Given China’s high involvement in globalization and the serious regional inequality, the issue how the globalization extends inside China has aroused high attention in academia. However, the existing studies ignore a pronounced feature of China’s foreign trade: the prevalence of processing trade with uneven distribution between regions. Due to the distinctive input structure of processing exports, the previous studies which fail to separate the processing exports apart from other productions may lead to biased estimates or misleading conclusions. In order to capture a true picture on China’s regional involvement in globalization as well as its domestic value chain, we aim to construct a new interregional input-output table for China which differentiates the production of processing exports from other productions at regional level. We will firstly describe how the information from a wide range of data source have been harmonized and used to arrive at the new input output table. Then, some applications based on the new table are further thoroughly addressed.