

A M C H A M



M A L A Y S I A

**AMERICAN MALAYSIAN
CHAMBER OF COMMERCE**

ECONOMIC IMPACT SURVEY

2018/19

**ELECTRICAL
AND ELECTRONICS
(E&E) SECTOR**



QUALITY INVESTMENT Innovation, Productivity, Education, Livelihoods



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ABOUT THIS SURVEY

12th Edition of the Malaysian American Electronics Industry [MAEI] Economic Impact Survey

37 AMCHAM member companies completed this year's survey, including six companies that were either new members or unable to participate last year.

The survey looks beyond simple FDI figures and captures other important metrics such as skilled job creation, support for local SMEs, and movement up the value chain.

All participants are under American ownership and/or have headquarters in the USA. However, it is not an exhaustive survey of all American E&E investment in Malaysia.

Many of the survey participants are members of the Malaysian American Electronics Industry (MAEI), an industry committee under AMCHAM that has been active since 1989.



AMERICAN MALAYSIAN
CHAMBER OF COMMERCE

2019 SURVEY OF AMERICAN INVESTMENT IN E&E SECTOR

The 2019 Economic Impact Survey captures the contribution from 37 American electrical & electronics businesses to the Malaysian economy encompassing FDI, job creation, knowledge transfer, and support for local SMEs.

RM 78.57bn
confirmed historical
FDI since 1972



RM7.33bn
salary payments in 2018

RM130bn/year
trade in goods surplus



RM1.90bn
taxes paid in 2018

RM18bn/year
goods and services
sourced locally



100,000
jobs created (excluding
contract workers)

9,193 contracts
with local companies (worth
at least RM100k/year)



12 new product lines /
6 new R&D facilities /
1 new shared services center



**76% expecting
further investment**



SIOBHAN DAS

Executive Director AMCHAM Malaysia

During AMCHAM's engagements with a broad range of government stakeholders, we find that one of the first questions we get asked is whether we can quantify the contributions that our member companies make to Malaysia's economy. The Economic Impact Survey is our effort to provide some tangible data to address this question.

I am delighted that our members have also found value in this initiative and that we are able to include a wider range of E&E companies in this year's survey. All data shared by our member companies is treated with confidence and data is only ever presented in an aggregated form - this has helped to secure trust from the members who have provided more complete sets of answers for this year's survey. We strive to present our survey findings in a transparent manner and to distinguish between increases caused by the expansion of the respondent pool versus true underlying growth trends.

Our findings enable us to provide a more complete picture of the total contributions made by American companies to Malaysia's E&E industry and the valuable role that the industry continues to play in Malaysia's progression towards high-income country status.



DATO' SERI WONG SIEW HAI

Chairman

AMCHAM's MAEI Committee

This year's survey helps us to reflect on the continued strategic importance of the E&E industry to Malaysia's economic prosperity. Members of the Malaysian American Electronics Industry (MAEI) and other AMCHAM members in this sector have continued to drive industrial development, creating growth and livelihood opportunities not only in Penang and Klang Valley but throughout the entire country.

Two findings really stick out for me as they address some common misconceptions about the E&E industry in Malaysia. The first relates to Malaysia's place within the global supply chain - over the past year I've been asked many times about which new American companies are considering investment in Malaysia as a result of the U.S.-China trade tensions. While some new investments may well be under consideration, perhaps of greater significance is the movement of volume or new product lines towards facilities that are already here. In this year's survey we identified 12 new product lines relocating to Malaysia within the past year, as well as six R&D centers and centers of excellence in high-value-added activities such as digital manufacturing. Some of these R&D centers have been relocated from developed countries such as Japan - this is a testament to how American MNCs are attracted to Malaysia due to our strong talent profiles and vibrant ecosystem of SMEs.

Secondly, our survey addresses the misconception that MNCs do not contribute to government revenues. While it is true that many companies enjoy corporate income tax exemptions as part of the investment incentives offered to them by the Malaysian government, it is also important to consider the 100,000 well-paid jobs that we create and the resulting personal income taxes paid on those salaries. In total, our member companies contributed almost RM 2 billion to the country's treasuries in 2018, while also supporting the livelihoods and wellbeing of thousands of Malaysian families.

