

Seeing the light: The industry is projected to benefit from continued renovation and retrofiting

IBISWorld Industry Report 23821 Electricians in the US

July 2019

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About this Industry

Industry Definition

This industry performs electrical work at a site and services, sells and installs electrical equipment. The electrical

services performed include new work, additions, alterations, maintenance and repairs.

Main Activities

The primary activities of this industry are

Electric light or power installation

Electric wiring installation on construction projects

Repair or maintenance of electrical wiring (except of electricity transmission or distribution lines)

Domestic exhaust fans installation

Closed-circuit video surveillance systems installation

Communication wiring and cabling installation

Repairs and maintenance of communication and electrical equipment

The major products and services in this industry are

Electric power and systems installation and servicing

Electronic control system installation and servicing

Fire and security system installation and servicing

Highway, street, or bridge lighting and signal installation and servicing

Telecommunications installation and servicing

All other services

Similar Industries

23713 Transmission Line Construction in the US

Businesses in this industry install, maintain and repair electricity and communication transmission lines, towers and power plants.

23816 Roofing Contractors in the US

Businesses in this industry install and repair concrete, metal and ceramic roofing.

23829 Elevator Installation & Service in the US

Businesses in this industry install and service building equipment such as elevators, revolving doors, escalators and lighting protection equipment.

44311 Consumer Electronics Stores in the US

Businesses in this industry sell new appliances, electrical goods and home entertainment products such as dishwashers, TVs and computers.

81121 Electronic & Computer Repair Services in the US

Businesses in this industry repair consumer electronic equipment, computers, office machines, communication equipment and other electronic and precision equipment.

81141 Appliance Repair in the US

Businesses in this industry repair household-type appliances such as window air conditioners, clothes dryers, washing machines, ovens and refrigerators.

About this Industry

Similar Industries continued

23822a Heating & Air-Conditioning Contractors in the US

Businesses in this industry install and service heating, ventilation, air conditioning (HVAC) and refrigeration equipment.

23822b Plumbers in the US

Businesses in this industry install and maintain plumbing fixtures, fittings and equipment.

Additional Resources

For additional information on this industry

www.bls.gov

Bureau of Labor Statistics

www.ecmweb.com

Electrical Construction and Maintenance (EC&M)

www.ieci.org

Independent Electrical Contractors

www.ibew.org

International Brotherhood of Electrical Workers

www.necanet.org

National Electrical Contractors Association

IBISWorld writes over 1000 US industry reports, which are updated up to four times a year. To see all reports, go to www.ibisworld.com

Industry at a Glance

Electricians in 2019

Key Statistics Snapshot

Revenue

\$179.8bn

Annual Growth 14–19

2.6%

Annual Growth 19–24

2.1%

Profit

\$9.9bn

Wages

\$58.6bn

Businesses

208,452

Market Share

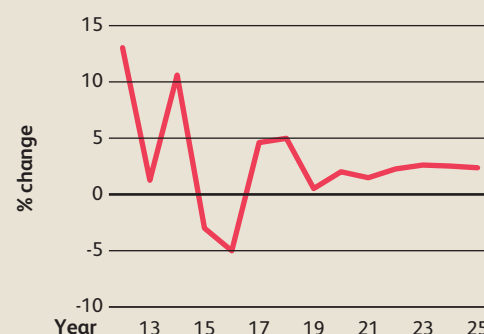
There are no major players in this industry

p. 23

Revenue vs. employment growth



Value of private nonresidential construction



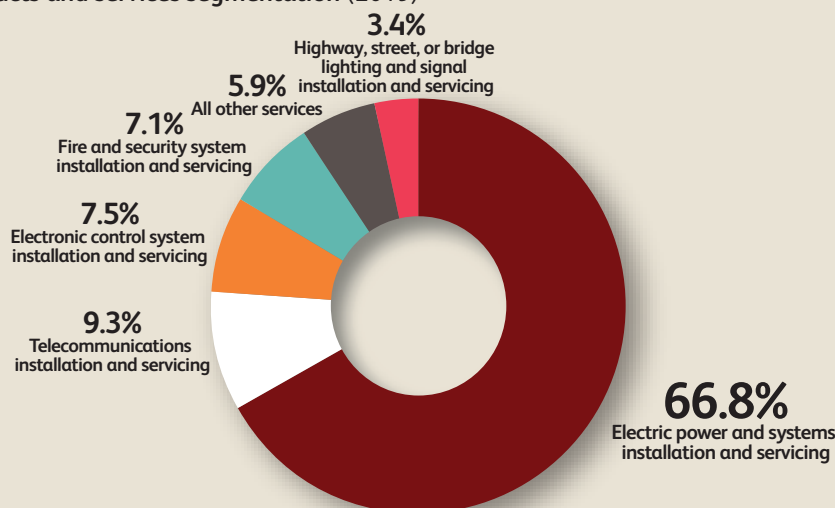
SOURCE: WWW.IBISWORLD.COM

Key External Drivers

Value of private nonresidential construction
Per capita disposable income
Value of residential construction
Access to credit
Housing starts
Private investment in manufacturing structures

p. 5

Products and services segmentation (2019)



SOURCE: WWW.IBISWORLD.COM

Industry Structure

Life Cycle Stage	Mature	Regulation Level	Heavy
Revenue Volatility	Low	Technology Change	Medium
Capital Intensity	Low	Barriers to Entry	Low
Industry Assistance	Low	Industry Globalization	Low
Concentration Level	Low	Competition Level	High

FOR ADDITIONAL STATISTICS AND TIME SERIES SEE THE APPENDIX ON PAGE 29

Industry Performance

Executive Summary | Key External Drivers | Current Performance

Industry Outlook | Life Cycle Stage

Executive Summary

Over the past five years to 2019, the Electricians industry has posted strong growth supported by new construction activity and an uptick in renovations. Industry operators generate a large portion of revenue from electrical system installations in new residential and nonresidential structures, as well as from repair, retrofit and maintenance work. As the general level of economic activity has increased and interest rates have remained low over the past five years, developers, home builders and business owners have pursued many construction projects that require electrical work, benefiting the

services from corporations and individuals alike. Currently, an estimated 68.7% of industry revenue is generated through nonresidential construction projects, which include construction work on industrial buildings, commercial buildings, office buildings and institutional, educational and civic facilities. As a result, the number of enterprises, establishments and employees has trended upward over the past five years despite a continued shortage of skilled labor. The average industry profit margin has also grown over the five years to 2019.

Over the five years to 2024, the Electricians industry is expected to continue growing, albeit at a slower pace. Uncertainty surrounding interest rates is anticipated to result in decelerated growth for the value of residential construction. Conversely, growth in the value of nonresidential construction is anticipated to accelerate, aided by increased investment in manufacturing structures. In addition, the industry is projected to benefit from continued renovation and retrofitting activity, particularly green upgrades, such as energy-efficiency projects. Nevertheless, anxiety over skilled labor shortages will persist over the next five years, possibly delaying or limiting industry productivity. Overall, industry revenue is forecast to increase at an annualized rate of 2.1% to \$199.5 billion in 2024.

The number of enterprises, establishments and employees has trended upward

industry. Overall, IBISWorld estimates revenue for the Electricians industry to increase at an annualized rate of 2.6% to \$179.8 billion over the five years to 2019, including growth of 1.5% in 2019 alone.

Demand for nonresidential and residential construction projects has been high during the period due to low interest rates and access to credit. In addition to growth in per capita disposable income and corporate profit, rising demand for construction projects requiring electrical work has boosted demand for industry

Key External Drivers

Value of private nonresidential construction

The value of private nonresidential construction includes expenditure on office buildings, hospitals, factories, power plants, mining shafts, communication lines, farms, railroads, schools, brokers' commissions and net purchases of used structures. Facility electrical systems, security and fire systems, telecommunication systems and site utility control jobs are contracted out

to electricians. In 2019, the value of private nonresidential construction is expected to increase, presenting a potential opportunity for the industry.

Per capita disposable income

This driver measures the personal income available to individuals for spending or saving. An increase in per capita disposable income drives demand for electrical services since it financially enables individuals to undertake

Industry Performance

Key External Drivers continued

upgrades and repairs. In 2019, per capita disposable income is anticipated to increase.

Value of residential construction

This driver measures investment in private residential structures. An increase in residential construction increases demand for the Electricians industry, since electrical services are often a component of construction. In 2019, the value of residential construction is anticipated to decrease, presenting a potential threat for the industry.

Access to credit

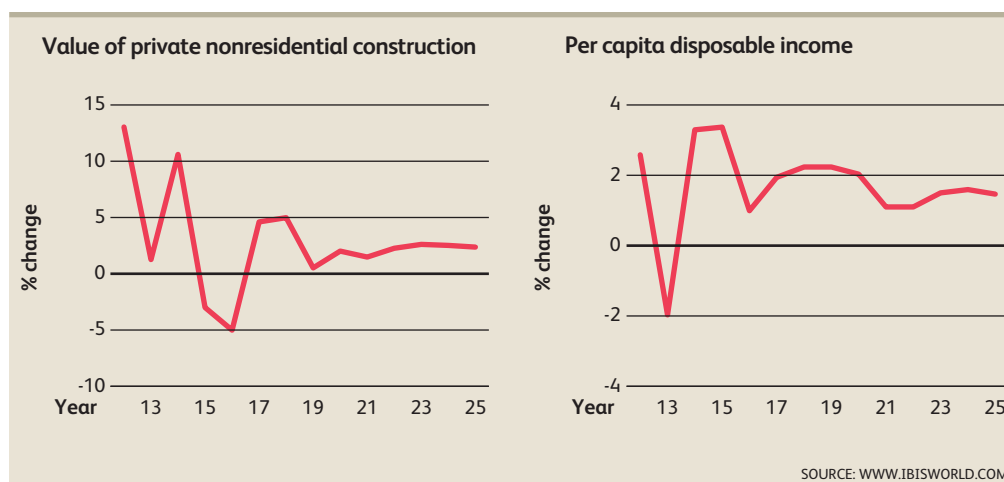
Access to credit refers to the borrowing capacity advanced by a commercial bank to an individual, business or organization in the form of loans, cash credit and overdrafts. Credit enables households to borrow against future income and companies to invest in machinery and equipment. Access to credit increases the pool of individuals and companies willing to invest in repairs and new construction, which require electrical work. In 2019, access to credit is expected to increase.

