The research represents an investigation of the Danish weight basis tax applied on industrial non-beverage packaging commodities with focus on paper/paperboard and plastic packaging. The main research objective is the determination of policy effectiveness in terms of the ability to reduce packaging demand in each case. Furthermore, the study includes four additional complementary objectives. The first one is the determination of economical consequences in terms of costs and benefits as a result of the effective policy. Secondly, the research establishes the environmental benefits accruing to various stakeholders as a result of the successful Danish policy implementation. Additionally, cost-benefit analysis incorporating economic and environmental items is performed to realize the overall impact of the policy. Finally, in the case of policy ineffectiveness, the investigation advances alternative policy proposals that would be in turn achieve the goal of reducing packaging demand.

In determining the policy effectiveness, the research performs trade gravitation modeling for packaging demand in each case (paper/paperboard and plastics). The taxation policy impact is determined by means of a binary dummy variable included amongst the explanatory variables. The models include results reveal the policy being effective only in the case of paper/paperboard packaging whilst it was ineffective in the case of plastic packaging. Additionally, in the case of paper/paperboard packaging where the policy was effective, input-output impact analysis is carried out to determine the induced output losses in the exporting countries i.e. Germany, the Netherlands, Norway, Finland and France. All calculations were based on paper/paperboard packaging demand unit (1 ton). Furthermore, the research determines the environmental benefits accruing to these countries in terms of reduced CO₂ and BOD emissions. Furthermore, calculations of environmental benefits associated with reduced paper/paperboard packaging waste in Denmark were carried out as well. In the end, cost-benefit analysis summarizing all economic and environmental items was conducted under three scenarios. In all scenarios, costs hugely out-weighted the benefits. In the case of plastic packaging, where the policy was ineffective, alternative policies were suggested enabling positive technological changes leading to improved packaging consumption. Furthermore, assuming that one such technological change occurred, the study simulates the event revealing the benefit
in terms of reduced packaging demand.

Remark: The summary of the dissertation should be written on A4-size pages and should not exceed 4,000 Japanese characters. When written in English, it should not exceed 1,500 words.