Index

Aggregate demand, econometric models of, 2
Aggregate productivity measures, 466, 470–472
Agriculture:
  and final demand, 87
  and production measurement, 421–422, 466, 469
  by industry of origin, 447–448
  See also Farm sector
Aircraft industry, wage rates in, 197
Apparel industry, wage rates in, 197
Automobile repair industry, 42
Automotive group:
  output, 388
  and quality change, 458
  See also Motor vehicle industry

Business cycles:
  and consumer goods output, 388
  and durable goods output, 401
  and equipment output, 396
  and final demand, 43
  and production, 463–464, 466
  and real product, 42
Business equipment industry, output measures in, 394–399

Canada:
  Census of Manufactures, 454–455
  industrial production estimates
    background, 415–418
    basic reporting unit and industry coverage, 431–432
    and commercial vs. noncommercial production, 431–432
    compared with U.S. estimate, 478–479
    domestic vs. national product, 428–429
    financial intermediaries, 438–442
    and indirect taxes, 424, 426–427
    by industry of origin, see Canada:
      industry of origin production estimates
      and net vs. gross domestic product, 429, 431
      and owner-occupied houses, 433
      and public administration and defense, 433
      and quality changes, 456–459
      and service industries, 436–438
      weights in, 453
      industry of origin production estimates, 14, 449
      basic concept, 418–423
      and company problems, 448–449
      data base and basic methodology, 442–443
      and factor cost vs. market price valuation, 423–424, 426–427
      national accounts and interest payments, 438–440
      national income estimates, 416–417
      price-cost analysis by industry, 474–477

  Capital:
    declining share of, 10
    growth of, and growth of work force, 161
    input estimates of, 10, 176–184
    output ratios, 482
    ratio to labor prices of, 161–162
    relative price of, 161
    See also Capital consumption allowances; Capital service
  Capital consumption allowances, 90
    in FRB and OBE indexes, 285
    and industrial production estimates, 429, 431
    and profits, 73
  Capital service:
    and capital input measurement, 178–182
    measurement of, 178–179
    and stock of capital, 10

  Census value added, see Value added
Collection, in construction industry, 447

Communications industry:
  - gross property compensation in, 155
  - unit labor costs in, 121, 148

Compensation, see Labor's share; Wages

Constant-dollar gross interest, derivation of, 440-441

Constant-dollar measures, 472
  - and current-dollars, 279-280
  - and analyses of growth change, 460, 462-464, 466
  - and internal consistency checks, 460

Construction industry:
  - in Canada, 446-447
  - productivity measures in, 106, 110
  - unit labor costs in, 8, 130-133

Construction materials industry, output measurement in, 391-394

Consumer goods:
  - and product measures, 386-391
  - price analyses, 6-7

Current-dollar national income estimates, Canadian, 416-417
  See also Constant-dollar measures

Cycles, see Business cycles

Dairy industry, value added per unit of output in, 261

Deflation:
  - and construction volume, 106, 110
  - and derivation of total output, 253, 256
  - of gross interest, 440-441
  - and OBE series, 356
  - by specified price indexes, 449-456
  See also Double deflation method

Depreciation, estimates of, 73

Direct sales, real product and, 20-23

Disaggregation of income and product, 16

Double deflation method, 98-99, 368
  - and OBE and FRB indexes, 351
  - in OBE measure, 362-364
  - and output measures, 481

Durable goods:
  - growth rates, 241, 243, 244, 246
  - output, 399-401
  - FRB and OBE measures of, 234

Earnings, see Profit; Wages

Elasticities of substitution:
  - of capital inputs and prices, 10

End product relations:
  - comparison of consumer goods, 386-391
  - and output of materials, 379, 381-386

Excise taxes:
  - and GPO and FRB measures of output, 234, 283
  - and OBE and FRB series, 350