Other countries are catching up fast and have the potential to leapfrog stages of industrial development through the adoption of advanced technologies and Industry 4.0 approaches. MAEI enjoys a fruitful and collaborative partnership with various government bodies responsible for the growth of the E&E industry in Malaysia, particularly the Ministry of International Trade & Industry (MITI), the Malaysian Investment Development Authority (MIDA), and the Malaysian Productivity Corporation (MPC). We hope that this survey can provide some new impetus to work on bold and forward-looking policies that can help to cement Malaysia's prominent position in the global E&E supply chain for the next 50 years and beyond.



EXECUTIVE SUMMARY

Malaysian American Electronics Industry [MAEI], an industry committee under AMCHAM, has the objective of highlighting the contributions of the American electronics industry to Malaysia and to engage the Government of Malaysia by proposing policies to enhance Malaysia's E&E sector.

Anchored around pioneer American MNC investors in the early 1970s, Malaysia's electrical and electronics (E&E) industry continues to grow in both size and sophistication. Our E&E sector is well equipped to compete on the world stage, and Malaysia today stands as the seventh largest E&E exporter in the world¹. At a time where the global economic outlook is unfavorable amidst new trade challenges, the E&E industry has remained a bulwark for Malaysia and, in 2018, was the only manufacturing sub-sector that registered a trade surplus².

Responses from 37 member companies demonstrate how this contribution extends well beyond the traditional metric of capital investment. Our survey highlights the ongoing investments by U.S. companies in Malaysian training and skills development, research and technology transfer, building up local SMEs,

and creating opportunities for thousands of Malaysians to earn high salaries through skilled positions.

In terms of livelihoods, we have confirmed that American E&E companies contribute more than **100,000** jobs to the Malaysian economy with strong levels of localization - a full 74% of companies surveyed have more than 90% of roles within their company filled by Malaysians. We have better visibility on the range of highly specialized roles created through these companies' R&D and process engineering programs - our members hire **191** PhD specialists, and more than **3,000** Masters degree holders with expertise in a range of technical and functional areas. Spending on R&D in 2018 reached **RM 4.89bn**, demonstrating the ongoing commitment of U.S. companies to developing new technological solutions here in Malaysia.

¹ World Trade Atlas

² MIDA

Perhaps the most striking data point relates to the collective trade-in-goods surplus registered by our member companies, which stands at **RM 130bn**. This number is vastly larger than we were able to report last year - partly due to the increased number of companies taking the survey, and more complete data sets from respondents. This is not to say that the trade surplus is not truly growing - a like-for-like comparison among companies who have submitted for consecutive years shows an increase of around **6%**. Malaysia's overall trade surplus for 2018 was **RM 120.27bn³**, suggesting that these 37 companies contribute the difference between Malaysia recording a trade surplus or trade deficit.

We've also been able to identify an even greater number of relationships between our member MNCs and local SMEs. Considering only contracts that are worth at least RM100,000 per year for goods or services, our members report more than **9,100** relationships with local suppliers, spending in excess of **RM 18bn** per year within the local economy. On average, American MNCs work with **248** suppliers per company in high-value contracts. Our members have also taken on an **additional 135** vendor development programs to support local companies in meeting international standards and being better equipped to compete at the global level. The additional livelihoods and tax payments supported through these SMEs cannot be captured within our survey, but clearly our members' contributions to Malaysia's economic development include considerable indirect contributions through support for local SMEs.

In terms of financial performance, 2018 was a mixed year for our member companies with around half enjoying some revenue growth, one quarter remaining flat and one quarter experiencing a decline. Looking forward, performance expectations remain healthy with more than two-thirds expecting their Malaysia-based business to grow over the coming years.

76% of companies intend to invest further in Malaysia within the next 5 years, which is a testament to the longstanding nature of U.S. investment in Malaysia's E&E sector.

This being the case, it must be recognized that Malaysia has fast-growing competitors for foreign investment, both within ASEAN and further afield. The global supply chain is fiercely competitive and global MNCs must take a wide range of cost and capacity variables into account when deciding where to deploy their investments.

