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NEW ISSUE

GROSS DOMESTIC PRODUCT AT PURCHASING POWER PARITY IN OECD COUNTRIES, 1985

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NOTE: This publication presents, for the first time, comparable estimates of gross domestic product (GDP) and major expenditure aggregates for Australia and other OECD member countries. The estimates for EEC countries were prepared by EUROSTAT, the statistical office for the European Community. The estimates for non-EEC countries were prepared by the OECD. Estimates were prepared on the basis of member country responses to detailed questionnaires.

MAIN FEATURES

The following comments refer to estimates of GDP in 1985 adjusted using purchasing power parities (for an explanation see paragraphs 1 to 4 of the Explanatory Notes).

Australia's per capita gross domestic product in 1985 was $US11,738. This compared with the United States ($US16,494), Canada ($US15,223), Germany ($US12,179), Japan ($US11,803), France ($US11,445), the United Kingdom ($US10,915) and New Zealand ($US10,037).

Australia's per capita private final consumption expenditure was $US7,044, compared with the United States ($US10,981), Canada ($US8,790), Japan ($US7,120), and New Zealand ($US6,121).

Australia's per capita gross fixed capital expenditure was $US2,751, compared with the United States ($US3,309), Canada ($US3,273), Japan ($US2,841) and New Zealand ($US2,116).

In the table opposite, OECD countries are ranked according to their GDP per capita in 1985, adjusted using purchasing power parities. The table also shows the extent to which each country's GDP per capita differs from the OECD average. Those countries for which GDP per capita is within a range of 10 per cent above or below Australia's have been grouped together.

RANKING OF OECD COUNTRIES' GDP PER HEAD AT AVERAGE OECD PRICES USING PURCHASING POWER PARITIES, 1985

Country	*% variation from OECD average*
United States	34.1
Canada	23.8
Norway	13.0
Luxembourg	9.2
Sweden	2.8
Denmark	-0.3
Germany	-1.0
Japan	-4.0
AUSTRALIA	-4.5
France	-6.9
Finland	-7.0
Netherlands	-8.4
United Kingdom	-11.2
Italy	-11.8
Austria	-12.8
Belgium	-13.1
New Zealand	-18.4
Spain	-38.2
Ireland	-45.5
Greece	-51.2
Portugal	-55.1
Turkey	-70.8

EXPLANATORY NOTES

The need for Purchasing Power Parities (PPPs)

In order to compare output or expenditure data for different countries it is necessary to convert values expressed in different currency units into a common unit of currency. A method often used is to convert data for different currencies into a common currency (usually US dollars), using market exchange rates as the currency convertor. However, the uniform application of the exchange rate to all goods and services produced and sold within the economy can result in quite misleading comparisons between countries. Exchange rates are influenced by a variety of financial, political, economic and institutional factors which are unrelated, or not closely related, to factors determining national price levels. They do not convey meaningful information about relative price levels within an individual country, and are therefore inappropriate for deriving comparisons of measures of output between countries. In order to obtain valid international comparisons of GDP, and GDP per capita, a measure of relative prices between countries is required. *Purchasing power parities* provide such a measure.

The meaning of Purchasing Power Parities

2. PPPs are essentially indexes of relative national price levels. In the same way that a consumer price index and other price deflators reflect changes in prices (of a defined basket of goods and services) within a given country over time, PPPs present a picture of how the level of prices in one country compares with that in another country at a given point in time. Similarly, where conventional price indexes are used to deflate current price values to derive changes in 'real' values within a country over time, so PPPs can be used to adjust current price values to obtain 'real' value comparisons *between* countries at a point in time. In this respect PPPs are particularly useful for comparing GDP per head, regarded by many international organisations as a key indicator of living standards and progress in economic development.

Calculation of PPPs

3. In its simplest form, a PPP is the ratio of the prices of the same commodity between two countries. For example,

	Australia Price in $A	*United States Price in $US*
Commodity A	0.75	0.50
Commodity B	1.00	1.10

The Australian PPP for commodity A relative to its price in the United States is

$$0.75 \div 0.50 = 1.5$$

The Australian PPP for commodity B relative to its price in the United States is

$$1.00 \div 1.10 = 0.9$$

The PPP for commodity A shows that $A1.50 is needed to buy, in Australia, the quantity of commodity A which can be bought for $US1.00 in the USA. Similarly, it would require $A0.90 to buy, in Australia, the quantity of commodity B which can be bought for $US1.00 in the USA.