Expenditure series, compared with industrial production series, 375-377

Expenditures, gross national product and, 69

Exports, in expenditure series, 375
  See also Net exports

Fabricated metal products industry, growth rate, 271-272

Factor cost vs. market price valuation, 423-424, 426-427

Factor shares:
  - changes in
  - and aggregate production functions, 186-187, 219
  - computation of, 186-187
  - and individual firms, 187-190
  - theoretical models for, 207, 217, 220-221
  - in gross national product accounts, 190-191
  - and industry income accounts, 10

Farm sector:
  - and gross property compensation, 156-157
  - and output measures, 110-111
  - and personal consumption expenditures, 85
  - and unit labor costs, 135, 143
  See also Agriculture

Final demand, 76
  - and business cycles, 43
  - changes in, 37-40, 60, 62
  - components of, 87-90
  - and industrial origin of income and product, 68
  - influence on real product by industry, 27-35
  See also Final-demand expenditures; Final-demand prices

Final-demand expenditures:
  - and change in costs and prices, 78, 92-94, 95-97
  - and inventory changes, 84
  - value-added content, 82, 94
Final-demand prices, analysis of industrial origins of, 77-78
Finance, insurance, and real estate sector, unit labor costs in, 127, 129-130
Fixed capital stocks, 482
Food products industry:
  and final demand, 20
  OBE and FRB data compared, 263-266, 361
  and personal consumption expenditures, 84
FRB indexes, 275-277
  and GPO measures, 226-229
Furniture and fixtures industry, OBE and FRB series compared, 266-268, 350, 362-364

Gross product: current- and constant-dollar, 70
derivation of, 279-280
determination of, 188
and GNP estimates, 13
and industrial origin of change in prices of goods and services, 78
price index, 71
See also Gross product originating
Gross product originating:
  and census value added, 230-231
deflator, 229, 368
  explanation of abbreviations, 285-286
  measurement of, 226-229
Gross property compensation:
  and capital input measurement, 182-183
changes in, 9-10
  estimating methods, 156-158
  and gross factor income, 159-162
  relative changes in, 155-158
  and unit nonlabor costs, 9-10
Growth rates:
  differential, total real domestic product and, 462
  explanation of abbreviations, 312, 347
  in fabricated metal products industry, 271-272
  in food and kindred products industries, 263-266
  and OBE and FRB real output measures, 241, 243-244, 246
  in motor vehicles and equipment industry, 272-275
  in primary metals industry, 269-271
Home goods and apparel industries, output in, 388-389
Imports:
  in expenditure series, 375
  and final demand expenditures, 84-87
Imputed rents, 433
Income:
  distribution, see Factor shares
  industrial origin of, 67-69
  component elements, 70-76
  national, 2
  and profit, 10
Indexes:
  of annual production, see Real output of Canadian production, 415-418
Federal Reserve Board’s, see FRB in-
dexes; Indexes: FRB and OBE compared
FRB and OBE compared
and bench-mark levels, 347-349
and census measures of net output, 256-258
durables and nondurables, 233-235
elimination of differences, 348-352, 360-368
and gross national product, 357
and growth rates, 241, 243-244, 246, 271-275, 312, 347
in food and kindred products indus-
tries, 263-266
in furniture and fixtures indus-
tries, 266-268
in primary metals industry, 269-
271
in printing, publishing, and allied
industries, 268-269
and industry weights, 236-237, 240,
248, 252-253, 283, 285
and inventory valuation adjust-
ment, 352-355
man-hours and double deflation
measures, 362
measurement problems with, 367-
370
and measures of output for two-
digit industries, 257-258, 261-
263
measuring methods, 286, 311-312
monthly vs. annual figures, 370
similarities between, 355-356
year-to-year changes, 247-248
of hourly compensation for em-
ployees in nonfarm sectors, 118
of industrial production, 415-418
background, 371-372
concept of data, 372-375
production grouping classification, 376
scope and classification of data,
375-376
OBE, 253, 256
See also Indexes: FRB and OBE compared
of output, 119, 466
of real product for manufacturing indus-
tries, 40-44, 277, 279-283
of total factor productivity, 183-184
of unit labor costs, 105, 120, 142
in communications, 122
in construction, 132
derivation of, 143, 145
in finance, insurance, and real es-
tate, 129
in government enterprises, 144
in manufacturing, 126
in mining, 123
in nonfarm sectors, 117
in private nonfarm economy, 113
in service industries, 131
in total private economy, 134
in trade, 124
in transportation, 128
Indirect sales, and real product, 23
Indirect taxes, 94, 153-155
allocation of, 480-481
Industrial production:
major end-product groups of, 378
major market divisions, 377
and materials output, 381-384
by two broad stages, 382
Industrial production measurement:
and business equipment industry, 394-399
Canadian, see Canada: industrial pro-
duction estimates
and company problems, 448-449
comparison of durable and nondur-
able groupings, 398-405
and construction materials, 391-394
and cyclical change, 460-463
and current- and constant-dollar in-
dustry data, 459-464, 469-472
of government, 413
and home owners, 433
industry by industry, 466, 470-472
by industry of origin
basic concept, 372-375, 418-423
basic reporting unit and industry
coverage, 443-448
and Canadian budget, 472-473
data base and methodology, 442-
443
and factor cost vs. market price
valuation, 423-424, 426-427
international comparison, 484
interpretation of, 405-406
and inventory, 407
and materials, 379
and end-product relations, 381-386
measurement and inference, 376-379, 381
missing data, 408-412
net and gross product measures, 373
scope and classification, 375-376
Industrial production measurement
(Cont.)
theoretical considerations, 407-408
uses for, 4, 15
and value deflation, 449-456
weights, 377-379
on yearly basis, 421-422
See also Productivity

