# GREENER BUSINESS ASIA Philippines

Validation Meeting 22 June 2010 Manila, Philippines

# Purpose of Research

> To provide guidance as to:

the selection of the sector of focus for the practical intervention

the direction and design of the subsequent enterprise level intervention

# Objective of Research

To understand the current state of knowledge & practice, challenges & opportunities with regard to addressing environmental challenges in the workplace in chosen sectors

# Examining Green Potential and Readiness of Selected Sectors

The Cases of the AUTOMOTIVE, ELECTRONICS & CONSTRUCTION SECTORS

#### **Sector Shortlist Selection Criteria**

|              | Technology<br>Profile<br>(Sector<br>Profiles) | Occupational<br>Injuries<br>Incidence<br>Rates 2003<br>(BLES) | Labor Productivity 2007 In P at constant 1985 prices (BLES) | CO2 Emissions Contribution IN 000 MT  (World Resources Institute) | CC<br>Impacts<br>On<br>Supply Chain<br>Activities |
|--------------|---|---|---|---|---|
| AUTOMOTIVE   | Predominantly<br>Japanese                     | 16.01 *   | 82,775**  | 24 (34%)***   | Operations  |
| ELECTRONICS  | Predominantly<br>Japanese                     |   |   | 11(15%)   |   |
| CONSTRUCTION | Insignificant<br>Japanese<br>influence        | 13.61   | 34,795  |   | Inbound logistics<br>Operations<br>Services       |

#### Note:

- \* Manufacturing Total
- \*\* Manufacture of Machinery & Eqpt
- \*\*\* Transport

#### **SECTOR SELECTION CRITERIA**

- 1. Supply chain linkage with MNEs
- 2. Appropriate size of supply chain base
- 3. Employment generation potential
- 4. Hospitable environment towards green practice
- 5. Management systems in place
- 6. Geographic concentration of production activities
- 7. Linkage with ILO Employer organization
- 8. Strong tripartite partnerships
- 9. Unionization
- 10. Voluntary environmental & energy conservation standards
- 11. Trade measures
- 12. Readiness to implement
- 13. Risk posed to environment

## **Key Findings**

The objectives and interest of the technology source (Japanese) are perfectly matched with those of the automotive & electronics sectors.

• While the construction sector exhibits enormous green jobs and green growth potential, its insubstantial links with the technology source may lead to issues of adaptation of technologies to local conditions, their assimilation and diffusion and sustainability of capabilities created.

#### **Sector Profile**

| Automotive   | Electronics   | Construction   |   |
|--|---|--|---|
| <ul> <li>Motor vehicle assembly -56 assemblers</li> <li>Components -256 suppliers 126 1st tier 132 2nd-3rd tier</li> </ul> | <ul> <li>Semicon</li> <li>EDP</li> <li>Automotive</li> <li>Consumer</li> <li>Office Eqpt.</li> <li>Comm/Radar</li> <li>Control/Inst</li> <li>Medical/Ind.</li> <li>Telecomm</li> <li>912 companies</li> </ul> | <ul> <li>Marble</li> <li>Ceramic</li> <li>Woodworks</li> <li>Sanitary Wares and Fixtures</li> <li>Cement</li> <li>Iron &amp; Steel</li> <li>Glass</li> <li>Aluminum</li> <li>Plywood &amp; veneer</li> <li>PVC, plastic &amp; vinyl</li> </ul> | <ul> <li>Wood of fiber –reinforce concrete</li> <li>Lightweight concrete</li> <li>Bamboo tiles</li> <li>Light guage steel sections</li> <li>Asbestos</li> <li>Lead</li> <li>Base-metal</li> <li>Paints &amp; Varnishes</li> </ul> |

#### Supply Chain Linkage with MNEs

| Automotive 🗸  | Electronics<br>✓                                     | Construction   |
|---|--|--|
| <ul> <li>Japanese MNEs<br/>presence dominant</li> </ul> | <ul> <li>Japanese MNEs<br/>presence large</li> </ul> | <ul> <li>Japanese MNEs<br/>presence large</li> </ul>       |
|   | But number smaller<br>than that of<br>automotive     | But number smaller than that of automotive and electronics |
| • 21 MNEs/28  | • 20 MNEs/43   | • 8 MNEs/16  |