One of our aims with this Economic Impact Survey is to reiterate and emphasize the major contributions made by existing investors here in Malaysia. It is our hope that this will encourage a greater policy emphasis on supporting growth and reinvestment by these companies, in tandem with Malaysia's efforts to attract new foreign investments.

AMCHAM's MAEI Committee looks forward to enhancing our engagement with the Malaysian government on matters relating to trade and investment policies. Together we can ensure that Malaysia positions itself to continuously attract new product lines and higher value-added processes from our E&E manufacturers as well as from new market entrants looking for an internationally competitive investment location.

³ MATRADE

FINANCIAL IMPACT

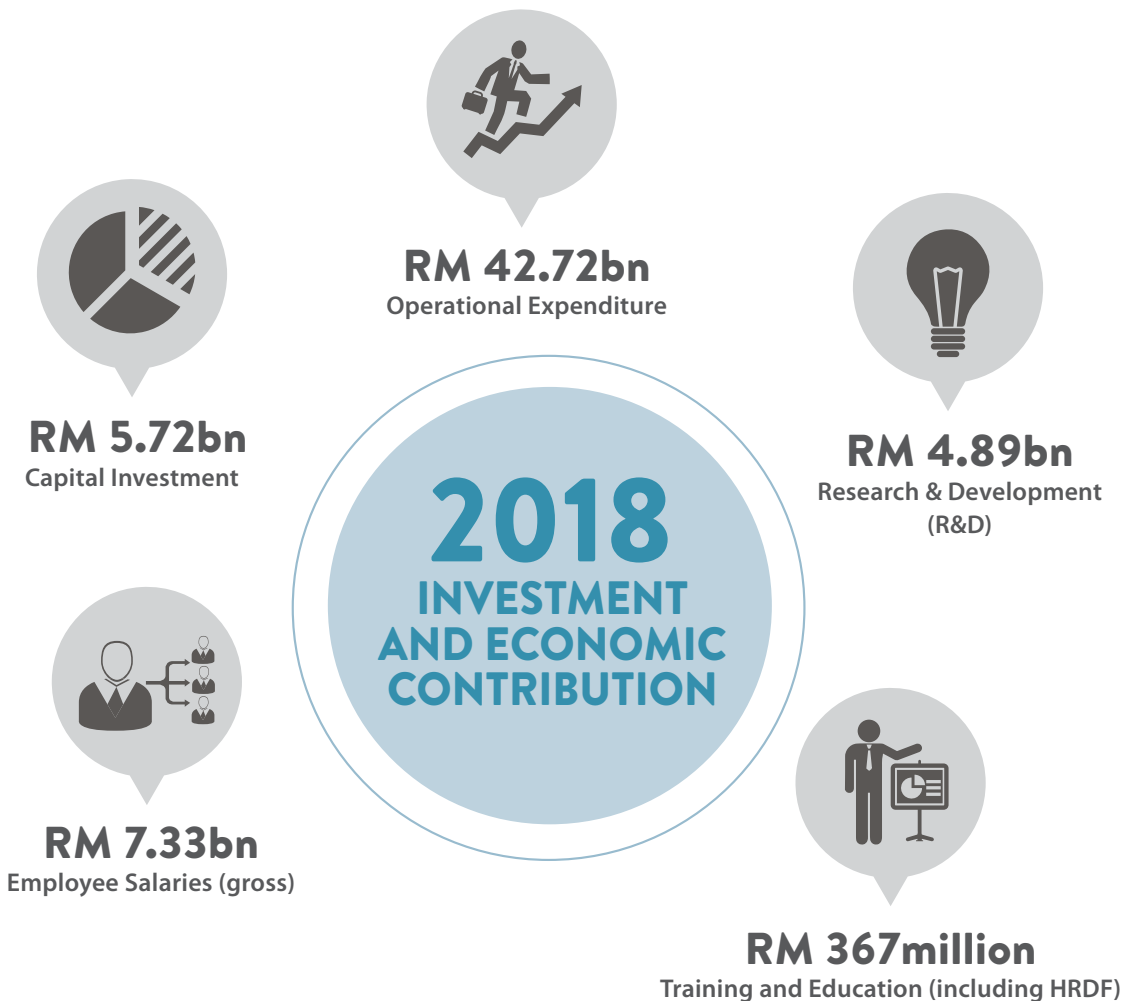
TOTAL HISTORICAL FDI BY SURVEY RESPONDENTS INTO MALAYSIA:



RM 78.57bn

Last year's survey identified RM 43bn of historical investment. This year's figure is larger due to:

- Inclusion of new respondents
- Greater data completeness
- Ongoing investment



CONTRIBUTION TO TRADE SURPLUS



Exported Goods

RM 212.71bn



SURPLUS

RM 130bn



Imported Goods

RM 82.70bn

Explanatory Notes:

Last year's survey identified a trade in goods surplus of RM27.81bn, noting that some large companies had been unable to share

For this year's survey, all survey respondents have provided trade data, and we also have additional data from new survey respondents.

Considering only the 28 companies that provided data last year, both imported goods and exported goods **increased by around 6%**

**Trade Surplus by
AMCHAM E&E
companies =
RM 130bn**

**Malaysia's total Trade
Surplus for 2018 =
RM 120.27bn**

Source: MATRADE

SUPPORTING THE DOMESTIC ECONOMY



Counting only contracts worth RM100k or more per year...

We have identified 9,193 relationships with local suppliers (goods + services)

Some duplication possible (i.e. Local SME serving 2 MNCs would count as 2)

Average of 248 relationships per respondent



RM 18bn

Total value of goods and services supply contracts with local companies in 2018

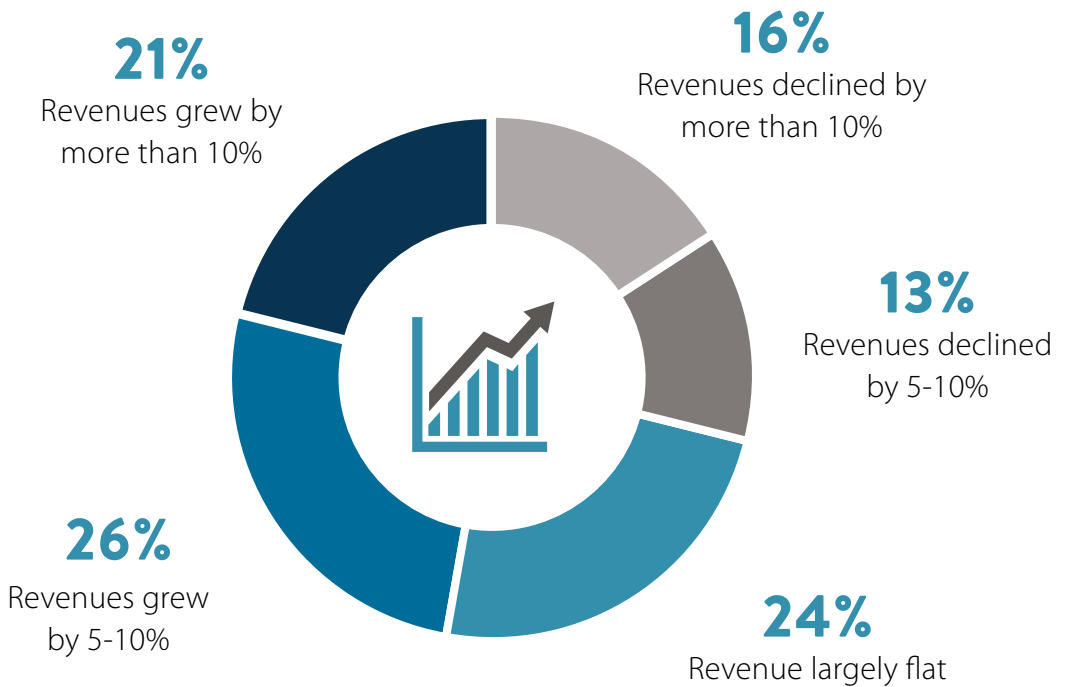


RM 1.90bn

Total TAXES paid in 2018 (both corporate income tax and personal income tax)



