

## **Article Title: To Create An Equilibrium: NXP's Resolve**

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Malaysia is an export-reliant developing nation. Exports alone account for 61.5% of Malaysia's total Gross Domestic Product (*GDP*) (The World Bank, 2021). At its core, the exports of electrical and electronic (*E&E*) products persist as our GDP's main contributor with RM 386.11 billion, which constitutes 39.4% of total exports. However, as we familiarise ourselves with the events of the pandemic, it should be noted that nearly all segments of the economy have been disrupted in some way or another. As the final piece to our Journalism chronicle, we take a deeper dive into one of , if not the most influential economic segments in Malaysia: the Electrical and Electronics (*E&E*) industry, further attaining an insightful portion of economic knowledge, integral to improving financial literacy amongst the youths.

FLY Malaysia Journalists Ernie and Fen Ying therefore, had the honour of interviewing Dr. Eu Poh Leng, Director of External Package Innovation with over 24 years of experience in NXP Semiconductors Malaysia to understand the types of pandemic disruptions to the E&E industry.

NXP Semiconductors is a global semiconductor company included in the S&P 500 Index and is actively making advancements in different technological segments, notably automotive, industrial, and communication infrastructure just to name a few. Dr. Eu has been actively involved in the development and introduction of new technology and products in internal and external factories. She has since published 65 technical papers and 4 journals, and is the owner of 23 filed and 11 issued patents.

### **Malaysia as a Major Player within the Industry**

When asked what specific specialty Malaysia has to become a major player in the E&E industry, Dr. Eu explained that our nation has an ample supply of talents in the workforce available for hire at a cost-effective wage, which helps Malaysia gain an upper hand. In Malaysia, there are currently 14 universities supplying ample engineering graduates each year, which will then provide a vast pool of talents to sustain and grow the E&E industry.

Secondly, Malaysia currently has a full range of companies in different segments to support the entire semiconductor value chain. For example, *Mitsui Leadframe* and *Showa Denko* manufacture semiconductor materials, *NXP* and *Intel* are advanced semiconductor packaging and testing factories, while *Pentamaster Corporation Berhad* manufactures automated test equipment.

### **Industry Challenges Amidst The Pandemic**

Dr. Eu emphasised that the COVID-19 pandemic has caused soaring demand for technological appliances such as personal computers, tablets, smartphones, and home appliances. Subsequently, this has resulted in a supply shock that triggered an unprecedented global shortage.

With this prospect on the industry's future, Dr. Eu then stated that the greatest challenge that could potentially be faced by the E&E industry would be obtaining material supplies with

longer lead times, specifically the duration between when an order for a material is placed and when it actually gets filled. She then references [Susquehanna Financial Group](#), an industry data distributor, that the average lead time for semiconductor chip supply has stretched to 15 weeks on average in February 2021.

### **NXP's Resolve**

To address the global shortage of semiconductors, Dr. Eu affirmed that NXP Semiconductors Malaysia has persisted to work tirelessly in efforts to keep up with demand.

*“NXP's production strategy is Supply, Supply, Supply.”*

When questioned what the key strategy was behind the success of the company's mitigation of such a disruption, Dr. Eu mentioned that all NXP factories in Malaysia have continuously run with optimum capacity to maximise production and meet the rising demand.

*“To help mitigate raw material and tool shortages, NXP had also placed orders way ahead of time to ensure the timely delivery of materials and tools in order to match the needs of production and supply. Regular meetings are also held with suppliers to help ensure supply.”*

Dr. Eu also highlights asset specificity as an integral part in NXP's production strategy as the company ensures the provision of regular training to its employees due to its belief in the enhancement of their soft and technical skills.

*“During the pandemic, regular training still proceeds as planned. An exception to these plans would be during the implementations of lockdowns or when the company had to ensure workforce control. During those times, training that could have been conducted online were held accordingly, but hands-on training which could only be done through physical onsite sessions were delayed and implemented at a later timing.”*

### **An Industry Leader's Advice to Fresh Graduates**

Having vast experience in the E&E industry whilst personally having climbed the corporate ladder herself, Dr. Eu has been kind enough to provide some advice for fresh graduates interested in pursuing a career in the E&E industry. She noted that despite the world's present circumstance, the semiconductor industry is currently thriving and is actively sourcing for new graduates to meet the rising demand. Therefore, fresh graduates should be on the lookout to hand in their applications.

When asked to elaborate on the skills and knowledge fresh graduates should aim to be equipped with in order to form a competitive advantage amidst the growing competition within the semiconductor industry, Dr. Eu proposed the list below in assurance to better prepare fresh graduates for the semiconductor world:

1. Good understanding of the semiconductor supply chain: Both Front-End and Back-End processes and needs.
2. Statistical knowledge: Design of Experiment, Response Surface Methodology, and DMAIC.

3. AI knowledge: Machine Learning and Deep Learning
4. Simulation knowledge: Mechanical Simulation, Electrical Simulation, and Thermal Simulation.
5. Program management skills: How to manage a project effectively.
6. Leadership skills: How to lead a team confidently.
7. Public speaking and public presentation skills: How to share your ideas convincingly.
8. Being a team player: Able to work well in a team, able to receive and follow instructions from a leader, able to go the extra mile, able to provide constructive ideas and bring solutions to the table to help the team succeed.
9. Being a creative and positive thinker: Able to think out-of-the-box, able to provide new and more efficient ways of doing a certain task, never take “no” as an answer until all means have been exhausted.

### **Hopes For The Future**

When asked about her future outlook and hopes for Malaysia’s E&E industry on the road to recovery post-pandemic, Dr. Eu noted considerable growth in their market segments, most prominently in their industrial and Internet of Things (IoT) sectors despite the uncertainties of the pandemic.

Moving forward, Dr. Eu hopes to see the E&E industry in Malaysia grow to greater heights in terms of the industry’s output capacity, technical capability and product cost competitiveness. She also firmly believes that her hopes can be achieved with both higher investments and long-term planning by existing E&E companies in Malaysia, as well as greater foreign investments to bring up new E&E facilities in Malaysia.

### **References**

data.worldbank.org [n.d.]. *Exports of goods and services (% of GDP)*. [online]

Available at :

<[https://data.worldbank.org/indicator/NE.EXP.GNFS.ZS?most\\_recent\\_value\\_desc=false](https://data.worldbank.org/indicator/NE.EXP.GNFS.ZS?most_recent_value_desc=false)>

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