Source: BusinessWorld Top 1000 Corporations, 2008

#### Size of Supply Chain Base

| Automotive <a></a>  | Electronics<br>✓  | Construction<br>✓   |
|---|---|---|
| <ul> <li>Micro_ 536</li> <li>Small_ 19</li> <li>Medium_ 120</li> <li>Large_ 28</li> </ul> | <ul> <li>Micro_ 142</li> <li>Small_ 278</li> <li>Medium_ 122</li> <li>Large_ 206</li> </ul> | <ul> <li>Micro_ 1,352</li> <li>Small_ 976</li> <li>Medium_ 84</li> <li>Large_ 73</li> </ul> |

#### *Note:*

Micro \_ > 10 Small \_ 10-99 Medium \_ 100-199 Large \_ 200 and over

Source: National Statistics Office, 2006

## **Direct Employment**

| Automotive   | Electronics<br>✓  | Construction<br>✓   |
|--|---|---|
| <ul><li>2004_ 39,000</li><li>2008_ 31,000</li><li>(-20%)</li></ul> | <ul><li>2004_ 310,000</li><li>2008_ 370,000</li><li>(19.45%)</li></ul>        | <ul><li>2004_ 1,700,000</li><li>2008_ 1,834,000</li><li>(7.83%)</li></ul> |
| <ul> <li>Number of employed<br/>lowest of the three</li> </ul>     | <ul> <li>Number of employed<br/>higher than that of<br/>automotive</li> </ul> | <ul> <li>Number of employed<br/>highest</li> </ul>                        |
| <ul> <li>Employment growth negative</li> </ul>                     | <ul> <li>High employment growth</li> </ul>                                    | <ul> <li>Employment growth positive</li> </ul>                            |

Source: Bureau of Labor and Employment Statistics, 2008 Office, 2006

# Hospitable Environment

| Automotive 🗸                                      | Electronics<br>✓              | Construction  |
|---|-------------------------------|---|
| <ul> <li>Green is an industry standard</li> </ul> | Green is an industry standard | <ul> <li>Green is an industry<br/>standard for some<br/>industry segments<br/>only</li> </ul> |

## Management Systems

Construction **Automotive Electronics** Formality in systems Formality in systems Formality in some indicated indicated systems indicated Employment, financial, Employment, financial, Employment, financial, production and production and production and environmental data environmental data environmental data available at enterprise available at enterprise available at enterprise level level level

# Geographic Clustering

| Automotive<br>✓  | Electronics<br>✓   | Construction   |
|--|--|--|
| <ul> <li>CALABARZON and<br/>NCR</li> </ul>                                 | EPZs/SEZs and NCR  | • Dispersed  |
| <ul> <li>Priority sector in the<br/>Export Development<br/>Plan</li> </ul> | <ul> <li>Priority sector in the<br/>Export Development<br/>Plan</li> </ul> | <ul> <li>Priority sector in the<br/>Export Development<br/>Plan</li> </ul> |

## Linkage with ILO Employers Org.

| Automotive | Electronics | Construction |
|------------|-------------|--------------|
| ✓          | ✓           | ✓            |
| • ECOP     | • ECOP      | • ECOP       |

# **Tripartite Collaborations**

| Automotive 🗸  | Electronics                    | Construction<br>✓   |
|---|--------------------------------|---|
| <ul> <li>Presence of industry tripartite council         (Automotive         Assembly Industry Tripartite Council)</li> </ul> | No industry tripartite council | <ul> <li>Presence of industry tripartite council</li> <li>(Construction Industry Tripartite Council)</li> </ul> |

#### Unionization

| Automotive <a></a> | Electronics<br>✓ | Construction<br>✓ |
|--------------------|------------------|-------------------|
| • Registered_ 21   | • Registered_ 40 | Registered_ 266   |

Source: Bureau of Labor Relations, June 2009

#### **Energy & Environmental Standards**

Automotive Electronics Construction ISO 14001 and QS • ISO 14001 BERDE (Building for 9000 (required by **Ecologically** assemblers among Responsible Design 1st to 2nd tier Excellence) suppliers) **Philippines** LEED (Leadership in **Environment and** Energy System) – US ISO 14001 but sporadically