Industry groups:
final demands and output, 23-24
income and product estimates, 5-6
and labor share, 10-11
and postwar increase in real product,
19-22
price indexes for each, 71
rates of growth of real product, 7-8
two-digit, gross national product esti-
mates and, 11
and unit labor costs, 8-9

Inflation:
and GNP, 75
and unit costs, 105

Input:
nonproportionality, and technical re-
lationships, 36
and final demand, 90
Input-output relation, 36
conventions of, 82-84
and factoring causes of change in real
product, 23-27
and final-demand expenditures, 78-80
and FRB series, 351
and indirect sales estimates, 23
and real product, 59-60, 62

Input-output tables:
and estimates of rates of growth of
real product, 7
and industry income calculations, 77
and prices, 5-6

Insurance sector, see Finance, insurance,
and real estate sector

Interest:
in Canadian national accounts, 438-440
and Canadian production estimates,
483-484
and GNP estimates, 14
and price changes, 96
unit costs for, 94

Inventory:
changing, 84, 376-377
and industrial production measure-
ment, 403, 421
in nonfarm sector, 385
in real product indexes, 280-281
valuation adjustment, OBE and FRB
indexes and, 352-355
See also Materials

Investment:
and industrial origin of income and
product, 68
and output estimates, 473

Kendrick’s method, 177-178, 182-184
Korean War, 75, 197
and consumer goods output, 391
and FRB and OBE series, 262-263
and output, 405

Labor and capital, elasticity of substitu-
tion between, 178

Labor cost:
per unit of output, 475
and prices, 6
and property share, 159-160
unit, sector changes in, 8-9
See also Wages

Labor’s share:
decline in, 198
equations for, 219-220
and final demand expenditures, 94
of gross national product by industry
since World War II, 191-192, 195,
197-205
as percentage of GNP, 10-11
and price change, 96
and real product, 8
trends in, 10-11
See also Wages

Laspeyres price index, 8, 74, 75, 100
Loss, equation for, 187-188

Machinery industry, 42-43
Market price valuation, factor cost and,
423-424, 426-427

Materials:
and end-product relations, 381-386
in industrial production measures,
379
input per unit of output, 354
output, fixed investment, 381, 383
and price behavior, 101
See also Inventory

