The adoption of the European System of Accounts 1995 framework in the national accounts of Malta

Grech, Aaron George and Pace, Christopher

Central Bank of Malta

June 2004

THE ADOPTION OF THE EUROPEAN SYSTEM OF ACCOUNTS 1995 FRAMEWORK IN THE NATIONAL ACCOUNTS OF MALTA

Aaron George Grech & Christopher Pace*

Introduction

The national accounts are undoubtedly the most comprehensive data sets compiled by national statistics offices in the attempt to present a detailed picture of economic activity. These statistics, especially the data on the GDP, are used by analysts and policymakers mainly in two ways: to make a time-series assessment of economic developments within a particular country; and to evaluate that country's relative performance vis-à-vis other countries. Compilers of national accounts must, therefore, adopt methodologies which ensure that economic activity is captured in its entirety and is measured consistently across time and space according to standardised definitions and concepts, a task that is becoming ever more difficult in today's dynamic global environment.

While the demand for statistics is growing continuously, spurred by requests for information by policymakers, financial markets and international institutions, economies are becoming increasingly difficult to measure. Most governments are removing administrative and economic controls that previously constituted the prime source for data collection. In addition, economic structures are shifting away from the primary and secondary sectors (agriculture, quarrying, construction and manufacturing) towards service industries that require little physical input and whose output is harder to capture. These challenges should be easier to face if national statistics offices co-ordinate their efforts and create internationally acceptable measures of economic activity. A major framework of this kind is the European System of National and Regional Accounts (ESA 1995) developed by Eurostat, the EU's statistical agency.[1]

Malta's National Statistics Office (NSO) recently released its first estimates of GDP at market prices computed according to this methodology. The previous compilation method was based on guidelines developed in the 1950s and 60s, when economic structures were very different. These data were, therefore, no longer comparable with those of many developed countries using more modern methods and definitions. This paper briefly sets out the main implications of the transition to ESA 1995, and evaluates its results on a preliminary basis. The first part of the paper describes the statistical framework underpinning the new data. These are then compared with the results given by the previous methodology and utilised to conduct a benchmarking exercise with the EU Member States. New indicators that have become available under the new framework are also presented and analysed.

* Aaron George Grech is a research officer in the Economic Analysis Office and Christopher Pace is an economics officer in the Statistics Office within the Economic Research Department of the Central Bank of Malta. The authors would like to thank Alexander F. Demarco and Jesmond Pulé for their useful comments and suggestions. Any errors, as well as opinions, expressed in this article are the sole responsibility of the authors.

[1] See Eurostat (1996).

1. The statistical framework underpinning the new GDP data

Eurostat describes its ESA 1995 methodology as "an internationally compatible accounting framework for a systematic and detailed description of a total economy (that is, a region, country or group of countries), its components, and its relations with other total economies".[2] The full sequence of accounts consists of twenty tables, starting from the production process and ending with the balance sheet of the economy (and its different institutional sectors).[3] This section of the paper will provide an outline of the institutional sectors and a simplified map of the sequence of accounts.

1.1 Institutional sectors

The ESA 1995 framework categorises the economy according to institutional sectors, grouping similar types of economic units. First, it distinguishes between resident and non-resident institutional units. An enterprise is said to be a resident unit of, or to have a centre of economic interest in, an economic territory when it is engaged in a significant amount of production there or when it owns land or buildings located there over a long period of time. Non-resident units are referred to as the 'rest of the world' sector. Resident units are split into profit and non-profit institutional units, on the basis of whether or not the unit's main concern is the recording of a surplus of revenues over expenditure.

Profit institutional units comprise two sectors:

- *Non-financial corporations* - institutional units engaged in the market production of goods and non-financial services (such as manufacturing firms and hotels).
- *Financial corporations* - entities that provide financial intermediation and auxiliary financial services (such as banks, insurance firms and exchange bureaux).

The non-profit sector comprises:

- *General government* - legal entities established by political processes that have legislative, judicial or executive authority whose output is not sold on the market. In the Maltese context this sector comprises the Consolidated Fund, the Treasury Clearance Fund and other public funds, local councils and extra-budgetary units. The latter are publicly-owned entities whose revenues cover less than half their production costs.
- *Households* - when they function as producing (and not solely consuming) units (such as farmers producing for their own consumption).
- *Non-profit institutions serving households (NPISH)* - legal or social entities whose status does not permit them to be a source of income, profit or other financial gain (such as band clubs and churches).