INDUSTRY PERFORMANCE

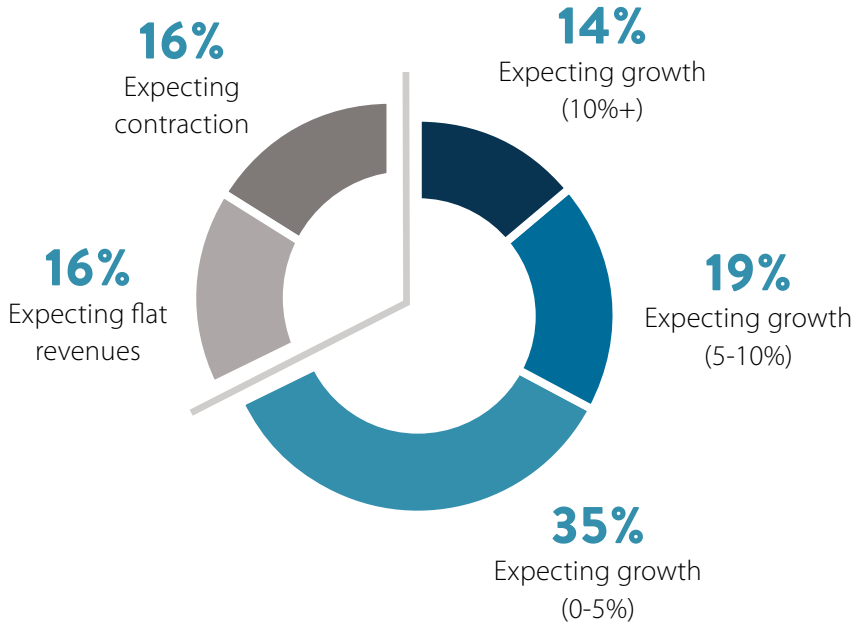


Mixed performance for 2018, with half of companies enjoying revenue growth and one quarter of companies remaining flat

INDUSTRY OUTLOOK

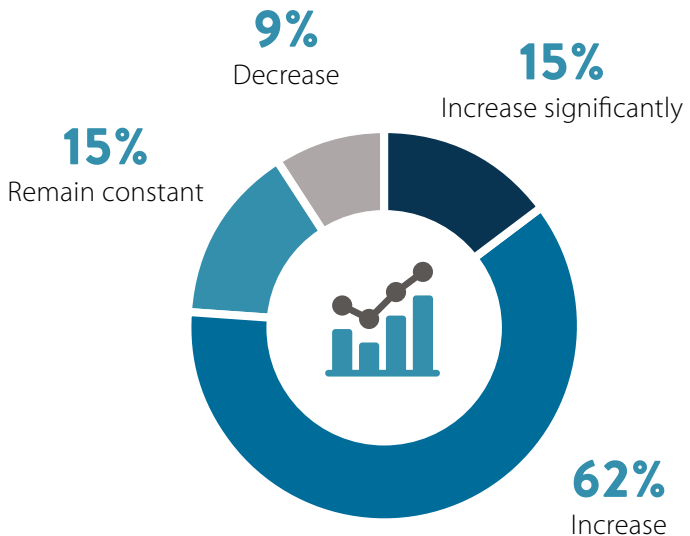
Outlook remains positive, with two thirds (68%) anticipating growth over coming years

However, note that future growth expectations have declined somewhat – in last year's survey, 89% of respondents expected growth in 2018



Furthermore, 76% of companies intend further investment over the next 5 years

Foreseen future investment is slightly **higher** than last year (70% of companies)



CREATING HIGH-SKILLED JOBS



100,000

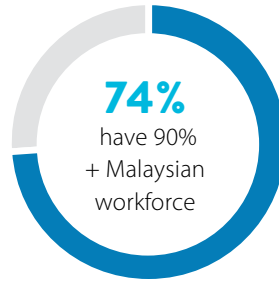
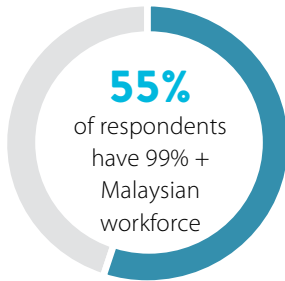
Total number of jobs created by survey respondents



