# E-Waste Management: The Case of Indian IT Sector

Logakanthi Subramanian
PhD -Year 3
School of Environment and Development



E-waste

## **Outline of this presentation**

- Background of the research
- Research approach
- Findings
- Way ahead

## Research background

- •E-waste a growing concern in developing countries
- •No separate regulation to manage e-waste in India until recently
- •The new regulation for e-waste management based on EU WEEE
- •The attitude towards e-waste
- •Growth and contribution of IT service sector to economy

# Knowledge gap

- •E-waste management is a new field of research
- •Stakeholders Producers, consumers and recyclers



- •Consumer types Household and Business/Bulk consumers
- •Indian IT sector as a bulk consumer

### **Aim**

The aim of the current research is to understand the structure and mechanism that underpins the management of e-waste in the IT/ITES sector so as to understand a bulk consumer behaviour and evolve a framework for better e-waste management.

## **Objectives**

- •Develop a conceptual model of factors influencing e-waste practices in the IT bulk consumer
- •Understand the current practices prevalent in the sector for e-waste management
- •Identify the factors influencing the current practices for e-waste management
- •Trace the path of e-waste among the stakeholders to identify the value-chain in operation
- Develop a framework for the management of e-waste

### **Research Questions**

- •What is happening?
  - What are the organizations doing about e-waste?
  - How are they doing it?
  - What difficulties they are posed? Etc.
- •Why it is happening?
  - When did the practice start? Why?
  - What influence does CSR, Regulation, client requirement, etc. have on their practice and so on

# **Methodology**

- Qualitative research
- Semi- structured interviews and document analysis
- Very Large (5) Large IT (5) and SME IT (10) Manufacturers (3) and Recyclers (5)
- Interviews were also done with regulators and other organizations working for e-waste management like GTZ, MAIT, NASSCOM, NGOs like Toxic Links, Greenpeace, etc.

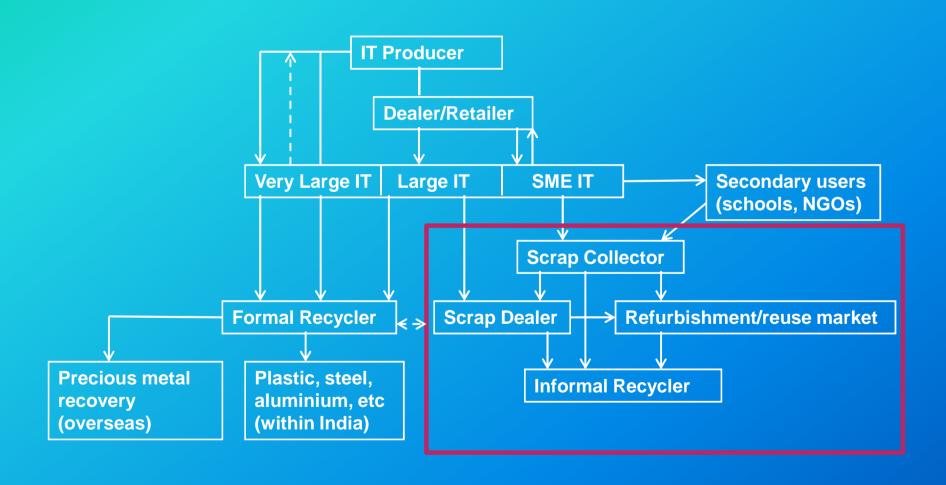
## Research procedure

- Literature review
- Pilot study
- Conceptual model
- Field work (interviews, document analysis & observations)
- Data coding and analysis
- Findings and outcomes

# **Findings**

- Material flow
- Factors influencing the practice
- •Challenges to the system
- •Development of a framework

### **Material Flow**



### Levels of e-waste management practice

Non-compliant

Compliant

Compliant plus

SME IT

Some Formal Recyclers formal Recyclers Large IT
Some Formal
Recyclers

Very Large IT IT producers



# Factors determining e-waste management practice

- External factors
  - Brand Image
  - Client requirement
  - Peer pressure
  - Regulation

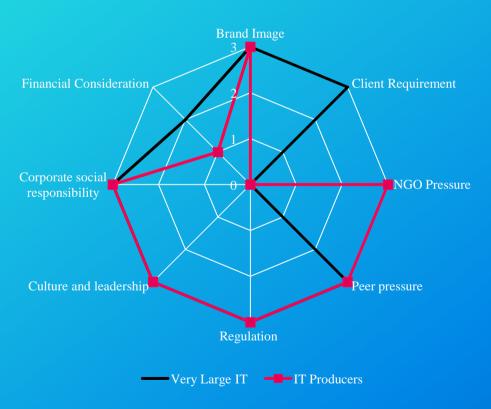
- Internal Factors
  - Corporate culture and leadership
  - o CSR
  - Financial factors

# **Enabling factors**

- •EMS
- Awareness
- Availability of formal recyclers

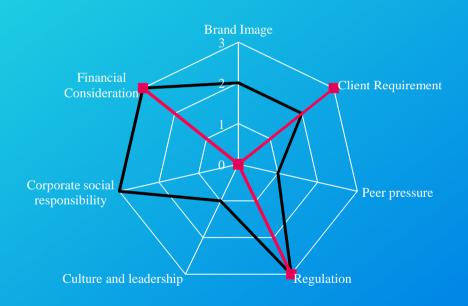
# **Compliant plus**

#### **Compliant plus**



# Compliant

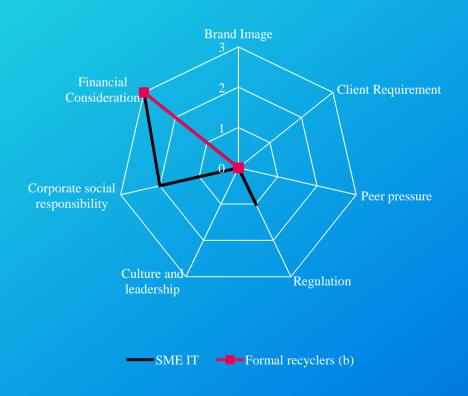
### Compliant



Large IT —Formal Recyclers (a)

# **Non-Compliant**

#### Non-compliant



# Challenges

- •Low awareness
- Availability of collection mechanism
- Participation



# Development of a framework

Improve awareness

Establish collection system

Incentivising collection

# Thank you!



Reduce, Reuse, Recycle!