4. PPPs for individual commodities can be aggregated, using weights derived from national expenditure data, to calculate an overall PPP for each country. The 'nominal', or current price, value of GDP for each country can then be deflated by its PPP to obtain an estimate of GDP which can be compared across countries. The OECD has calculated PPPs for individual member countries relative to *average* prices across the OECD to derive the real expenditure values contained in this publication.

Background to the OECD PPP project

5. The OECD first became involved in the study of PPPs in the early 1950's. In the 1960's and 1970's the main focus of this work shifted to the Statistical Offices of the United Nations and the European Communities. In 1982 the OECD resumed work on PPPs, resulting in calculations of some member country PPPs and real gross domestic products (and their components) for 1980. Most of the data contained in this publication relate to 1985. The ABS provided detailed expenditure and commodity price data for the 1985 project.

6. The 1985 PPP exercise has involved a number of difficulties of concept and practice in achieving full inter-country comparability. The next PPP exercise is scheduled for the reference year 1990. Australia and other countries are working with the OECD to improve the comparability of country estimates.

Notes on tables

7. Tables 2 and 3, which provide details of the components of GDP, contain data only for those member countries of the OECD which are not part of the EEC. This is because the methodology employed in estimating the PPPs does not provide comparability between EEC and non-EEC countries at levels below total GDP.

8. Tables 1 and 4, which are concerned solely with total GDP, contain comparable data for EEC and non-EEC countries.

9. The totals for gross domestic product per head shown in Table 2 differ slightly from those shown in Tables 1 and 4 for some countries. These differences exist because the national accounts estimates used by the OECD in deriving Tables 1 and 4 are more recent than those used in Table 2.

Related Publications

10. Results of the 1980 purchasing power parities project, and a description of the methodology employed in calculating PPPs, are contained in *Purchasing power parities and real expenditure in the OECD*, by M. Ward, published by the OECD in 1985.

11. Results of the 1985 purchasing power parities project, in greater detail than is presented in this publication, will appear in a supplement to the 1987 edition of *OECD National Accounts : Volume One* (forthcoming).

12. Publications on the Australian national accounts are listed in the *Catalogue of Publications, Australia* (1101.0). The ABS also issues, on Tuesdays and Fridays, a *Publications Advice* (1105.0) which lists publications to be released in the next few days. The Catalogue and Publications Advice are available from any ABS office.

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IAN CASTLES
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TABLE 1. GROSS DOMESTIC PRODUCT PER HEAD, BASED ON EXCHANGE RATES AND PURCHASING POWER PARITIES, 1985

	National currency per US dollar		*Gross domestic product per head (US dollars)*		*Indexes of gross domestic product per head (OECD = 100.0)*	
	Exchange rates	*Purchasing power parities*	*Using exchange rates*	*At average OECD prices using purchasing power parities*	*Using exchange rates*	*At average OECD prices using purchasing power parities*
Australia	1.43	1.23	10,116	11,738	93.5	95.5
New Zealand	2.02	1.36	6,722	10,037	62.1	81.6
Japan	239	222	10,974	11,803	101.5	96.0
Canada	1.37	1.22	13,635	15,223	126.1	123.8
United States	1.00	1.00	16,494	16,494	152.5	134.1
Europe-non EEC						
Austria	20.7	16.9	8,743	10,729	80.8	87.2
Finland	6.20	5.98	11,041	11,442	102.1	93.0
Norway	8.60	8.64	13,960	13,897	129.1	113.0
Sweden	8.60	8.17	12,006	12,639	111.0	102.8
Turkey	522.0	153.5	1,057	3,594	9.8	29.2
Other countries	..	..	14,079	14,332	130.2	116.5
EEC						
Belgium	59.4	44.6	8,022	10,680	74.2	86.9
Denmark	10.60	9.79	11,319	12,254	104.6	99.7
France	8.99	7.26	9,251	11,445	85.5	93.1
Germany	2.94	2.48	10,243	12,179	94.7	99.0
Greece	138.1	77.3	3,358	6,001	31.0	48.8
Ireland	0.946	0.722	5,123	6,704	47.4	54.5
Italy	1,909	1,301	7,387	10,841	68.3	88.2
Luxembourg	59.4	43.1	9,745	13,429	90.1	109.2
Netherlands	3.32	2.54	8,628	11,269	79.8	91.6
Portugal	170.4	66.2	2,146	5,526	19.8	44.9
Spain	170.0	95.3	4,255	7,595	39.3	61.8
United Kingdom	0.779	0.567	7,943	10,915	73.4	88.8
Total OECD	..	..	**10,817**	**12,297**	**100.0**	**100.0**