Housing starts

This driver measures the number of new, privately owned housing units started in a given year. These include both single-unit and multi-unit developments. All new construction projects require the installation of electric power systems and thus support demand for industry operators. Small companies and nonemployers are generally hired for smaller projects and single-family units, while large contractors benefit from larger multi-unit developments. Housing starts are expected to increase in 2019.

Private investment in manufacturing structures

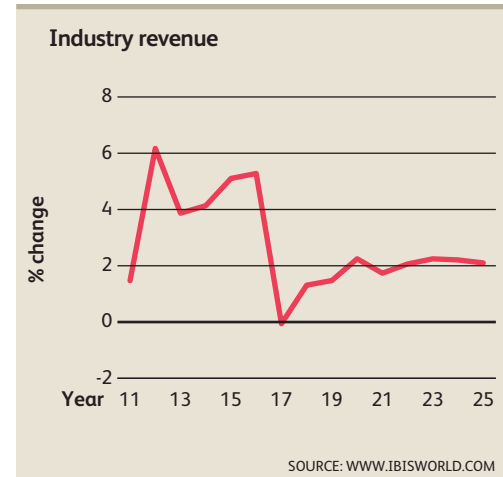
This driver represents the total annual expenditure by businesses on structures related to manufacturing in the United States. Manufacturing and commercial clients represent a significant market segment for the Electricians industry. Increased investment in these structures drives demand for the industry, since electrical services constitute a type of such investment. In 2019, private investment in manufacturing structures is estimated to increase.



Industry Performance

Current Performance

The Electricians industry includes operators that service, sell and install electrical equipment and perform electrical work at a site. They execute new work, additions, alterations and maintenance and repairs. This industry has performed strongly over the past five years, with revenue growing at an annualized rate of 2.6% to \$179.8 billion in 2019 and estimated growth of 1.5% in 2019 alone. Growth in important downstream construction markets and low interest rates combined with increasing per capita disposable income and access to credit has driven revenue acceleration during the five-year period.



Construction markets driving demand

Over the five years to 2019, per capita disposable income has increased an annualized 2.2%, driven by declining unemployment and wage growth during the five-year period. In addition, access to credit has grown an annualized 5.6%. Access to credit over the past five years has been supported by low interest rates and improving economic conditions, which increased the quality of loan portfolios held by banks and encouraged greater lending. This trend drove construction activity, as businesses and individuals took advantage of lower borrowing costs due to low interest rates and higher lending activity.

Nonresidential building construction constitutes the largest market for industry services, accounting for 68.7% of industry revenue in 2019. This segment includes construction projects for commercial and industrial buildings, hotels, office buildings and civic, institutional and public safety facilities. Over the five years to 2019, the value of private nonresidential construction is estimated to increase at an annualized rate of 0.3%, driving demand for the industry's largest downstream market. Low interest rates, growing corporate profit and higher

consumer spending have encouraged commercial businesses and institutions to invest in new construction, repairs and system upgrades.

Although it constitutes a smaller share of revenue, private residential construction has also played an important role in driving growth for the Electricians industry. Increasing per capita disposable income and low interest rates have encouraged both individuals and developers to borrow for spending on home improvements, renovations and new construction. Over the past five years, the value of residential construction is estimated to have increased an annualized 3.5%. The number of new housing starts, which has grown an annualized 5.0% over the five years to 2019, has been a major contributor to residential construction growth. Both residential and nonresidential construction projects typically require the services of an electrical contractor and are, therefore, vital to driving industry demand. Residential projects are especially important for smaller electrical contractors, which are better suited to the smaller scale of this work.

Industry Performance

Industry participation and labor shortage

As a result of growing demand for industry services, the number of industry enterprises is anticipated to grow an annualized 0.9% to 208,452 companies over the five years to 2019. Nonemploying operators are expected to constitute the majority of new enterprises entering the industry during the five-year period.

These contractors, estimated to account for 65.2% of total enterprises, can flexibly enter and exit the industry depending on the level of demand for electrical services. The growing number of enterprises has driven an increase in the number of industry employees. Over the five years to 2019, the number of industry employees is estimated to increase an annualized 3.4% to 1.0 million electricians.

Nevertheless, employment growth has not kept up with the rate of retirement, which has contributed to continued anxiety among industry operators over a skilled labor shortage. According to the State of the Industry report published by Klein Tools, the shortage of skilled

The growing number of enterprises has driven an increase in the number of industry employees

electricians continues to cause concern for 70.0% of contractors surveyed. As a result, electricians are working to support the future of the trade and encourage more young people to pursue careers as electricians. According to the Klein Tools report, 46.0% of electricians have mentored or trained apprentices or students voluntarily. Apprenticeship programs are critical to shaping a skilled workforce since they provide valuable on-the-job experience. Additionally, classroom training constitutes a significant portion of industry instruction and web-based programs have become more common to attract new students through greater flexibility.

Going green and profit

Many businesses have opted for energy conservation and efficiency to reduce recurring costs over the past five years, leading to growing demand for the installation of green electrical systems. Energy management systems that automatically adjust lighting and climate controls based on the occupancy of a room or building are typically relatively inexpensive to implement. Furthermore, the US Green Building Council's Leadership in Energy and Environmental Design (LEED) Green Building Rating System is heavily geared toward improving electrical efficiency. According to the National Electrical Contractors Association, more than 40.0% of LEED certification standards concern work performed by

electrical contractors. Consequently, the growing popularity of LEED certification among building owners will continue to provide industry operators with a sustained source of demand.

Average industry profit, measured as earnings before taxes and interest, is expected to reach 5.5% of total revenue in 2019, up from 4.8% in 2014. Increasing demand and an expanded pool of customers have alleviated the level of price competition, enabling industry operators to land larger contracts and improve their profit margins. However, this benefit has been somewhat offset by increases in total wage expenditure, as operators have had to compete in a tight labor market for skilled employees.

Industry Performance

Industry Outlook

Steady though slowed, growth in the US construction market is set to continue driving revenue growth for the Electricians industry over the five years to 2024. Higher interest rates and saturating demand for construction are expected to result in slowing overall construction activity, which is expected to translate to lower demand for the Electricians industry over the next five years. Nonetheless, particularly solid growth in the value of nonresidential

construction, access to credit and investment in manufacturing structures is anticipated to drive revenue growth for the Electricians industry. In addition, the increasing complexity of electrical systems and the growing emphasis on energy efficiency will create new opportunities for industry expansion, also contributing to revenue growth. Overall, IBISWorld projects industry revenue to increase at an annualized rate of 2.1% to \$199.5 billion in 2024.

Decelerated construction growth

Private residential and nonresidential construction markets will continue to be the primary determinants of growth for the Electricians industry. Over the next five years, growth in the value of nonresidential construction activity is anticipated to accelerate, while the value of residential construction activity is expected to decelerate. Since nonresidential construction activity accounts for the largest share of industry revenue, growth in this important downstream market will provide opportunities for industry operators moving forward.

Private nonresidential construction, which accounts for the bulk of industry revenue, is anticipated to increase at an annualized rate of 2.2%, driving demand for electrical contractor services in commercial and industrial building projects. Besides new construction, renovation and retrofitting activity will also continue to support the Electricians industry. Necessary maintenance work in commercial buildings is particularly important for industry revenue due to the high value of these contracts. As the number of new commercial construction projects rises over the next five years, the pool of maintenance contracts is also expected to increase, benefiting industry revenue. The yet-to-be ratified trade agreement, known as the United States-Mexico-Canada Agreement (USMCA), is

Growth in nonresidential construction will provide opportunities for industry operators

intended to encourage US companies to keep their manufacturing operations domestic; however, the effects of the agreement remain to be seen. Thus, this agreement has the potential to positively influence the level of private investment in manufacturing structures and demand for electrical services. Private investment in manufacturing structures is expected to grow an annualized 2.4% over the next five years. However, recent uncertainty surrounding interest rates has the potential to slow this growth.

Meanwhile, the value of residential construction is anticipated to rise at a forecast annualized rate of 0.6% over the five years to 2024. Increased interest rates will likely lower demand for housing. Typically, higher interest rates increase the cost of borrowing; therefore, weighing on demand for new mortgages and investment in residential construction projects. In addition, uncertainty about whether the federal reserve will continue to increase interest rates or even lower them is also

Industry Performance

Decelerated construction growth continued

contributing to slowed growth projections. The uncertainty has led many investors and individuals to adopt a wait-and-see approach.

Technological change

Increasing complexity and technological change in computer and communication systems combined with efforts to boost energy efficiency will drive further investment in electrical system updates and maintenance. The rise in per capita disposable income is anticipated to spur the popularity of home automation and the integration of the Internet of Things (IoT) into daily life. This technology involves remote and automatic control of a home's lighting, appliances, heating and air conditioning, entertainment and security

The adoption of new technologies is projected to support the industry

systems. The increasing use and storage of large data sets will continue to drive demand for electrical contractors with expertise in maintaining and repairing large data storage systems. The adoption of these technologies is projected to support the industry over the five years to 2024.

Industry structure and profit

Apprenticeship training, the industry's primary method for boosting a pool of skilled labor, generally fluctuates in line with building activity. During periods of declining industrial demand, fewer people begin apprenticeship programs, which typically take four years to complete. As a result, the pool of fully trained electricians is too small when periods of higher demand arise. High retirement rates among older industry operators have added to this shortage. It is likely that the labor shortage will constrain industry activity as contractors find it difficult to expand their staff with suitably qualified labor at the same pace as demand.

Over the next five years, the average industry profit margin is expected to remain steady. In 2024, profit, measured as earnings before interest and taxes, is forecast to account for 5.5% of revenue. In addition, IBISWorld estimates the number of industry enterprises will increase an annualized 1.4% to reach 223,824 operators in 2024. Industry employment is forecast to increase at an annualized rate of 2.2% during the five-year period to reach 1.1 million employees in 2024, although there is still expected to be a deficit between the number of electricians in demand and those available to provide skilled services.