70,000+

Jobs fulfilled by Malaysians

HIGHLY LOCALIZED WORKFORCE



HIGHLY SPECIALIZED



191

Ph.D. Holders



3,100

Master's Graduates



12,500

Skilled Engineers



7,500

Dedicated R&D jobs



5,600

Skilled jobs in Shared Services

PROGRESSING UP THE VALUE CHAIN

During 2018



VENDOR DEVELOPMENT PROGRAMS

In addition to **301 programs** identified in last year's survey...

18 MNCs have taken on new VDPs in 2018 with a total of **135 additional local companies.**



LEADING TOWARDS INDUSTRY 4.0

In 2018, **18 companies** made active investments in Industry 4.0 / automation technologies

78% of companies have integrated elements of Industry 4.0 into their operations

68% planning further Industry 4.0 investment over next 2 years



DEVELOPING INTELLECTUAL PROPERTY

Including 2018...

43 patents developed and registered in Malaysia

377 patents developed in Malaysia and registered overseas

4.89bn invested in R&D Activities in 2018



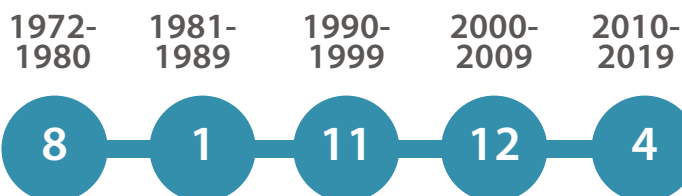
SURVEY RESPONDENTS

Malaysia has welcomed new American E&E investors every decade since the 1970s.



LONG-TERM INVESTORS

Year of first investment in Malaysia:



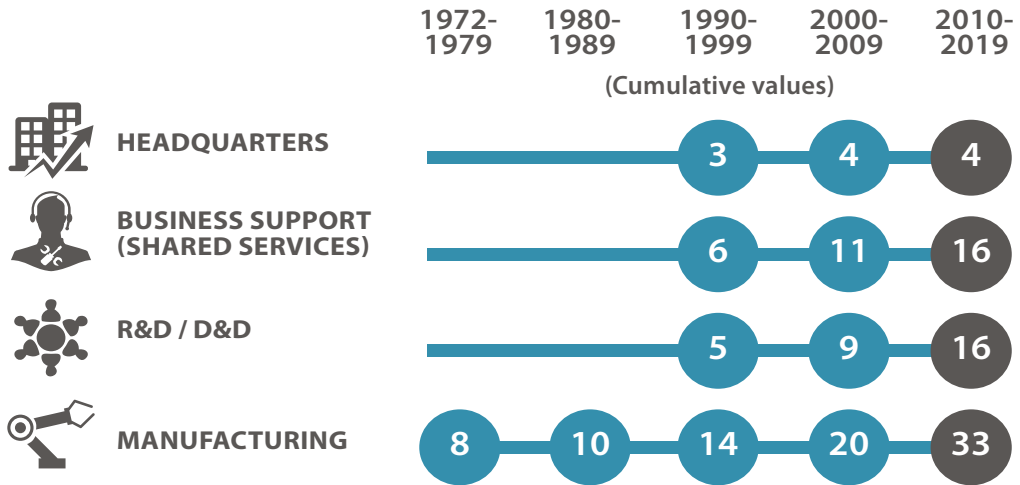
Our E&E members are mostly clustered around Penang and Klang Valley, though many states have received investments from American E&E companies.



