

A decorative graphic on the left side of the slide, consisting of a network of light blue lines and circles that resemble a circuit board or a neural network. The lines are vertical and horizontal, with small circles at various points, creating a complex, interconnected pattern.

CREATING A HIGH-VALUE MANUFACTURING SECTOR THROUGH STEM

The background is a gradient of blue, transitioning from a lighter shade at the top to a darker shade at the bottom. In the four corners, there are decorative white line-art elements that resemble circuit traces or a stylized tree structure, with small circles at the end of the lines.

Ideal growth is a balanced growth among
agriculture, services and industry

MANUFACTURING SUB-SECTORS BY TECHNOLOGY

- Low Technology
 - Medium Technology
 - High Technology
- High-Value Manufacturing



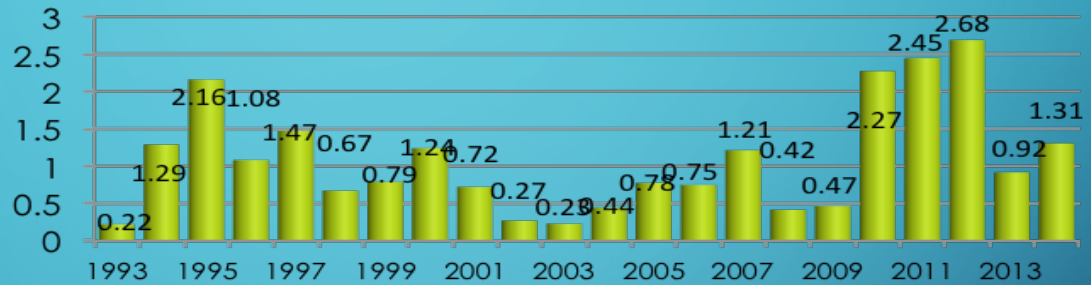
Value Add

DECLINE IN MANUFACTURING IN THE PHILIPPINES

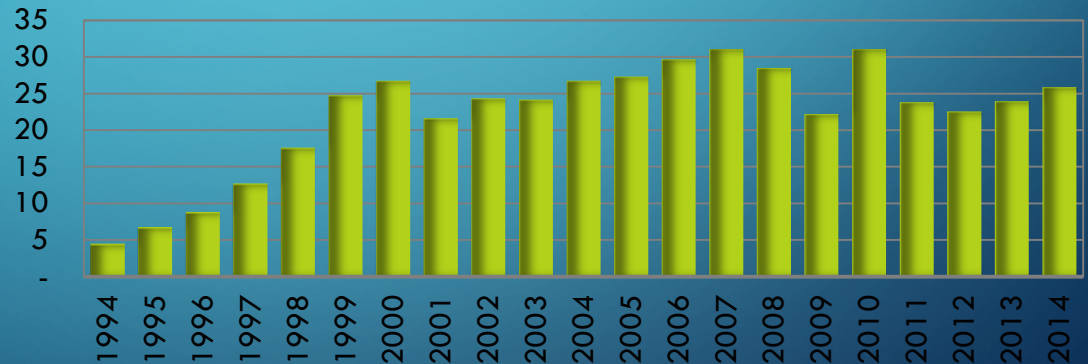
- 1980 to 2000: approximately 25% of GDP
- 2009: down to 21%
- 2014: better at 23%

SEMICONDUCTOR AND ELECTRONICS INDUSTRY

- Investments in US\$B



- Exports in US\$B



REASONS FOR THE DECLINE

- Relatively high cost of doing business
- Inadequate and deteriorating infrastructure
- Reduction in trade barriers and competition from lower cost economies
- Growth of the services sector which attracted the skilled labor force

ARRESTING THE DECLINE

- Cost Reduction
 - Improve Quality and Reliability
 - Higher Efficiency and Productivity
 - Manufacturing Automation
- Move up the Value Chain
 - Original Design Manufacturing
 - Manufacturing Process Development

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Requires Science and Engineering Talent

DO WE HAVE THE STEM RESOURCES?

- Yes, but not enough
- Slight mismatch between what is supplied by the Academe and what is needed by industry



THERE IS A LOT OF HOPE FOR HIGH-VALUE MANUFACTURING IN THE PHILIPPINES

- Ongoing STEM Human Resource Development
 - Government Support for industry
 - Positive Investment Climate
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