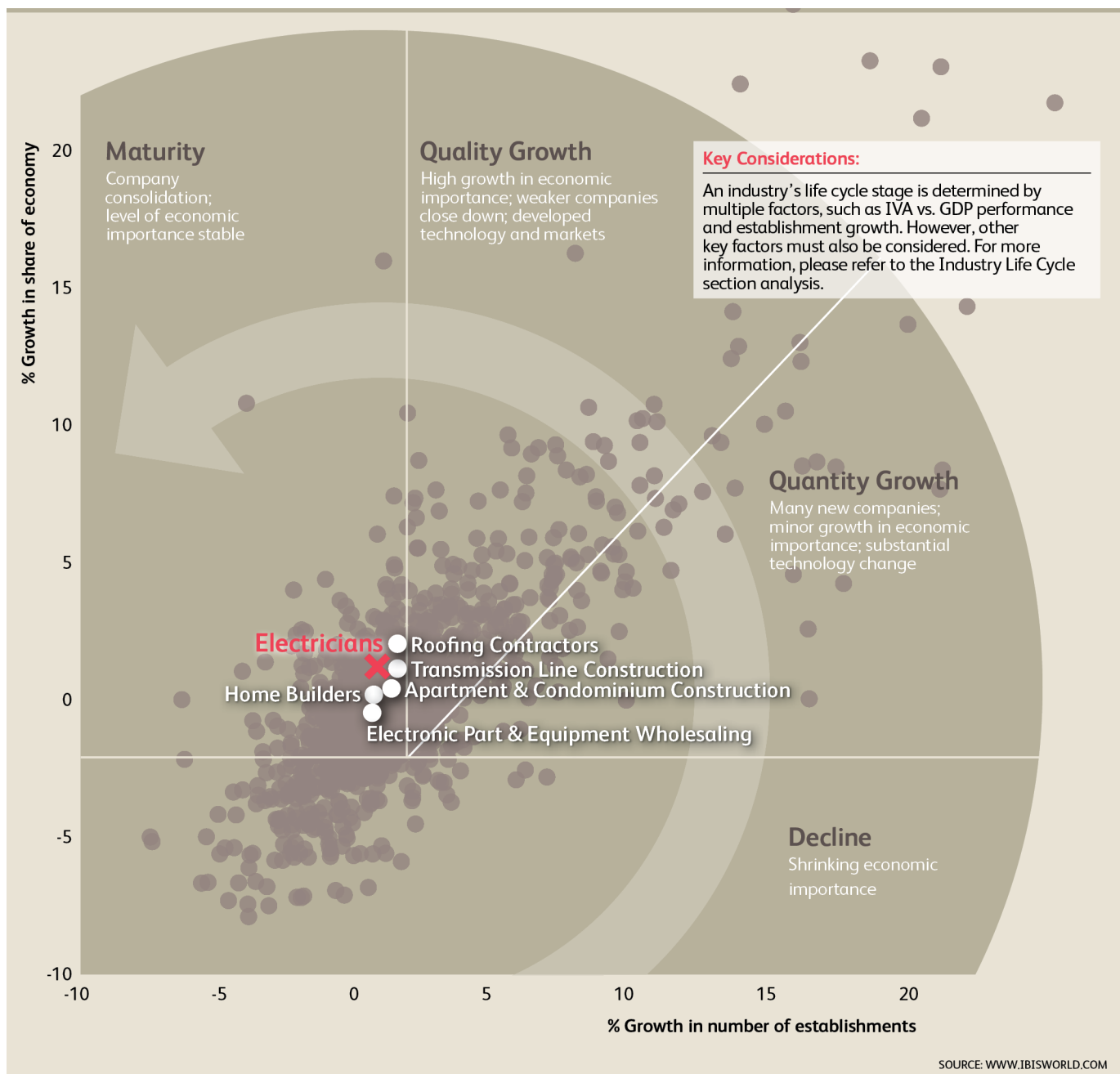
Industry Performance

Life Cycle Stage

Industry value added is growing at a faster rate than overall GDP

The industry must keep pace with moderate technological change

The industry's markets are largely established, though green services are forecast to grow



Industry Performance

Industry Life Cycle

This industry
is **Mature**

The US Electricians industry is in the mature phase of its life cycle, characterized by full market acceptance and market saturation, moderate technological change and slow but stable growth in enterprise numbers. Industry value-added (IVA), which measures the industry's contribution to the overall economy, is expected to grow at an annualized rate of 3.3% over the 10 years to 2024, significantly higher than US GDP growth of an annualized 2.0% during the same period. This strong IVA growth can be attributed to recent growth in the industry's downstream

residential and commercial building construction markets.

The industry's fragmented nature prevents widespread merger and acquisition (M&A) activity that is common in mature industries, and very low barriers to entry encourage a high volume of small-scale operators to open contracting businesses each year. Furthermore, the moderate changes in technology used in electrical infrastructure and systems have strengthened recent growth. Overall, however, the industry is fully established; specialty electrical work is required for almost every new structure built.

Products & Markets

Supply Chain | Products and Services | Demand Determinants
Major Markets | International Trade | Business Locations

Supply Chain

KEY BUYING INDUSTRIES

23611a	Home Builders in the US Home builders and developers contract electricians to install electrical equipment and wiring on new single-family homes.
23611b	Apartment & Condominium Construction in the US Electricians are hired for the installation, repair, retrofit and maintenance of electrical equipment and wiring on apartment buildings.
23621	Industrial Building Construction in the US Construction of manufacturing plants, factories and other industrial facilities drives demand for electrical contractors.
23622a	Commercial Building Construction in the US Developers of commercial buildings and structures hire electrical contractors to install equipment and wiring.
23622b	Municipal Building Construction in the US Schools, hospitals, community centers, government buildings, prisons and other municipal building construction require electrical installation and maintenance of equipment and wiring.
23799	Heavy Engineering Construction in the US Mines, refineries, power plants and other heavy industrial facilities require electrical contractors to install electrical equipment.
42343	Computer & Packaged Software Wholesaling in the US This industry hires electrical contractors to provide cabling and installation services for computer and communication equipment.
42361	Electrical Equipment Wholesaling in the US This industry provides electrical contracting services for installation of appliances and fittings, as well as for repair on existing equipment under warranty.
53131	Property Management in the US Property owners and managers hire electrical contracting services for maintenance and repair of facilities in existing buildings.

KEY SELLING INDUSTRIES

42361	Electrical Equipment Wholesaling in the US This industry supplies materials and equipment for use by electrical contractors.
42369	Electronic Part & Equipment Wholesaling in the US This industry supplies electronic parts and other materials used by electrical contractors.
42381	Construction & Mining Equipment Wholesaling in the US This industry supplies equipment used by electrical contractors during installation, retrofit and repair projects.

Products and Services

Electric power and systems installation and servicing

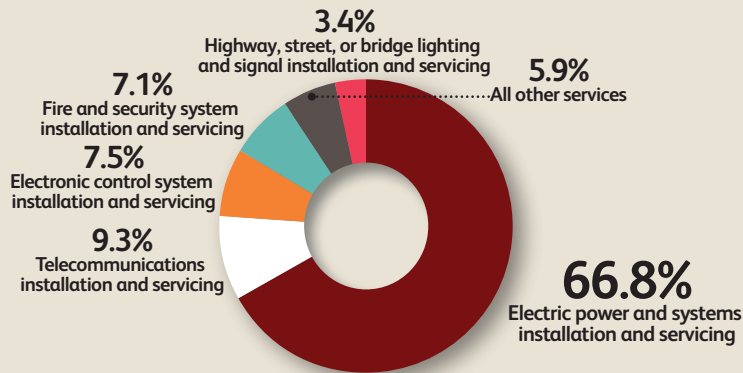
The Electricians industry generates the bulk of its revenue (66.8%) from the installation, repair and maintenance of electrical power, wiring and related systems in buildings across the construction market. This widely inclusive segment consists of the servicing of

electric outlets, power control, fiber-optic cables and lighting. These services are spread primarily between the residential market (i.e. single-family homes and apartment buildings) and the nonresidential market (i.e. office buildings, retail spaces and institutional buildings). Every new home or building requires basic electrical infrastructure

Products & Markets

Products and Services continued

Products and services segmentation (2019)



Total \$179.8bn

SOURCE: WWW.IBISWORLD.COM

installation, and the repair of electric systems is typically essential to a family's comfort or a business' operation.

data centers and data networks will drive demand for this segment due to the size and complexity of such systems.

Telecommunications installation and servicing

This segment includes the installation and maintenance of electronics systems, including audio, video, cable TV, home theaters, communication equipment and telephones, computers, internet (e.g. broadband connections) and networks. This service segment is expected to contribute to 9.3% of industry revenue. As the number of mobile internet and broadband connections increases, this will burgeon demand for this service segment. Additionally, the rise of large

Other servicing

Services categorized in this section include electronic and environmental control systems installation and servicing (7.5%), fire and security systems installation and servicing (7.1%) and highway, street or bridge lighting and signal installation and servicing (3.4%). Cable and conduit laying services, considered to be a heavy construction and civil engineering service, make up 1.4% of industry revenue. Other services include cable TV hook-up and building sprinkler system installation.

Demand Determinants

Demand for electric work is driven primarily by the level of spending on new construction, repair, renovation and maintenance work throughout the residential, commercial, industrial and institutional building markets. Broadly, investment in construction and repairs closely mirrors macroeconomic indicators such as per capita disposable income, consumer confidence, unemployment and the overall level of corporate profit and,

therefore, these can also be used as a proxy to determine demand for electrical contractors. Fluctuations in investment in construction segments and, therefore, revenue for this industry, are also influenced by long-term interest rates, rental yield, company profitability and household income, population growth and government sector spending policies.

