



METHODOLOGY NOTE FOR THE QUARTERIZATION OF EXPENDITURE SIDE OF THE GROSS DOMESTIC PRODUCT

PBS is compiling and disseminating quarterly GDP on the supply-side of the economy since November, 2023 with the Technical Assistance of the World Bank. To meet the growing demand from policymakers, academicians, researchers and international data users and following the concepts of the supply-side of the economy agreed upon by the World Bank, PBS has started compiling the quarterly estimates of the expenditure side of the GDP.

PBS consulted with key stakeholders including Ministry of Finance, M/O PD&SI, State Bank of Pakistan and Pakistan Institute of Development Economics (PIDE) to deliberate upon methodological choices for the quarterization of the various components of the expenditure side of the GDP. Based upon the inputs/comments of the stakeholders, the component-wise methodology to estimate the quarterly estimates of the GDP expenditures is presented below:

Household final consumption expenditure (HFCE): In the annual estimates HFCE, which constitutes about 80% of the economy, is estimated through residual approach as done in other regional economies e.g. India and Bangladesh. To align the QNA methodology with the ANA and to better capture seasonal-differences in the consumption patterns, estimation of quarterly HFCE has been proposed through the residual approach where all the remaining components of the expenditure side of the GDP has been estimated directly through source data/indicators/benchmarking.

NPISH final consumption expenditure: In the ANAs, NPISH FCE is extrapolated at current prices through the combined nominal output of membership organizations and NGOs'. Due to non-availability of any relevant quarterly indicators, quarterly estimates of NPISH FCE have been derived through Denton (benchmarking) method.

General government final consumption expenditure: The estimates of General Government FCE are based on expenditures incurred by the federal, provincial, district and local governments including TMAs. The quarterly estimates of GG FCE have been derived by using the quarterly consolidated expenditures excluding interest payments reported in the quarterly reports on Fiscal Operations compiled by the Ministry of Finance.

Gross fixed capital formation: The compilation of GFCF is diverse by source i.e. private, public and general government as well as industries. The summary of GFCF indicators by industry/source is presented below:

Industry / Sector	% Share (2015-16)	Proposed QNA Indicator	Deflator
a. Private Sector	75.95		
1. Agriculture, forestry and fishing	19.41	Weighted Imports and Domestic sales of Agriculture Machinery, Commercial Bank's Financing for fixed investment	WPI Metal Product, Machinery & Equipment
2. Mining and quarrying	2.02	Commercial Bank's Financing for fixed investment	WPI Metal Product, Machinery & Equipment
3. Large Scale	13.57	Companies data	WPI-General
4. Small Scale (including Slaughtering)	1.94	Commercial Bank's Financing to manufacturing SMEs	WPI- Food Products, Beverages & Tobacco
5. Electricity, gas, and water supply	1.00	Companies data and Commercial Bank's financing for fixed investment	WPI Metal Product, Machinery & Equipment
6. Construction	1.28	Imports of Construction Machinery	WPI Building material
7. Wholesale and retail trade	4.35	Commercial Bank's Financing for fixed investment	WPI- General
8. Accom. and food service activities (H& R)	1.61	Commercial Bank's Financing for fixed investment	WPI- General
9. Transportation and storage	8.37	Weighted Domestic sales, Imports of Transport Machinery and Commercial Bank's Financing	WPI- General
10. Information and communication	2.79	Weighted Commercial Bank's Financing for fixed investment and companies data from sources	WPI- General
11. Financial and insurance activities	1.06	Companies data	WPI- General
12. Real estate activities (OD)	11.25	Benchmarking through Denton	WPI Building material
13. Education	2.14	Volume index of student's enrolment	WPI- General
14. Human health and social work activities	1.18	Volume index of number of health personnel's	WPI- General
15. Other Private Services	3.97	Weighted volume index comprising of number of engineers and Commercial Bank's financing for fixed investment	WPI- General
b. Public Sector	5.41	Weighted indicator comprising of companies data and General Government development expenditures	Weighted WPI General and WPI Product, Machinery & Equipment
c. General Government	18.64	General Government development expenditures	WPI-General

Changes in inventories and valuables: Due to non-availability of relevant indicators, changes in inventories and valuables are estimated in ANAs through fixed growth rates i.e. 1.6% and 0.11% respectively. The quarterly estimates of both of these components have been obtained through Denton (Benchmarking) method.

Exports and imports of goods and services: Like ANAs, quarterly estimates of exports and imports of goods and services have been derived by using data from Balance of Payments compiled by the State Bank of Pakistan.