

## **Are Non-Tariff Measures (NTMs) Promoting or Deterring Trade? A Case Study on Mango Exports from Sri Lanka**

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Tropical fruits have a higher demand from international market and many countries in the tropics can capitalize on this opportunity to earn foreign exchange. Accessing the international fresh fruit market is constrained by the non-tariff measures (NTMs). Better understanding of the nature of NTMs and their effects is a pre-requirement to enter the international fresh fruit market. This study focuses on mango exports from Sri Lanka, NTM related rejections, main NTMs facing mango exports from Sri Lanka, and analyses the effects of NTMs on mango exports. To extract the mango internal and external rejections National Plant Quarantine Service (NPQS) database were used. To identify and classify the main NTMs affecting mangos, the frequency and coverage ratios were calculated using the UNCTAD TRAINS database. To determine the effect of NTMs on mango exports from Sri Lanka, two gravity models were estimated using a panel data set. Bilateral exports of mango at HS 6-digit level were regressed against NTMs for 16 countries for the period 2000 to 2021. The total number of NTMs and specific NTMs related to Sanitary and Phytosanitary (SPS) conditions (A8) were included in the models. The results shows main reasons for internal and external rejections were the presence of pests namely seed weevil and fruit fly and absence of phyto-certification. The incidences of NTM revealed that mango exports in Sri Lanka are critically regulated by SPS, Technical barriers to Trade (TBT), and pre shipment inspection formalities (PSI). The results of the gravity model indicate that TBT, and PSI have positive effects, and total NTMs, SPS, and conformity assessment of SPS have negative effects on mango exports. The results imply NTM and NTM related measures have a considerable impact on mango exports in Sri Lanka illustrating the need to keep higher attention on NTMs to enhance fresh fruits exports.

**Keywords:** Coverage ratio, Frequency ratio, Gravity model, Incidence approach, Non-tariff measures

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