Demand for ongoing maintenance work is primarily influenced by the budgetary

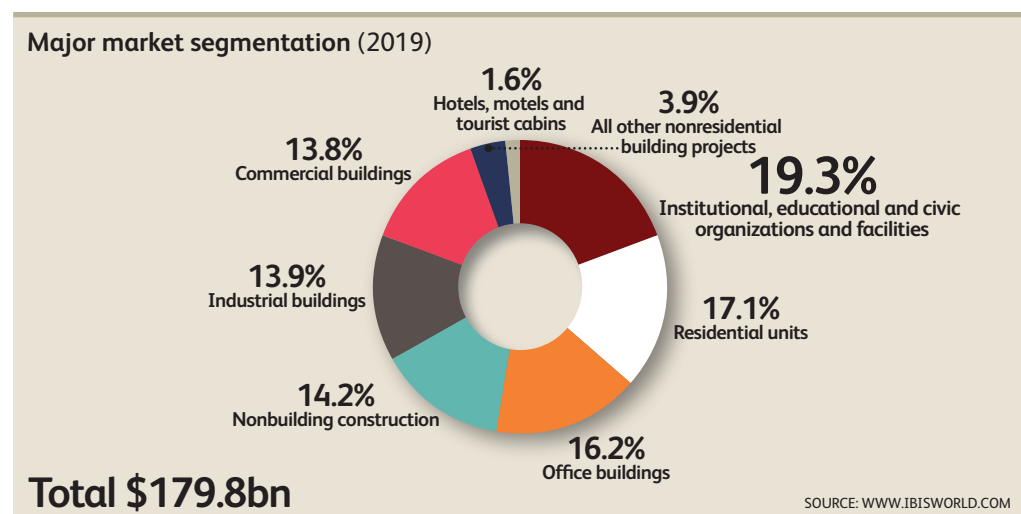
Products & Markets

Demand Determinants continued

priorities of clients, the level of and changes in capacity utilization of buildings or machinery and the general aging of existing buildings and other capital stock. Irregular demand to carry out minor repair and maintenance work on houses may be influenced by growth in household disposable income and faulty or aging building stock. Recently, growth in demand is partly attributable to the increased content, complexity and sophistication of electrical and mechanical systems, as well

as the installation of more technologically advanced voice and data communications, lighting and environmental control systems in all types of facilities, driven largely by the integration of digital processing and information technology. Increasingly, buildings require extensive electrical distribution systems. In addition, the maintenance of extensive computer systems, demand for energy savings and environmental control in individual spaces have driven demand for the industry.

Major Markets



Operators in the Electricians industry provide their services within the residential, commercial, industrial building markets as well as the nonbuilding market. The building construction market makes up the bulk of the market demand for this industry, contributing 85.8% of industry revenue in 2019.

Institutional, educational and civic organizations and facilities

Institutional buildings such as hospitals, clinics, medical centers, schools, law courts, prisons, churches and police and fire stations account for an estimated 19.3% of industry revenue in 2019.

Demand from the institutional market is driven by population growth and the level of government spending, both state and federal, and the level of corporate profit. Many of these institutions rely on funding from government agencies. Fluctuations in funding to these institutions can be influenced not only by the health of the economy but also by shifts in the political environment that influence budgetary and funding priorities.

Residential units

Work in the residential building market contributes 17.1% of industry revenue in 2019. Included in residential buildings are single-family homes, apartment

Products & Markets

Major Markets continued

buildings, dormitories and barracks. Single-family homes make up the largest share, contributing 12.6% of revenue to the total value of construction for the industry in 2019. The value of new housing starts is estimated to increase an annualized 5.0% over the five years to 2019 and has helped drive demand from this segment.

Office buildings

Electrical construction projects for office buildings are estimated to account for 16.2% of revenue for the Electricians industry in 2019. This includes lighting services, repairs and maintenance and new construction services for office buildings. Office buildings typically rely on electrical contractors to ensure workspaces remain well lit, comfortable, secure and reliable and consistently powered. This segment, in particular, requires industry services for the implementation of building-wide fire and security alarm systems as well as environmental control systems.

Commercial buildings

Electrical work performed on commercial retail establishments and warehouses is estimated to account for 13.8% of industry revenue in 2019. This segment

includes stores, restaurants, automobile service stations and other commercial buildings, such as distribution and storage facilities. Economic growth is likely to increase the commercial building market's share of revenue as business owners are increasingly able to invest in their physical establishments. An annualized 0.3% increase in private investment in manufacturing structures is anticipated to contribute to growing demand from this segment.

Nonbuilding construction

Nonbuilding construction accounts for an estimated 14.2% of industry revenue in 2019. This segment includes electrical work done on highways, roads, parking lots and lawn sprinkler systems. A significant portion of demand from this segment comes from public infrastructure spending, including from federal, state and local governments. According to the latest data available from the Congressional Budget Office, Federal, state and local governments spent \$441.0 billion on transportation and water infrastructure projects in 2017. As the aging and deterioration of US infrastructure becomes an increasing point of focus, this segment is expected to increase as a share of revenue.

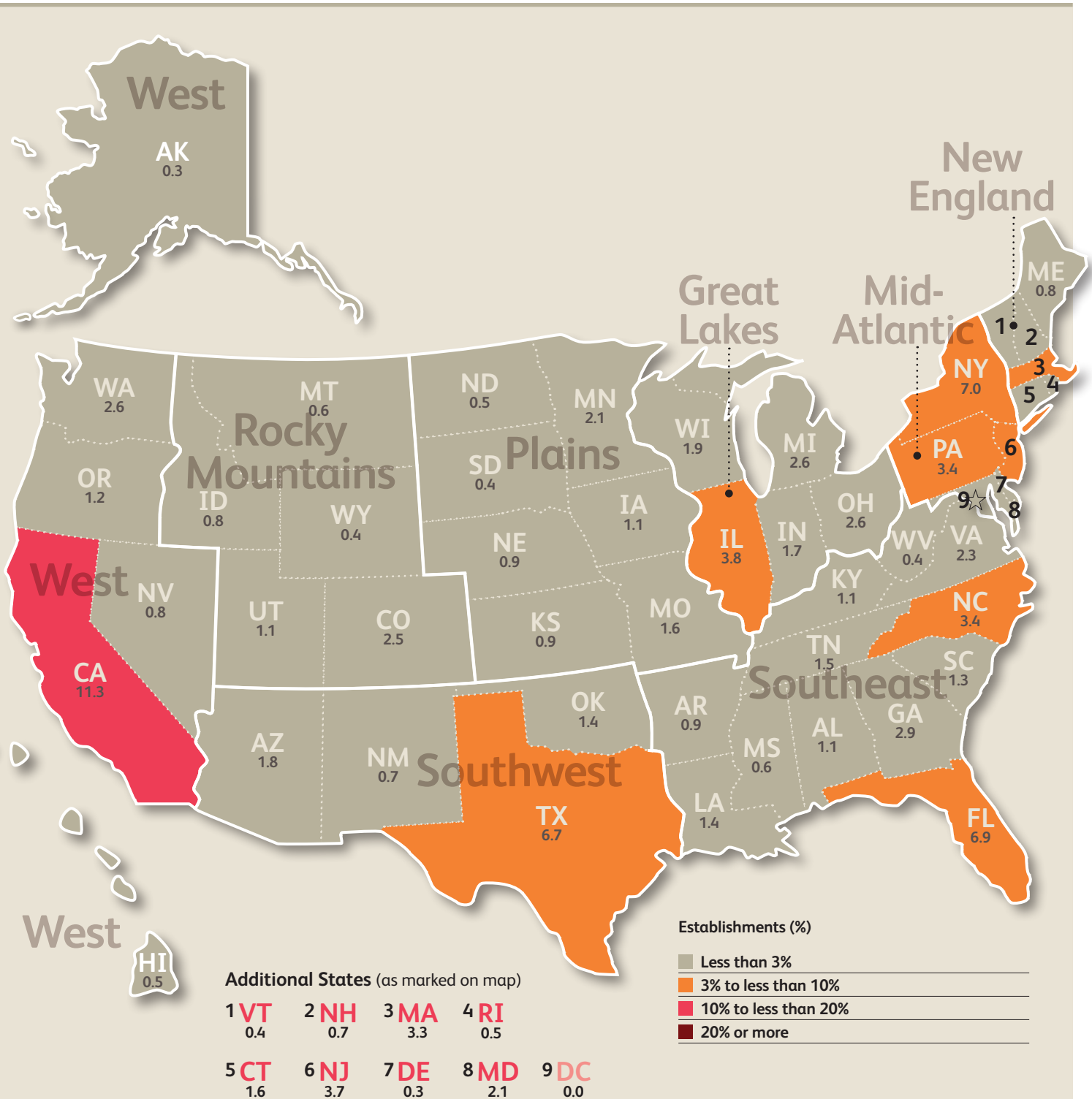
International Trade

International operations represent a small but growing share of electrical contracting activity. In developed economies, this industry tends to be highly regulated and the strict licensing requirements often limit entry into foreign markets. Some

US-based companies regularly supply electrical contracting expertise on international projects (particularly in Canada and Mexico). As a service industry, the Electricians industry does not import or export goods.

Products & Markets

Business Locations 2019



Products & Markets

Business Locations

The small-scale and localized nature of operations in the Electricians industry results in geographically dispersed structure that corresponds to the distribution of population and economic activity throughout the country. Small-scale establishments target a local, state-based market while larger-scale contractors often undertake maintenance and construction contracts throughout several states.

The Southeast region of the United States contains the largest portion of industry establishments, the area being home to 23.7% of industry establishments. Following closely behind are the Mid-Atlantic, West and Great Lakes regions with 16.6%, 16.7% and 12.5% of industry establishments respectively. In general, the regional distribution of establishments closely mirrors that of population density.

The largest state, California, has the highest portion of industry establishments at 11.3%. New York state, home to the most densely populated city in the United States, holds 7.0% of industry establishments. Florida, Texas



and Illinois respectively hold 6.9%, 6.7% and 3.8% of industry establishments. These figures are not surprising given the percentage of the US population in each state. Since building construction provides a large portion of revenue, it follows that industry establishments are concentrated in urban areas.

