share of any public institution in Utah. One in four international students at the University of Utah are from China. Foreign students at BYU make up four percent (1,350 students) of the student body.

The presence of international students on university and college campuses is only half the story of globalization and higher education. Many of Utah institutions of higher education, including BYU, have well-developed learning abroad/study

abroad programs with hundreds of participants annually. Some examples of programs offered in 2017 include Environmental and Sustainability Studies in Costa Rica, Global Public Health in Ghana, Intensive Japanese Language in Japan, Asia Pacific Business, African Culture and Geography: Mozambique, Zambia, Botswana, and Namibia. BYU’s unofficial motto “the world is our campus” typifies the mission of all the study abroad programs in Utah.

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