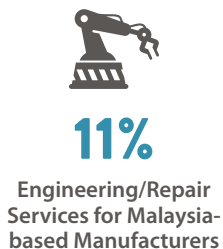
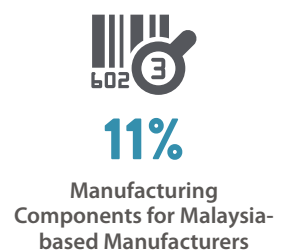
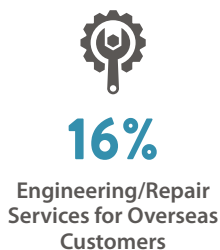
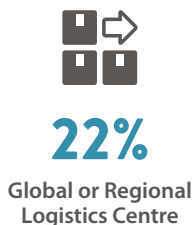
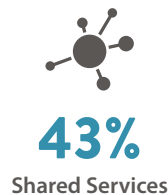
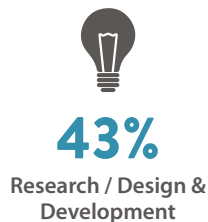
Number of investment in:

Penang	27
KL & Selangor	10
Kedah	5
Johor	4
Negeri Sembilan	3
Melaka	2
Perak	2
Sarawak	1
Putrajaya	1
Perlis	1

EVOLUTION AND UPSCALING OF COMPANIES

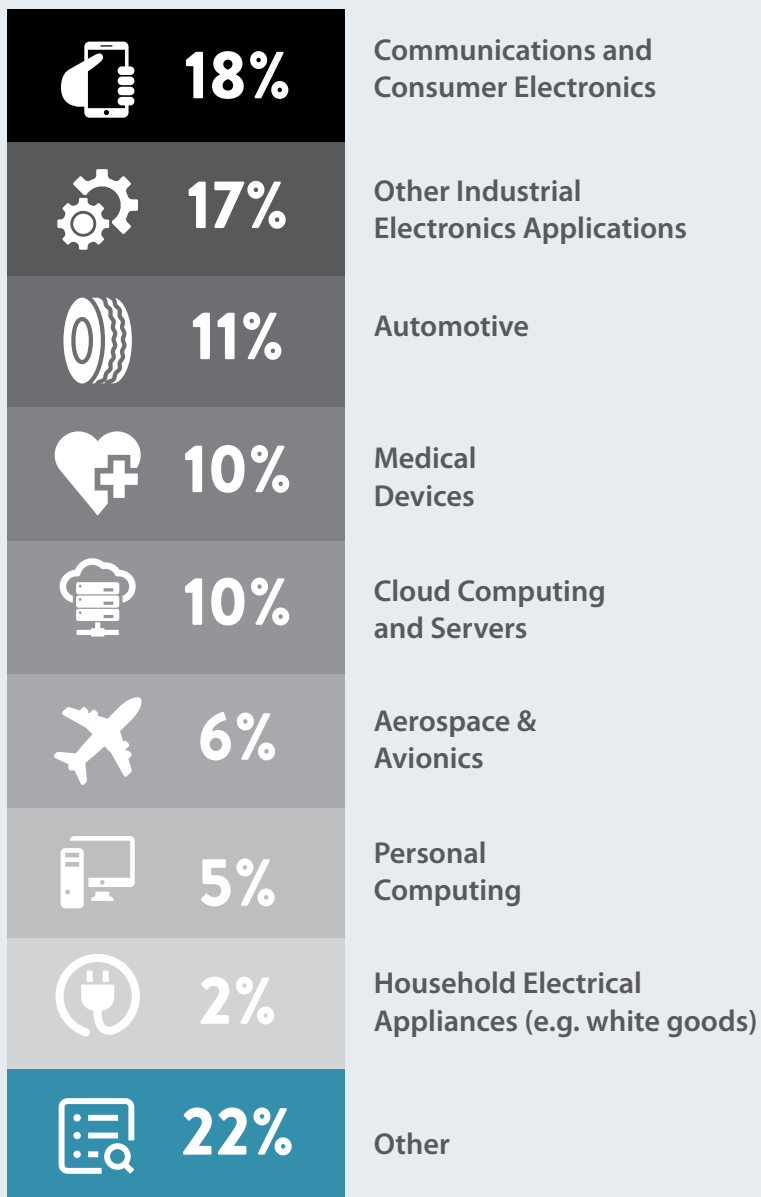


Source: Historical MAEI Annual Survey



SURVEY RESPONDENTS

E&E products made in Malaysia by AMCHAM members service a range of industries across the globe (updated for 2018)