TABLE 2. VALUE PER HEAD FOR GROSS DOMESTIC PRODUCT AND MAIN EXPENDITURE CATEGORIES IN US DOLLARS, 1985 AT AVERAGE OECD PRICES USING PURCHASING POWER PARITIES

	Final consumption expenditure		*Gross fixed capital expenditure*			*Increase in stocks*	*Balance of exports and imports*	*Gross domestic product*
	Private	*Government*	*Construction*	*Equipment*	*Total(a)*			
Australia	7,044	2,193	1,378	1,202	2,751	69	-315	11,742
New Zealand	6,121	1,950	1,201	863	2,116	102	-252	10,037
Japan	7,120	1,323	1,638	1,202	2,841	78	441	11,803
Canada	8,790	2,637	2,387	883	3,273	86	443	15,228
United States	10,981	2,679	1,837	1,472	3,309	111	-586	16,494
Europe-non EEC								
Austria	5,920	2,096	1,354	1,126	2,491	219	19	10,731
Finland	5,506	2,675	2,033	1,059	3,091	24	147	11,442
Norway	6,065	2,765	2,236	1,172	3,408	358	1,302	13,898
Sweden	6,060	3,848	1,361	1,015	2,407	-17	340	12,639
Turkey	2,226	712	379	278	657	28	-29	3,594
EEC	6,466	1,895	1,061	842	1,970	44	127	10,502

(a) Total gross fixed capital expenditure includes items other than construction and equipment.

TABLE 3. PURCHASING POWER PARITIES FOR GROSS DOMESTIC PRODUCT AND MAIN EXPENDITURE CATEGORIES IN NATIONAL CURRENCIES PER US DOLLAR, 1985

	Final consumption expenditure		*Gross fixed capital expenditure*			*Increase in stocks*	*Balance of exports and imports*	*Gross domestic product*
	Private	*Government*	*Construction*	*Equipment*	*Total(a)*			
Australia	1.24	1.12	1.49	1.21	1.34	1.33	1.43	1.23
New Zealand	1.35	1.02	1.46	2.19	1.77	1.94	2.00	1.36
Japan	218	171	297	246	275	297	237	222
Canada	1.23	1.25	1.10	1.48	1.20	1.35	1.37	1.22
United States	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Europe-non EEC								
Austria	17.60	14.30	18.00	16.70	17.40	20.20	20.50	16.90
Finland	6.87	4.65	5.38	6.21	5.66	8.39	6.16	5.98
Norway	9.77	7.16	7.41	9.78	8.22	11.80	8.54	8.64
Sweden	8.88	6.52	9.67	7.79	8.82	10.68	8.55	8.17
Turkey	186	64	144	186	162	283	522	153

(a) Total gross fixed capital expenditure includes items other than construction and equipment.

TABLE 4. GROSS DOMESTIC PRODUCT PER HEAD, AT AVERAGE OECD PRICES USING PURCHASING POWER PARITIES (US DOLLARS)(a)