Competitive Landscape

Market Share Concentration | Key Success Factors | Cost Structure Benchmarks
Basis of Competition | Barriers to Entry | Industry Globalization

Market Share Concentration

Level
Concentration in
this industry is **Low**

The Electricians industry has a low level of concentration, as the combined revenue from the top four industry operators constitutes an estimated 3.1% of total revenue for the industry. Most industry operators are small companies that serve the residential housing market in narrow geographic areas. The industry is fragmented, and most companies, 62.2%, have a staff of fewer than five employees. In contrast, only a fraction,

0.03% of companies, employ more than 500 employees. Moreover, IBISWorld estimates that nonemployers account for 65.2% of total industry enterprises. The industry's low level of concentration is expected to continue over the five years to 2024. More companies are expected to enter the market as the construction sector accelerates, but most of these operators will be smaller companies and nonemployers.

Key Success Factors

IBISWorld identifies 250 Key Success Factors for a business. The most important for this industry are:

Having a good reputation

Maintaining a reputation for quality and timeliness is essential for operators that gain new business through word-of-mouth recommendations.

Having contacts within key markets

Maintaining positive relationships with clients (e.g. prime builders, developers and building owners) is important to the success of industry operators.

Management of seasonal production

The ability of electrical contractors to read construction cycles and adapt their work accordingly is a key factor for success.

Ability to compete on tender

Larger companies that bid for commercial contracts must be able to effectively compete on tender to win new business.

Cost Structure Benchmarks

The Electrician industry is service oriented and includes companies that install, maintain and repair electrical systems. Like most contractor industries, it requires low levels of capital investment, and most costs concern labor. Most industry operators are nonemployers, though companies with employees generate 96.3% of the industry's revenue.

Wages

In 2019, wages are estimated to constitute 32.6% of revenue, the second largest cost component for the industry. This is an increase from 2014, wherein wages consisted of 30.0% of industry revenue. Due to the increasing shortage of electrical workers, wages have been increasing in an attempt to increase the available labor supply. Over the five years

to 2019, total wage expenditure increased at an annualized rate of 4.3% and is expected to continue growing over the five years to 2024 at an annualized rate of 2.1%. The economic expansion has increased the number of construction projects requiring electrical contractors. Also, the increasing complexity of electrical, security, fire and data systems has increased the need for skilled labor.

Purchases

Representing the largest expenditure for the industry, purchases are estimated to account for 38.2% of industry revenue in 2019. Purchases include costs of materials, components and supplies used for installation, maintenance and repair services. It also includes any payments to subcontractors or temporary workers who are not part of a company's payroll.

Competitive Landscape

Cost Structure Benchmarks continued

Since most materials are purchased in project specific volumes, purchases as a percentage of total revenue generally fluctuate in line with downstream-demand. Purchases might include convenience outlets, lamp holders, switches, fuses, circuit breakers, wires, junction boxes, utility boxes, conduits and pipes, clamps, connectors and many other types of supplies.

Profit

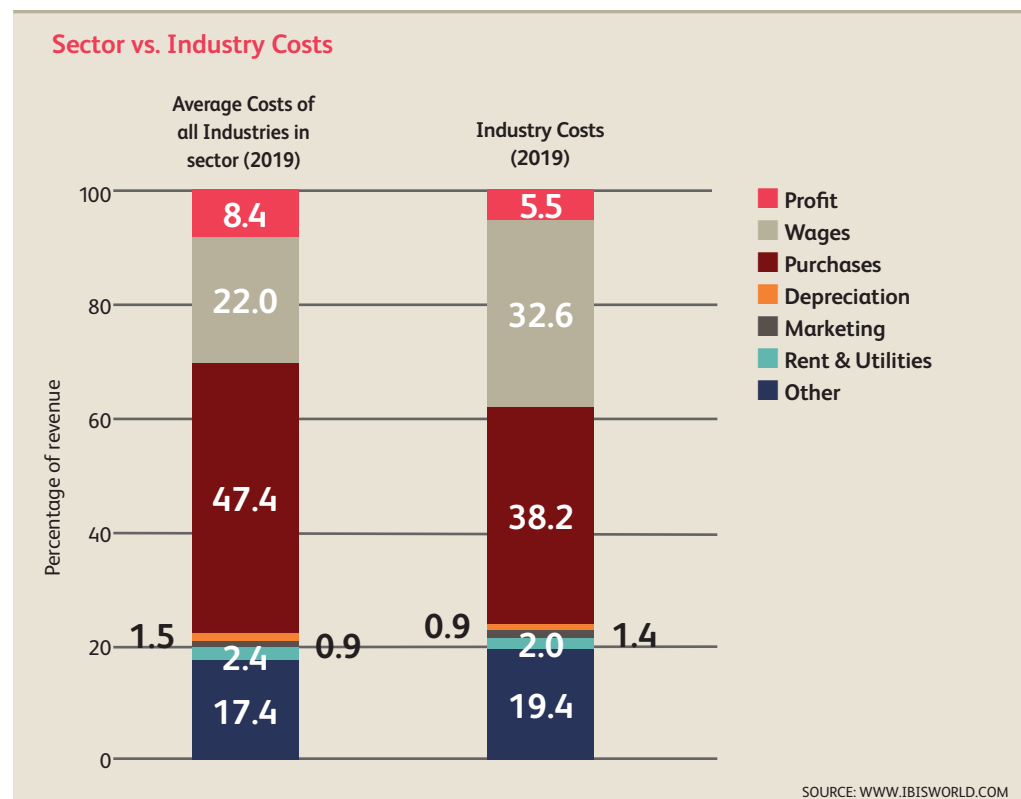
Industry profit, defined as earnings before interest and taxes, is expected to account for 5.5% of revenue in 2019, up from 4.8% in 2014. Industry operators are subject to high levels of price competition, particularly during periods of lower demand. As a result, profit margins often suffer. Typically, industry operators are chosen for contracts based on competitive bids, in which clients are looking for a combination of a minimized

cost of services, adequate experience and an efficient and quick project time line.

As a result of the economic growth during the period and strong demand from downstream construction sectors, profit margins have increased slightly as competitive pricing pressures have eased a bit. In addition to price competition, profit margins are significantly influenced by the cost of labor, one of the largest cost components for industry operators. Over the five years, total wage expenditure increased an annualized 4.3% and put downward pressure on profit margins, partially offsetting any gains from decreased price competition.

Depreciation

Operators in the Electricians industry invest little to no capital on expensive machinery and equipment. Therefore, these costs account for only 0.9% of revenue in 2019.



Competitive Landscape

Cost Structure Benchmarks continued

Marketing

Advertising and marketing expenditures represent an estimated 1.4% of total revenue in 2019. Most industry operators rely on word-of-mouth and reputation based on past projects; therefore, this segment does not constitute a significant cost component for industry operators.

Rent

Rental expenses account for an estimated 0.5% of revenue in 2019. Industry operators provide services on-site and do not require their own retail space to

provide services. As a result, this cost component accounts for a very small share of revenue.

Utilities

Utilities are estimated to account for 1.5% of total revenue in 2019 and have not changed significantly during the period.

Other

All other costs are estimated to account for 19.6% of total revenue in 2019. This includes communication, licensing fees, legal bills, taxes and other administrative expenses.

Basis of Competition

Level & Trend

Competition in this industry is **High** and the trend is **Steady**

This industry is highly fragmented and is characterized by low levels of concentration. For small companies and nonemployers that operate in a narrow geographic scope, competition is limited to similar operators in the area. For larger companies, such as MYR Group, EMCOR and Rosendin Electric, that operate on a national or regional basis, competition exists on a broader scale. In general, however, industry operators compete based on price, their ability to control project costs, their quantity of licensed and/or qualified personnel, their reputation for integrity, quality and safety, relationships with customers, access to credit and overall financial strength.

Operators in this industry generate the majority of revenue from projects requiring competitive bids; contractors offer cost quotes for a given project, and the client awards the project to the winning bid. During periods of low demand, price competition becomes much more intense. With a smaller pool of contracts to compete for, more

operators are willing to lower prices and accept narrower profit margins in an attempt to win more bids. This trend plays a large role in forcing out smaller companies, which usually cannot reduce costs to the extent that larger companies can.

Since most operators work in a small geographic area, local reputation for quality work is an essential component of competing successfully. Having a portfolio of previously locally completed work demonstrates an operator's experience and abilities to potential clients. General electrical contracting work is homogenous within the industry's markets (i.e. electrical work for new home construction is similar across the market); as a result, the individual reputation of contractors goes a long way in influencing a homeowner or general contractor's choice of electrician. Electricians with a longstanding presence in their market are better positioned to receive more work from local general contractors who prefer to work with subcontractors they know and trust.

Competitive Landscape

Barriers to Entry

Level & Trend
Barriers to Entry
in this industry are
Low and **Steady**

The Electricians industry has relatively few significant barriers to entry due to the tendency for work to be on-site and little need for large capital investments in property or machinery. The initial financial investment needed to become an electrician is limited to acquiring basic tools and electrical equipment, as well as standard cabling and wiring and transportation to the worksite. Additionally, most states do require electrical contractors to obtain a license, which poses the most substantial barrier to entry.

Nonfinancial barriers to entry, such as learning the necessary skills pose an initial obstacle to those looking to enter the industry. The necessary education can be obtained through a technical school or an apprenticeship program. Apprenticeship programs are usually four years long and include 144 hours of

Barriers to Entry checklist

Competition	High
Concentration	Low
Life Cycle Stage	Mature
Capital Intensity	Low
Technology Change	Medium
Regulation and Policy	Heavy
Industry Assistance	Low

SOURCE: WWW.IBISWORLD.COM

technical training and 2,000 hours of on-the-job training each year. To provide electrical services, one must learn electrical theory, blueprint reading, electrical code requirements and safety practices. After a four-year apprenticeship, electricians are considered journeymen and can perform work on their own.

Industry Globalization

Level & Trend
Globalization in this
industry is **Low** and
the trend is **Steady**

As a contractor industry that generally supplies to local or regional markets, the Electricians industry has a low level of globalization. Most operators are nonemployers without the capacity to operate in more than one city or county, let alone country. However, the industry's largest companies are

able to maintain a presence in other countries. Nonetheless, most industry revenue is generated in the United States. For example, EMCOR operates in the United Kingdom and United States, but more than 90.0% of industry revenue is generated in the United States.

Major Companies

There are no Major Players in this industry | Other Companies

Other Companies

The Electricians industry is highly fragmented; most companies are small and operate on a highly local or regional basis. Consequently, the industry has no

major players because no operator generates enough revenue from industry-specific tasks to account for more than 5.0% of total industry revenue.