ECONOMIC IMPACT SURVEY PARTICIPANTS

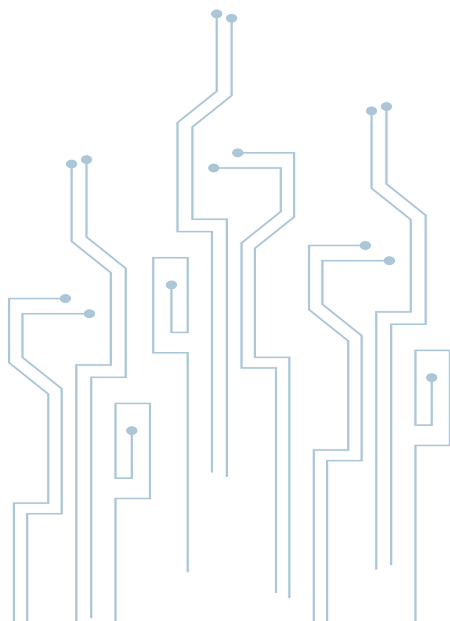
PARTICIPANTS FROM MAEI

- Agilent Technologies LDA Malaysia Sdn Bhd
- Analog Devices Sdn Bhd (Formerly known as Linear Semiconductor Sdn Bhd)
- Benchmark Electronics (M) Sdn Bhd
- Boston Scientific Medical Device (Malaysia) Sdn Bhd
- Celestica Malaysia Sdn Bhd
- Dell Global Business Center Sdn Bhd *
- Finisar (M) Sdn Bhd
- First Solar (Malaysia) Sdn. Bhd.
- Flextronics Malaysia Group
- Freescale Semiconductor Malaysia Sdn Bhd
- HP Inc.
- Integrated Device Technology (Malaysia) Sdn. Bhd.
- Intel Technology Sdn Bhd
- ITW Meritex Sdn Bhd
- Jabil Circuit Sdn. Bhd.
- Keysight Technologies
- Knowles Electronics (M) Sdn Bhd
- Lumileds Malaysia Sdn. Bhd.
- Microsemi Solutions Sdn Bhd
- Motorola Solutions Malaysia Sdn Bhd
- NI Malaysia Sdn. Bhd.
- ON Semiconductor Malaysia Sdn Bhd
- Plexus Manufacturing Sdn Bhd
- Samtec Asia Pacific (M) Sdn Bhd *
- Sensata Technologies (M) Sdn Bhd
- SMART Modular Technologies Sdn. Bhd.
- SunPower Malaysia Manufacturing Sdn. Bhd.
- Texas Instruments Malaysia & Texas Instruments Electronics Malaysia
- TF AMD Microelectronics (Penang) Sdn. Bhd *
- Western Digital Malaysia Berhad

* *First-time respondent*

OTHER E&E PARTICIPANTS

- Avago Technologies (M) Sdn. Bhd. (Broadcom) *
- Cypress Semiconductor (Malaysia) Sdn. Bhd. *
- Emerson Process Management Manufacturing (M) Sdn. Bhd.
- Paramit Malaysia Sdn Bhd
- Renesas International Operations Sdn. Bhd. (Intersil International Operations)
- Sandisk Storage Malaysia *
- Sanmina-SCI Systems (M) Sdn Bhd
- Seagate International (Johor) Sdn Bhd





ABOUT AMCHAM MALAYSIA

AMCHAM has been the “Voice of U.S. Business in Malaysia” since 1978. We are a membership-based, wholly independent and not-for-profit business organization.

We represent around 270 companies (mostly American MNCs) that are active in Malaysia

Members are from a diverse range of industries, key sectors include E&E, Healthcare, FMCG, Logistics, Oil & Gas, Financial Services, Digital Technology, and Consultancy.

AMCHAM helps our members to provide collective inputs to the Government of Malaysia on a range of policy matters.

We also serve as a platform for members to share knowledge and best practices within our community.



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