#### **Tariff Structures**

#### Automotive

#### Electronics

#### Construction

- Under JPEPA:
- Tariff elimination for 6-10 ton buses by 2010
- ➤ Tariff elimination for components/parts/accessories under the motor vehicle devt. Program, may be delayed up to 2013, subject to ongoing negotiations
- Vehicle remain protected depending on cylinder capacity (>3000cc, 30% tariff rate:< 3000cc, 20% subject to negotiations)

Source: JPEPA

- Under JPEPA:
- > Immediate tariff elimination for
- Office machines
- Automatic data processing machines
- Electrical machinery & parts
- Telecom equipment
- Sound recording equipment

- Under JPEPA,
- ➤ Tariff elimination for portland cement on the sixth year of the agreement (2013)
- Immediate tariff elimination for machinery/machine tools (e.g. machinery for crushing earth)

# Readiness to implement

| Automotive 🗸   | Electronics<br>✓   | Construction<br>✓   |
|--|--|---|
| <ul> <li>Views training<br/>support to be<br/>favorable esp. for the<br/>supply tiers beyond<br/>the 1<sup>st</sup> &amp; 2nd</li> </ul> | <ul> <li>Views training<br/>support to be<br/>favorable</li> </ul> | <ul> <li>Green Building         Council has made         representations with         DOLE on a green         skills collaboration</li> </ul> |

### Risks posed to environment

| Automotive<br>✓   | Electronics<br>✓   | Construction<br>✓   |
|---|--|---|
| <ul> <li>Environmental emissions associated with paint processes</li> <li>vehicle engines</li> </ul>                                    | <ul> <li>Industrial pollution<br/>from waste water, the<br/>use of lead, ozone-<br/>depleting solvents<br/>and volatile organic<br/>compounds</li> </ul> | <ul> <li>Construction         responsible for one-         third of our energy         use, raw material         use, waste output         and greenhouse gas         emissions.</li> </ul> |
| <ul> <li>Need to reduce<br/>energy requirement<br/>for both the finished<br/>product &amp; the<br/>manufacturing<br/>process</li> </ul> | <ul> <li>Need to reduce<br/>energy requirement<br/>for both the finished<br/>product &amp; the<br/>manufacturing<br/>process</li> </ul>                  | <ul> <li>Need for strategies<br/>for sustainable site<br/>development, water<br/>savings, energy<br/>efficiency, materials<br/>selection &amp;<br/>environmental quality</li> </ul>         |

| Criteria   | A        | E        | С |
|--|----------|----------|---|
| Supply chain linkage with MNEs                       | <b>√</b> | <b>√</b> |   |
| 2. Appropriate size of supply chain base             | ✓        | ✓        | ✓ |
| 3. Employment generation potential                   |          | ✓        | ✓ |
| 4. Hospitable environment towards green practice     | ✓        | ✓        |   |
| 5. Management systems in place                       | ✓        | ✓        |   |
| 6. Geographic concentration of production activities | ✓        | ✓        |   |
| 7. Linkage with ILO Employer organization            | ✓        | ✓        | ✓ |
| 8. Strong tripartite partnerships                    | ✓        |          | ✓ |
| 9. Unionization rates                                | ✓        | <b>√</b> | ✓ |
| 10. Voluntary environmental standards                | ✓        | ✓        | ✓ |
| 11. Trade-Environment related measures               | ✓        | ✓        | ✓ |
| 12. Readiness to implement                           | ✓        | ✓        | ✓ |
| 13. Risk posed to environment                        | ✓        | ✓        | ✓ |

## **Key Findings**

The objectives and interest of the project technology source are perfectly matched with those of the automotive & electronics sectors.

• While the construction sector exhibits enormous green jobs and green growth potential, its insubstantial links with the project' technology source may lead to issues of adaptation of technologies to local conditions, their assimilation and diffusion and sustainability of capabilities created.

#### **Key Question**

• What will be the sector of choice for the practical intervention?

#### Institute for Labor Studies

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