Environmentally conscious supply chain – Yan Zhang

The significant growth in the world economy has brought a rapid development in technology and broad international trade opportunities. But it is accompanied by the rise in environmental problems. These problems such as depletion of ozone layer, global warming, deforestation and soil erosion are integrated outcome of the industry's many sources of pollution. Environment has an increasingly important stake in daily business administration.

The environmentally conscious supply chain, addressing the whole network of the product life cycle from raw materials to end customers, is an integrated method for environmental management. This paper attempts to establish a model for choosing environmental friendly partners for business. The model, based on typical traditional supply chain for the electronic industry, is a heuristic model designed to optimally reduce the adverse environmental impacts due to inefficient management of the supply chain and invalid operation. The elemental difference in the traditional supply chain and environmentally conscious supply chain for electronic industry are identified. Environmental external costs are evaluated according to current environmental economical theories. An environmentally conscious supply chain model is built to help the logistic managers make more informed decisions. This thesis also address how to solve problems in supply chain decision making, and provides an example, based on operational research, to solve conflict between environmental issues and corporate profit.