Other Company Performance

EMCOR Group Inc.
Market Share: 1.3 %

EMCOR Group Inc. (EMCOR) is a publicly traded electrical and mechanical construction company headquartered in Norwalk, CT. In addition to electrical and mechanical construction services, the company provides a large variety of building and industrial services. Its client base includes a broad range of commercial, industrial, utility and institutional customers. As of 2018, the company employs an estimated 33,000 people worldwide at its operations in the United States and the United Kingdom (latest data available). EMCOR generates the majority (95.0%) of its service revenue through US operations.

The company operates in the Electricians industry through its electrical construction and facilities services performed in the United States. Within this service segment, the company's capabilities include commercial electrical design services, roadway lighting, traffic signal and intelligent transportation systems, fire alarm and detection equipment, industrial electrical services, solar installation, voice and data communication systems, panel fabrication, high and low voltage services and many others. In 2019, the company is anticipated to generate \$2.3 billion in industry-specific revenue.

Other Company Performance

Rosendin Electric Inc.
Market Share: 0.9 %

Rosendin Electric Inc. (Rosendin) is an employee-owned electrical contractor headquartered in San Jose, CA. In addition to its corporate headquarters, Rosendin has offices in Arizona, Maryland, Hawaii, Nevada, North Carolina, Oregon, Texas and Virginia, as well as other cities in California. The company was created in 1919 under the name Rosendin Electric Motor Works. It changed its name to Rosendin Electric Inc. in 1953 and has been employee owned since 1992.

Rosendin provides design-build engineering, building information modeling, prefabrication, service and maintenance, network and renewable energy services. The company provides services for biotechnology/pharmaceutical, commercial, data center, education, entertainment, healthcare, heavy industrial, hotel, institutional, multifamily residential, LEED, power, solar power, telecommunications, transportation and wind energy projects. In 2019, Rosendin is estimated to produce industry-specific revenue of \$1.5 billion.

Other Company Performance

Cupertino Electric Inc.
Market Share: 0.5 %

Cupertino Electric Inc. (Cupertino Electric) is a privately owned electrical engineering and construction company headquartered in San Jose, CA, and founded in 1954. In addition to its headquarters, the company operates satellite offices in San Francisco, Southern California, Wisconsin and

Arizona. Cupertino Electric designs, procures, constructs, installs and maintains complex electrical systems for commercial clients in the biotechnology, data center, education, healthcare high-tech, hospitality, manufacturing, retail, solar and utility industries. In 2019, Cupertino

Major Companies

Other Company Performance continued

Electric is estimated to generate \$875.1 million in revenue, all of which is anticipated to be relevant to the Electricians industry.

Other Company Performance

MYR Group Inc.
Market Share: 0.5 %

MYR Group Inc. (MYR) is a holding company that was established in 1995 through the merger of several long-standing specialty contractors. MYR comprises specialty electrical construction service providers and employs an estimated 5,500 people as of 2018 (latest data available). Through its subsidiaries, MYR Group provides electrical construction services and limited gas construction services in a network located throughout the United States and Canada. The company operates in two industry segments: transmission and

distribution (T&D) and commercial and industrial (C&I) electrical contracting services.

The industry-relevant C&I segment provides services such as the design, installation, maintenance and repair of commercial and industrial wiring, the installation of traffic networks and the installation of bridge, roadway and tunnel lighting. Industry-relevant operations for this segment are generally located in the western and northeastern United States. In 2019, industry-specific revenue for the company is estimated to reach \$965.5 million.

Operating Conditions

Capital Intensity | Technology & Systems | Revenue Volatility
Regulation & Policy | Industry Assistance

Capital Intensity

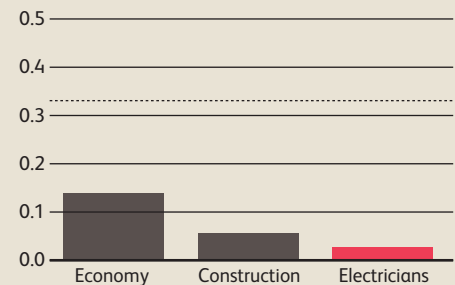
Level

The level of capital intensity is **Low**

The capital intensity for this industry is very low. IBISWorld estimates that for every \$1.00 spent in wages, the average industry enterprise spends \$0.03 on capital investments. This is due to the service-oriented nature of the industry, which relies heavily on the skills and knowledge of individual contractors and requires little heavy equipment. Consequently, wages comprise a large cost segment for the industry at 32.6%, and depreciation accounts for 0.9% of revenue. Start-up expenses are largely limited to basic tools and materials purchases, such as wiring and cables. For most electricians, the heaviest equipment is the van or truck

Capital Intensity

Capital units per labor unit

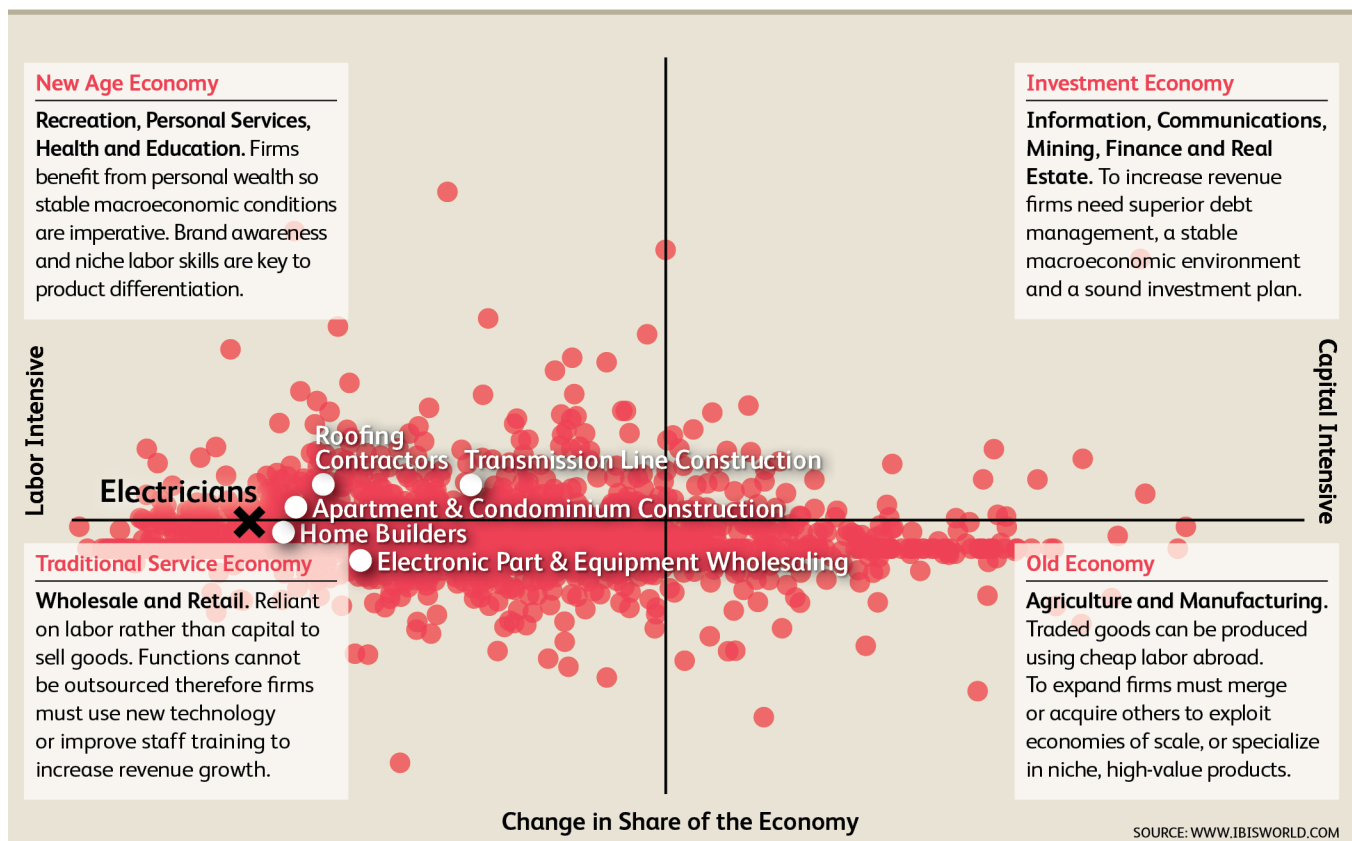


Dotted line shows a high level of capital intensity

SOURCE: WWW.IBISWORLD.COM

used for transportation to and from the worksite.

Tools of the Trade: Growth Strategies for Success



Operating Conditions

Technology and Systems

Level

The level of technology change is **Medium**

The Electricians industry is exposed to a significant level of technological change because its services change to reflect innovations in building construction and technological infrastructure. The industry constantly adapts to the changing content, complexity and sophistication of electrical and mechanical systems. In recent years, operators have had to install and maintain advanced voice and data communications as well as automation and computer systems, which require more sophisticated power supplies and extensive low-voltage and fiber-optic cabling. Interior climate and lighting

control systems are more integrated with digital processing and information technology. Over the past decade, the increasing computerization of both residential and commercial buildings and appliances has necessitated more sophisticated training and apprenticeships for new electricians, as the duties expected of electricians increasingly converge with those of information technology professionals. Technological advances will continue to play a critical role in changing the industry and guiding operators' specializations to meet clients' demands.

Revenue Volatility

Level

The level of volatility is **Low**

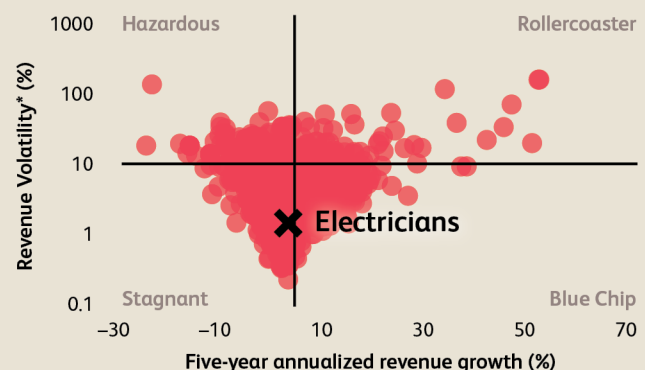
Over the past five years, revenue for the Electricians industry has been characterized by a low level of volatility. A degree of volatility is normal for this industry as it depends on construction cycles, which tend to be relatively volatile. Strong growth in downstream construction markets during the period has benefited electricians due to increased demand for installation

services. Steady demand has steadily increased industry revenue without many fluctuations during the period. Industry revenue is anticipated to remain stable with low volatility as the industry experiences slower but steady growth in demand from downstream residential and nonresidential construction markets over the next five years.

