An important part of the calculations of GDP is the balancing of the supply and use in the economy in the framework of supply and use tables. At Statistics Sweden today, this work is mainly done manually; a quite resourcedemanding undertaking. We propose an alternative balancing approach, making use of the existing framework of supply and use tables and utilizing the uncertainties of input data as weights. From the balanced results, the GDP estimates can be induced, along with their uncertainties. The approach, basically a generalized least-square using the uncertainties of input data as weights, origins from Stone et al (1942). It provides an automatic and fairly objective way of conducting the balancing process compared to the manual (and somewhat subjective) methods used today. It also gives valuable insights into the uncertainties of various input data sources. We present empirical results from a recent evaluation of the method in the production environment of Statistics Sweden. The main challenge proved to be the in-house collection of all necessary information on uncertainties.