	1970	*1971*	*1972*	*1973*	*1974*	*1975*	*1976*	*1977*	*1978*	*1979*	*1980*	*1981*	*1982*	*1983*	*1984*	*1985*
Australia	3,474	3,794	4,052	4,489	4,906	5,477	5,952	6,340	6,905	7,778	8,514	9,326	9,748	10,004	10,994	11,738
New Zealand	3,283	3,536	3,770	4,254	4,845	5,155	5,584	5,634	5,948	6,458	7,176	8,005	8,439	9,024	9,652	10,037
Japan	2,812	3,050	3,376	3,831	4,071	4,533	4,989	5,550	6,199	7,041	7,958	8,856	9,619	10,177	11,017	11,803
Canada	3,976	4,364	4,771	5,417	6,078	6,750	7,511	8,206	9,110	10,204	11,153	12,330	12,524	13,208	14,330	15,223
United States	4,922	5,275	5,735	6,347	6,810	7,334	8,094	8,933	9,969	10,952	11,804	13,077	13,424	14,282	15,665	16,494
Europe-non EEC																
Austria	2,722	2,993	3,303	3,674	4,158	4,563	5,077	5,652	6,098	6,964	7,825	8,415	9,041	9,556	10,105	10,729
Finland	2,907	3,115	3,483	3,941	4,405	4,873	5,174	5,517	6,051	7,058	8,105	8,869	9,656	10,202	10,816	11,442
Norway	3,127	3,416	3,726	4,107	4,684	5,331	6,019	6,625	7,396	8,433	9,553	10,368	11,019	11,858	12,947	13,897
Sweden	3,848	4,055	4,322	4,782	5,368	6,024	6,442	6,741	7,335	8,273	9,156	9,837	10,541	11,146	12,009	12,639
Turkey	890	994	1,079	1,144	1,371	1,619	1,879	2,060	2,231	2,335	2,481	2,736	3,009	3,152	3,386	3,594
Other countries	4,770	5,165	5,523	6,032	6,659	6,852	7,264	7,972	8,577	9,549	10,840	11,789	12,323	12,753	13,417	14,332
EEC																
Belgium	3,003	3,261	3,575	4,026	4,559	4,920	5,485	5,874	6,490	7,202	8,174	8,682	9,406	9,661	10,214	10,680
Denmark	3,545	3,800	4,155	4,567	4,913	5,344	6,022	6,509	7,076	7,940	8,613	9,223	10,103	10,666	11,450	12,254
France	3,204	3,517	3,861	4,301	4,809	5,275	5,847	6,387	7,116	7,968	8,735	9,427	10,138	10,503	11,021	11,445
Germany	3,430	3,670	3,975	4,411	4,823	5,231	5,880	6,476	7,158	8,102	8,948	9,632	10,189	10,740	11,466	12,179
Greece	1,564	1,752	1,980	2,255	2,362	2,730	3,032	3,295	3,732	4,159	4,567	4,882	5,179	5,344	5,677	6,001
Ireland	1,818	1,957	2,144	2,359	2,637	3,010	3,187	3,631	4,127	4,552	5,069	5,589	5,954	5,985	6,421	6,704
Italy	3,046	3,233	3,463	3,927	4,429	4,666	5,213	5,663	6,207	7,058	7,983	8,707	9,251	9,567	10,257	10,841
Luxembourg	3,780	4,064	4,465	5,117	5,740	5,889	6,348	6,903	7,675	8,575	9,444	10,073	10,855	11,574	12,676	13,429
Netherlands	3,543	3,835	4,091	4,531	5,104	5,554	6,144	6,669	7,276	8,065	8,798	9,361	9,756	10,173	10,795	11,269
Portugal	1,462	1,552	1,865	2,203	2,403	2,326	2,968	3,348	3,203	3,956	4,308	4,629	5,150	5,187	5,192	5,526
Spain	2,178	2,380	2,666	3,040	3,474	3,821	4,121	4,493	4,858	5,243	5,775	6,161	6,594	6,889	7,250	7,595
United Kingdom	3,265	3,505	3,735	4,279	4,620	5,051	5,556	5,995	6,675	7,405	7,881	8,407	9,031	9,664	10,225	10,915
Total OECD	**3,490**	**3,762**	**4,091**	**4,569**	**4,979**	**5,414**	**5,987**	**6,567**	**7,276**	**8,097**	**8,866**	**9,712**	**10,215**	**10,775**	**11,633**	**12,297**

(a) Purchasing power parities have been backdated to 1970 using each country's annual rate of inflation relative to that of the United States. The measure of inflation used for each country is the implicit price deflator for gross domestic product.

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