A higher level of revenue volatility implies greater industry risk. Volatility can negatively affect long-term strategic decisions, such as the time frame for capital investment.

When a firm makes poor investment decisions it may face underutilized capacity if demand suddenly falls, or capacity constraints if it rises quickly.

Volatility vs. growth



SOURCE: WWW.IBISWORLD.COM

Operating Conditions

Regulation and Policy

Level & Trend
The level of Regulation is **Heavy** and the trend is **Steady**

The Electricians industry is highly regulated both in terms of trade qualification grounds and occupational safety. Licenses to undertake electrical contracting activities are issued by each state building authority and industry-based apprenticeship training is mandatory to obtain qualifications and participate in this industry. The activities of industry participants are governed by industry-based recognized standards, and industry associations also issue certificates of competency across a range of specialized fields and members take part in authorized training programs.

Generally, the compliance with regulatory controls, wiring standards and state licensing tends to increase the cost of undertaking business in this industry but also helps stabilize industry conditions by ensuring against the entry of unqualified competitors.

Industry standards

The National Electrical Contracting Association (NECA) has released a wide range of quality standards for electrical construction under the National Electrical Installation Standards (NEIS), which define the standards required to install products and systems in a neat and workmanlike manner as required by the National Electrical Code. The American National Standards Institute (ANSI) must approve any standard submitted by NEIS before it is implemented. In addition to these standards, operators in this industry must also be aware of codes administered by the National Fire Protection Association.

NECA-devised standards approved by ANSI are included in the following categories under the NEIS 1000-NEIS Specification System: NECA 1, good workmanship; NECA 100, electrical

symbols; NECA 101, steel conduits; NECA 104, aluminum wire and cable; NECA 202, industrial heat tracing; NECA 301, fiber-optic cables; NECA 305, fire alarm systems; NECA 400, switchboards; NECA 402, Motor control centers; NECA 404, generator sets; NECA 405, interconnected generation systems; NECA 500, indoor commercial lighting; NECA 501, exterior lighting; NECA 502, industrial lighting; and NECA 568, telecommunications.

Governmental regulation

Industry activities are subject to various federal, state and local laws and regulations, including but not limited to: permitting and licensing requirements applicable to electrical contractors; building, mechanical and electrical codes and zoning ordinances; laws and regulations relating to consumer protection, including laws and regulations governing service contracts for residential services; and laws and regulations relating to worker safety and protection of human health. Failure to comply with the applicable regulations could result in substantial fines or revocation of operating permits.

Some states impose a tighter regulatory environment to ensure insurance warranty of work undertaken. For example, Florida requires participants to maintain funds on deposit with the Florida Office of Insurance Commissioner and Treasurer. Additionally, some state and local regulations require permits and licenses to be held by individuals rather than a corporate entity. Often the individuals holding the permit or license can authorize electrical contracting activities for all service technicians in a company operating within the relevant regional market.

Operating Conditions

Industry Assistance

Level & Trend

The level of Industry Assistance is **Low** and the trend is **Steady**

Special trade contractor services do not receive tariff protection against imports. However, the Electricians industry is assisted by the stringent qualifications and licensing prerequisites needed to operate in the market. Furthermore, the industry benefits from trade associations, including the National Electrical Contractors Association (NECA) and Independent Electrical Contractors (IEC). The NECA provides

industry research, helps establish standards and codes and organizes conferences and lobbies on behalf of the industry before legislative bodies. The IEC is primarily composed of small-scale contractors and emphasizes its high-quality apprenticeship and training program. In addition, the federal government along with municipalities provide indirect industry assistance through government contracts.

Key Statistics

Industry Data

	Revenue (\$m)	Industry Value Added (\$m)	Establishments	Enterprises	Employment	Exports	Imports	Wages (\$m)	Domestic Demand	Value of private non-residential construction (\$m)
2010	135,731.2	45,771.9	197,932	196,591	795,962	--	--	41,157.1	N/A	412.8
2011	137,727.1	47,048.9	196,062	194,703	781,007	--	--	41,539.9	N/A	424.1
2012	146,226.5	51,179.8	198,025	196,446	810,469	--	--	43,868.4	N/A	479.4
2013	151,885.1	54,071.6	198,380	196,921	837,640	--	--	45,566.0	N/A	485.5
2014	158,164.7	56,307.2	201,028	199,588	863,994	--	--	47,450.0	N/A	537.0
2015	166,236.9	60,677.1	202,265	200,768	892,659	--	--	49,871.6	N/A	520.9
2016	175,015.6	63,181.2	205,823	203,895	933,319	--	--	52,505.3	N/A	494.8
2017	174,907.2	66,621.0	206,377	204,479	964,728	--	--	54,902.2	N/A	517.6
2018	177,198.7	68,814.1	208,204	206,224	1,002,554	--	--	57,549.6	N/A	543.4
2019	179,812.4	69,954.6	210,511	208,452	1,020,939	--	--	58,563.3	N/A	546.2
2020	183,854.7	71,562.8	213,514	211,305	1,044,475	--	--	59,906.7	N/A	557.2
2021	187,047.5	72,905.5	216,351	214,047	1,064,831	--	--	61,048.8	N/A	565.5
2022	190,907.2	74,457.8	219,508	217,072	1,087,586	--	--	62,344.4	N/A	578.3
2023	195,195.1	76,149.7	223,030	220,450	1,111,968	--	--	63,742.6	N/A	593.4
2024	199,502.8	77,801.0	226,543	223,824	1,135,836	--	--	65,118.5	N/A	608.3
Sector Rank	3/35	1/35	4/35	4/35	1/35	N/A	N/A	1/35	N/A	N/A
Economy Rank	63/694	44/694	35/694	34/694	34/694	N/A	N/A	24/694	N/A	N/A

Annual Change

	Revenue (%)	Industry Value Added (%)	Establishments (%)	Enterprises (%)	Employment (%)	Exports (%)	Imports (%)	Wages (%)	Domestic Demand (%)	Value of private non-residential construction (%)
2011	1.5	2.8	-0.9	-1.0	-1.9	N/A	N/A	0.9	N/A	2.7
2012	6.2	8.8	1.0	0.9	3.8	N/A	N/A	5.6	N/A	13.0
2013	3.9	5.7	0.2	0.2	3.4	N/A	N/A	3.9	N/A	1.3
2014	4.1	4.1	1.3	1.4	3.1	N/A	N/A	4.1	N/A	10.6
2015	5.1	7.8	0.6	0.6	3.3	N/A	N/A	5.1	N/A	-3.0
2016	5.3	4.1	1.8	1.6	4.6	N/A	N/A	5.3	N/A	-5.0
2017	-0.1	5.4	0.3	0.3	3.4	N/A	N/A	4.6	N/A	4.6
2018	1.3	3.3	0.9	0.9	3.9	N/A	N/A	4.8	N/A	5.0
2019	1.5	1.7	1.1	1.1	1.8	N/A	N/A	1.8	N/A	0.5
2020	2.2	2.3	1.4	1.4	2.3	N/A	N/A	2.3	N/A	2.0
2021	1.7	1.9	1.3	1.3	1.9	N/A	N/A	1.9	N/A	1.5
2022	2.1	2.1	1.5	1.4	2.1	N/A	N/A	2.1	N/A	2.3
2023	2.2	2.3	1.6	1.6	2.2	N/A	N/A	2.2	N/A	2.6
2024	2.2	2.2	1.6	1.5	2.1	N/A	N/A	2.2	N/A	2.5
Sector Rank	22/35	22/35	18/35	17/35	16/35	N/A	N/A	18/35	N/A	N/A
Economy Rank	344/694	351/694	327/694	312/694	263/694	N/A	N/A	282/694	N/A	N/A

Key Ratios

	IVA/Revenue (%)	Imports/Demand (%)	Exports/Revenue (%)	Revenue per Employee (\$'000)	Wages/Revenue (%)	Employees per Est.	Average Wage (\$)	Share of the Economy (%)
2010	33.72	N/A	N/A	170.52	30.32	4.02	51,707.37	0.29
2011	34.16	N/A	N/A	176.35	30.16	3.98	53,187.62	0.30
2012	35.00	N/A	N/A	180.42	30.00	4.09	54,127.18	0.32
2013	35.60	N/A	N/A	181.33	30.00	4.22	54,398.07	0.33
2014	35.60	N/A	N/A	183.06	30.00	4.30	54,919.36	0.33
2015	36.50	N/A	N/A	186.23	30.00	4.41	55,868.59	0.35
2016	36.10	N/A	N/A	187.52	30.00	4.53	56,256.54	0.36
2017	38.09	N/A	N/A	181.30	31.39	4.67	56,909.51	0.37
2018	38.83	N/A	N/A	176.75	32.48	4.82	57,402.99	0.37
2019	38.90	N/A	N/A	176.12	32.57	4.85	57,362.19	0.37
2020	38.92	N/A	N/A	176.03	32.58	4.89	57,355.80	0.37
2021	38.98	N/A	N/A	175.66	32.64	4.92	57,331.91	0.37
2022	39.00	N/A	N/A	175.53	32.66	4.95	57,323.65	0.37
2023	39.01	N/A	N/A	175.54	32.66	4.99	57,324.13	0.37
2024	39.00	N/A	N/A	175.64	32.64	5.01	57,330.90	0.38
Sector Rank	8/35	N/A	N/A	20/35	5/35	13/35	15/35	1/35
Economy Rank	232/694	N/A	N/A	459/694	139/694	476/694	302/694	44/694

Figures are in inflation-adjusted 2019 dollars. Rank refers to 2019 data.

