Producer cost indices for construction (macroeconomic indicators)

Objectives

The producer cost indices for construction (macroeconomic indicators) are primarily used for national accounts, macroeconomics analyses and international comparisons. They are subject to revision.

Definition

"Buildings" group activities "41.2: Building Construction" and "43 except 43.1, 43.21B and 43.99E: Specialised construction works except demolition, site preparation, electrical installation on the highway and rental and leasing services of construction and civil engineering machinery and equipment with operator".

"Public Works" include activities "42: Civil engineering", "43.1: Demolition, site preparation" and "43.21B: electrical installation on the highway".

The other statistical indices coincide as much as possible with official activities of NACE rev.2, with a distinction sometimes introduced between “specialised construction works for new buildings” and “specialised construction works for existing buildings”.

Methodology

Producer cost indices for construction (macroeconomic indicators) are composite statistical indices, aggregating costs indices by 6 expenses items, according to the "KLEMS" analytical accounting approach (K = capital goods "equipment", L = “labour”, E = "energy", M = "materials", S = “services”), with the supplementary item T = “transport". Each costs item is itself made up of elementary indices issued from public statistics.

Costs indices and cost items are aggregated using a Laspeyres chain-linked technique, reference 100 in 2010.

Weights at all levels of aggregation are issued from 2012 Structural Business Survey in construction, confronted with professional unions studies in the framework of moving Buildings (BT) and Public Works (TP) indices toward base 2010, for contract escalation.

Labour cost is measured by the labour cost index in construction, available every quarter between T+75 and T+80. Thus, first two months of last quarter are estimated, then known in same time as third month.

Cost items are obtained by aggregation of elementary indices :

$$CI(t) = CI(t-1) * \sum_{CI} weight(j, CI) * j(t) \Big/ \sum_{CI} weight(j, CI) * j(t-1)$$

where CI is the cost item, j the elementary index.

Then, producer cost indices of first rank activities (41.2, 42, 43BTC, 43BTR, 43TP) are obtained by aggregation of cost items :

$$I(t) = I(t-1) * \sum_{CI} weight(CI, I) * CI(t) \Big/ \sum_{CI} weight(CI, I) * CI(t-1)$$

where I is the producer cost index of first rank activities, CI the cost item.

At last, producer cost indices of more aggregated activities (43, BT, TP, F) are obtained by aggregation of producer cost indices of first rank activities :

$$IND(t) = IND(t-1) * \sum_{I} weight(I, IND) * I(t) \Big/ \sum_{I} weight(I, IND) * I(t-1)$$

where IND is the producer cost index of more aggregated activities, I the producer cost index of first rank activities.

The composition of "equipment" item is adapted to the construction of buildings (structural works), specialised construction works for existing buildings (finishing) and public works respectively. "Equipment" item of specialised construction works for new buildings is a weighted average of the "equipment" items for structural works and finishing.

The composition of "materials" item is adapted to the construction of buildings, specialised construction works for existing buildings (finishing), civil engineering and specialised works for civil engineering respectively.

The composition of “energy” item is different between buildings (diesel oil) and public works (road diesel and heavy fuel oil). Building companies generally use their trucks, while those of public works resort to freight transport companies. Thus, transport indices of the two activities are different.

The weights of costs items and elementary indices are normally fixed for the duration of the base.