Mining industry, unit labor costs in,
121, 123, 124

Models:
of aggregate demand, 2
of changing economic structure, 4-5
Index

of changing factor shares, 207, 217
Monthly Industries Survey of Shipments, Inventories, and Orders, 365–366
Motor vehicle industry:
and final-demand expenditures, 80–82
growth rate, 272–275
and wage rates, 197
See also Automotive group
Net domestic product vs. gross domestic product, 429, 431
Net exports:
derivation of, 87
and industrial origin of income and product, 68
Noncommercial industries:
in Canadian production estimates, 431–432
product of, 14
Nondurable goods industries:
and FRB and OBE output measures, 234, 237–238
growth rates, 241, 243–244, 246
output, 402–405
Nonlabor costs:
changes in, 9–10
indirect business taxes, 153–155
industry changes in, 151–153
Nonfarm sector:
inventory levels and changes by stage, 385
unit labor costs
in communications, 121
in construction, 130–133
in finance, insurance, and real estate, 127, 129–130
in government enterprises, 133
in individual sectors, 115–118
in manufacturing, 124–126
in mining, 121, 123, 124
over-all trends, 112–115
in public utilities, 118–121
in service industries, 130
total, 135–136, 142–143
in trade, 125
in transportation, 127
OBE indexes:
and real manufacturing output measured, see Real output
and net value-added, 233
See also FRB indexes
Ordnance, 87
Output:
of consumer goods, 386–391
of durable goods, 394–401
estimates, 60, 62
and economic planning, 472–473
and final demands, 23–25
and government enterprises, 133
indexes of, 466, 469
per man-hour
in farm sector, 143
interindustry, 9
measurement of, 70–72
and unit labor cost shifts, 145–147
and quality change, 481–482
sector measures of, 106
and service industries, 437–438
and taxes, 154–155
for two-digit industries, 257–258, 261–263
and wages, 204–205
Personal consumption expenditures, 87
composition of, 82–84
industrial origin of, 82
Petroleum refining industry, depreciation charges for, 279
Post Office, U.S., 133
Price deflators, 99–101
derivation of, 73–74
and GNP, 74–75
in real product indexes, 281–282
Price indexes:
for components of final demand, 99
derivation of, 69
and GNP estimates, 12, 71
of industry value added, 71
and quality changes, 458–459
and value deflation, 449–456
Price-cost analysis, in Canada, 474–477
Prices:
changes in aggregate, 90
elements of, 78
choice of industries for analysis of, 100
and GNP, 69
and indirect business taxes, 9
and input-output tables, 5–6
and unit costs, 72
and unit labor costs, 112, 145
Primary metals industry, 42
growth rate, OBE and FRB series compared, 269–271
Primary metals industry (Cont.)
and materials input per unit of output, 354
value-added, 98–99
Printing and publishing industries:
deflation process, 369
rate of growth, 268–269
Private economy, see Nonfarm sector
Product:
estimates of, 60
industrial composition of data for estimating, 67
Product mix:
and GNP, 73
and growth, 7
and technical coefficients, 36
Production, see Industrial production measurement; Productivity
Production functions:
aggregate, 219
and changing factor shares, 186–187
and production indexes, 413
Productivity:
and hourly compensation, 135
and output, 9–10
and output per man-hour, 71
and property share, 159–160
and proprietors, 135–136
and sector output measures, 106
and unit labor cost, 105, 110–111
and wages, 115, 117–118, 149
See also Industrial production measurement
Profit:
and capital consumption allowance, 73
corporate, per unit of output, 475
equation for, 187–188
in FRB and OBE indexes, 285
and income, 10
and price change, 96
and unit labor costs, 8–9, 94
Profit-capital ratio, 189
Profit-sales ratio, 189
Property income:
per dollar of capital stock, 72
per unit, 72
Property shares, declining, 10
Proprietors:
inclusion in nonfarm sector, 142
income allocation, 72–73
and productivity, 135–136
value of labor, 147–148
Public administration and defense, industrial production estimates and, 433–436
Public utilities, unit labor costs of, 118–121, 133, 148
Quality adjustment, in motor vehicles industry, 273
Quality changes:
and output measures, 481–482
and production estimates, 456–459
Quantity equation of money, 220
Radio, see Communications industry
Real domestic product, industry of origin data and, 464
Real estate sector:
in Canadian production estimates, 480
and final demand expenditures, 94
See also Finance, insurance, and real estate sector
Real gross product, 373
Real output:
estimates of, 15, 442, 473
OBE and FRB measures compared
conceptual differences and measurement problems, 226–229, 247–248
differences due to weights, 248, 252–253
durables and nondurables, 233–235
growth rate, 241, 243–244, 246
industry weights, 236–237, 240
methods, 225–226, 231, 233
quantity and deflation methods, 253, 256
for noncommercial industries, 432
weighting systems for, 476–477
Real product:
and direct sales to final users, 20–23
and “double deflation” method, 98–99
and employee compensation, 8
estimating methods, 59–60, 62, 64–66
growth rates, 7–8
indexes of, 277, 279–283
and indirect sales, 23
by industry
and changing technical requirements, 35–37
and final demand, 27–35
and input-output relation, 23–27, 59–60, 62
and interrelationship between changes
in final demand and technical coefficients, 37–40
OBE data on, 227–228
postwar increase in, 19–22
procedure for factoring changes in, 44–45
relationship between indexes of real production, 40–44
Recessions, see Business cycles
Rents:
and Canadian production estimates, 483–484
and gross national product estimates, 14
and industry of origin measures, 441–442
Rents industry, 433
Resource allocation, indirect business taxes and, 9
Self-employment, unit labor-cost estimates and, 110–111
Service industries:
and Canadian production estimates, 436–438
classification of, 375
unit labor costs in, 8, 130
Social security, unit labor cost estimates and, 111–112
Tax statistics, as source of production data, 476
Taxes:
and Canadian industrial production estimates, 424, 426–427
and capital service price measurement, 182
and OBE and FRB indexes compared, 262
per unit of production, 9
See also Excise taxes; Indirect taxes
Technical relationships:
and final demand, 28, 33, 35
interrelationship between changes in, 37–40
and real product by industry, 35–37
Technological change:
and growth, 7
and technical requirements, 35–36
Technology:
and capital ratio of output facilities, 381
and unit cost of materials, 261
Telephone, see Communications industry
Television, see Communications industry
Tennessee Valley Authority, 133
Trade industry:
and personal consumption expenditures, 84
unit labor costs in, 125
Transportation charges, industrial production estimates and, 445–446
Transportation industry, unit labor costs in, 127
Transportation equipment industry, 87
Unions:
and unit labor cost, 148–149
and wages, 205
Unit costs, price changes and, 71, 72, 78, 96
Unit labor cost:
background of, 105
common intersector elements, 134–135
in communications industry, 121
definition, 110
derivation of, 110
in farm sector, 143
in mining, 121, 123, 124, 148
in nonfarm sector
in construction, 130–133
in finance, insurance, and real estate, 127, 129–130
in government enterprises, 133
in individual sectors, 115–118
over-all trends, 112–115
and prices, 78, 94–96
and proprietors, 147–148
in public utilities, 118–121
in service industry, 130
shifts in, 143, 145, 147–149
in total private economy, 135–136, 142–143
in trade sector, 125
in transportation, 127
Utilities, publicly owned, see Public utilities
Value:
constant-dollar aggregate for, 280
defined, 19n
Value added, 233
aggregate, and expenditures for final goods, 80
compared with OBE series, 256
and fabricated metal products industry, 271–272
and final-demand expenditures, 23–25, 87
and food and related products industries, 265–266
and FRB indexes, 234, 277, 365
and furniture and fixtures industries, 266–268
and gross national product, 13, 80
and GPO, 230–231
and motor vehicles and equipment industry, 272–275
and price change by industry, 475
and primary metals industry, 269–271
and printing, publishing, and allied industries, 268–269

Wages:
changes in, 204–205
in farm sector, 143
per man-hour, derivation of, 110
and prices, 6
and productivity, 112, 115, 117–118
and unions, 148–149
and unit labor cost, 105
See also Labor's share

Weights:
in Canadian production estimates, 453
in industrial production measurement, 377–378
and OBE and FRB series, 283, 285, 350
Welfare and pension plans, unit labor cost estimates and, 111–112
World War II, industrial production and, 371–372