SOURCE: WWW.IBISWORLD.COM

Industry Financial Ratios

	Apr 2014 - Mar 2015	Apr 2015 - Mar 2016	Apr 2016 - Mar 2017	Apr 2017 - Mar 2018	Apr 2017 - Mar 2018 by company revenue		
					Small (<\$10m)	Medium (\$10-50m)	Large (>\$50m)
Liquidity Ratios							
Current Ratio	1.7	1.7	1.7	1.7	1.8	1.7	1.6
Quick Ratio	1.5	1.4	1.4	1.4	1.5	1.5	1.3
Sales / Receivables (Trade Receivables Turnover)	5.8	5.8	5.9	5.7	7.3	5.2	4.7
Days' Receivables	62.9	62.9	61.9	64.0	50.0	70.2	77.7
Cost of Sales / Inventory (Inventory Turnover)	549.2	627.1	615.8	n/c	n/c	631.9	n/c
Days' Inventory	0.7	0.6	0.6	0.4	0.4	0.6	0.4
Cost of Sales / Payables (Payables Turnover)	14.2	13.7	14.4	14.2	18.1	12.6	13.2
Days' Payables	25.7	26.6	25.3	25.7	20.2	29.0	27.7
Sales / Working Capital	9.4	9.8	9.7	9.2	11.0	8.4	9.1
Coverage Ratios							
Earnings Before Interest & Taxes (EBIT) / Interest	12.2	15.3	14.7	15.0	11.0	18.3	25.3
Net Profit + Dep., Depletion, Amort. / Current Maturities LT Debt	4.8	4.9	5.2	5.7	3.4	5.8	11.4
Leverage Ratios							
Fixed Assets / Net Worth	0.3	0.3	0.3	0.3	0.4	0.3	0.2
Debt / Net Worth	1.3	1.4	1.5	1.4	1.4	1.3	1.8
Tangible Net Worth	34.7	35.0	33.7	35.2	31.6	40.2	34.3
Operating Ratios							
Profit before Taxes / Net Worth, %	24.3	27.9	29.2	30.3	31.7	29.1	26.4
Profit before Taxes / Total Assets, %	10.2	11.2	11.7	11.5	13.3	11.2	9.8
Sales / Net Fixed Assets	30.9	29.7	27.7	27.4	25.4	30.3	33.8
Sales / Total Assets (Asset Turnover)	2.9	2.9	2.9	2.8	3.1	2.8	2.6
Cash Flow & Debt Service Ratios (% of sales)							
Cash from Trading	22.0	23.9	24.6	24.4	33.7	20.6	14.3
Cash after Operations	4.2	5.2	4.9	4.6	5.0	3.9	4.6
Net Cash after Operations	4.1	5.0	5.1	4.7	5.4	4.0	4.4
Cash after Debt Amortization	1.1	1.5	1.4	0.9	1.3	0.8	1.1
Debt Service P&I Coverage	3.6	4.2	3.9	3.3	3.0	3.2	4.3
Interest Coverage (Operating Cash)	10.4	13.2	12.6	11.6	10.0	13.0	16.7
Assets, %							
Cash & Equivalents	16.5	16.3	16.7	17.4	21.1	14.8	11.3
Trade Receivables (net)	47.6	46.2	45.8	46.1	37.8	53.4	55.3
Inventory	4.8	5.1	4.8	4.3	5.2	3.8	2.1
All Other Current Assets	7.9	8.1	8.1	7.8	5.7	9.1	11.9
Total Current Assets	76.9	75.7	75.3	75.5	69.8	81.1	80.6
Fixed Assets (net)	15.5	15.8	16.3	16.8	20.8	13.4	11.8
Intangibles (net)	2.2	2.5	2.9	2.8	3.3	2.1	2.8
All Other Non-Current Assets	5.4	5.9	5.5	4.9	6.1	3.3	4.7
Total Assets	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total Assets (\$m)	14,256.1	14,292.4	13,290.1	15,943.3	895.5	4,141.9	10,905.9
Liabilities, %							
Notes Payable-Short Term	11.2	10.4	10.8	10.0	13.9	6.7	5.3
Current Maturities L/T/D	2.7	2.6	2.7	3.1	4.3	2.2	1.9
Trade Payables	18.1	17.9	17.2	16.7	14.2	19.6	17.7
Income Taxes Payable	0.4	0.4	0.3	0.3	0.3	0.2	0.4
All Other Current Liabilities	16.3	15.8	17.2	16.6	12.1	18.9	25.9
Total Current Liabilities	48.6	47.0	48.3	46.8	44.8	47.6	51.1
Long Term Debt	10.2	10.3	10.6	11.4	16.2	6.9	6.6
Deferred Taxes	0.4	0.3	0.3	0.3	0.3	0.3	0.2
All Other Non-Current Liabilities	4.0	4.9	4.3	3.6	3.8	2.9	5.0
Net Worth	36.9	37.5	36.6	38.0	34.9	42.3	37.1
Total Liabilities & Net Worth (\$m)	14,256.1	14,292.4	13,290.1	15,943.3	895.5	4,141.9	10,905.9
Maximum Number of Statements Used	1,332	1,298	1,184	1,212	590	450	172

Source: RMA Annual Statement Studies, rmahq.org. RMA data for all industries is derived directly from more than 260,000 statements of member financial institutions' borrowers and prospects.

Note: For a full description of the ratios refer to the Key Statistics chapter online.

Jargon & Glossary

Industry Jargon

CLIMATE CONTROL The technology of indoor and automotive environmental comfort.

DATA CABLING Electronic installation required to enable the sending and receiving of data between computer networks.

LOW-VOLTAGE An electronic connection that uses low voltage, which is required to power fire alarms, household lights, air conditioning, music systems, security cameras and other electronic equipment.

IBISWorld Glossary

BARRIERS TO ENTRY High barriers to entry mean that new companies struggle to enter an industry, while low barriers mean it is easy for new companies to enter an industry.

CAPITAL INTENSITY Compares the amount of money spent on capital (plant, machinery and equipment) with that spent on labor. IBISWorld uses the ratio of depreciation to wages as a proxy for capital intensity. High capital intensity is more than \$0.333 of capital to \$1 of labor; medium is \$0.125 to \$0.333 of capital to \$1 of labor; low is less than \$0.125 of capital for every \$1 of labor.

CONSTANT PRICES The dollar figures in the Key Statistics table, including forecasts, are adjusted for inflation using the current year (i.e. year published) as the base year. This removes the impact of changes in the purchasing power of the dollar, leaving only the "real" growth or decline in industry metrics. The inflation adjustments in IBISWorld's reports are made using the US Bureau of Economic Analysis' implicit GDP price deflator.

DOMESTIC DEMAND Spending on industry goods and services within the United States, regardless of their country of origin. It is derived by adding imports to industry revenue, and then subtracting exports.

EMPLOYMENT The number of permanent, part-time, temporary and seasonal employees, working proprietors, partners, managers and executives within the industry.

ENTERPRISE A division that is separately managed and keeps management accounts. Each enterprise consists of one or more establishments that are under common ownership or control.

ESTABLISHMENT The smallest type of accounting unit within an enterprise, an establishment is a single physical location where business is conducted or where services or industrial operations are performed. Multiple establishments under common control make up an enterprise.

EXPORTS Total value of industry goods and services sold by US companies to customers abroad.

IMPORTS Total value of industry goods and services brought in from foreign countries to be sold in the United States.

INDUSTRY CONCENTRATION An indicator of the dominance of the top four players in an industry. Concentration is considered high if the top players account for more than 70 % of industry revenue. Medium is 40 % to 70 % of industry revenue. Low is less than 40 %.

INDUSTRY REVENUE The total sales of industry goods and services (exclusive of excise and sales tax); subsidies on production; all other operating income from outside the firm (such as commission income, repair and service income, and rent, leasing and hiring income); and capital work done by rental or lease. Receipts from interest royalties, dividends and the sale of fixed tangible assets are excluded.

INDUSTRY VALUE ADDED (IVA) The market value of goods and services produced by the industry minus the cost of goods and services used in production. IVA is also described as the industry's contribution to GDP, or profit plus wages and depreciation.

INTERNATIONAL TRADE The level of international trade is determined by ratios of exports to revenue and imports to domestic demand. For exports/revenue: low is less than 5 %, medium is 5 % to 20 %, and high is more than 20 %. Imports/domestic demand: low is less than 5 %, medium is 5 % to 35 %, and high is more than 35 %.

LIFE CYCLE All industries go through periods of growth, maturity and decline. IBISWorld determines an industry's life cycle by considering its growth rate (measured by IVA) compared with GDP; the growth rate of the number of establishments; the amount of change the industry's products are undergoing; the rate of technological change; and the level of customer acceptance of industry products and services.

NONEMPLOYING ESTABLISHMENT Businesses with no paid employment or payroll, also known as nonemployers. These are mostly set up by self-employed individuals.

PROFIT IBISWorld uses earnings before interest and tax (EBIT) as an indicator of a company's profitability. It is calculated as revenue minus expenses, excluding interest and tax.

VOLATILITY The level of volatility is determined by averaging the absolute change in revenue in each of the past five years. Volatility levels: very high is more than $\pm 20\%$; high volatility is $\pm 10\%$ to $\pm 20\%$; moderate volatility is $\pm 3\%$ to $\pm 10\%$; and low volatility is less than $\pm 3\%$.

WAGES The gross total wages and salaries of all employees in the industry. The cost of benefits is also included in this figure.

At IBISWorld we know that industry intelligence is more than assembling facts

It is combining data with analysis to answer the questions that successful businesses ask

Identify high growth, emerging & shrinking markets

Arm yourself with the latest industry intelligence

Assess competitive threats from existing & new entrants

Benchmark your performance against the competition

Make speedy market-ready, profit-maximizing decisions



Who is IBISWorld?

We are strategists, analysts, researchers, and marketers. We provide answers to information-hungry, time-poor businesses. Our goal is to provide real world answers that matter to your business in our 700 US industry reports. When tough strategic, budget, sales and marketing decisions need to be made, our suite of Industry and Risk intelligence products give you deeply-researched answers quickly.

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