1.2 The sequence of accounts - a simplified map

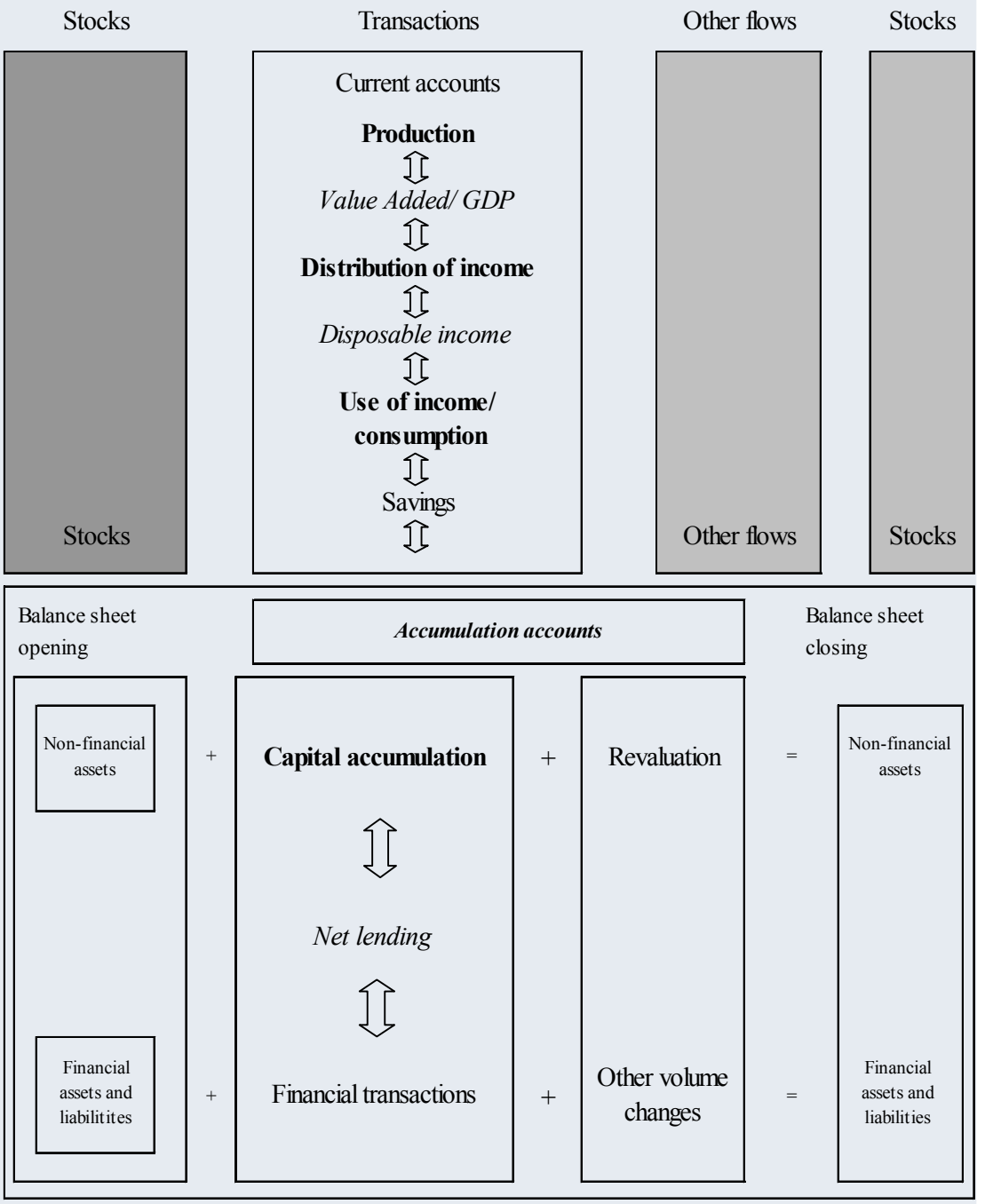
In the ESA 1995 framework, transactions are recorded in specific accounts arranged in a sequence, where the balancing item on one account is carried down to the next account in the sequence. The balancing items, which are accounting constructs, operate as connections between accounts and show the result at that specific stage. The structure comprises three broad categories: current accounts,

---

[2] Ibid.

[3] The ESA 1995 "is broadly consistent with the 1993 SNA with regard to definitions, accounting rules and classification, although it incorporates certain differences that make it more in line with use in the EU". See Carson & Laliberté (2001).

Chart 1 The ESA 95 Sequence of Accounts*



** Adapted from IMF (2000).*

accumulation accounts and balance sheets (see Chart 1). Current accounts record recurrent flow transactions. Accumulation accounts incorporate flow transactions that affect assets or liabilities, as well as non-transaction changes in assets and liabilities (such as valuation changes). Balance sheets show the value of stocks of assets and liabilities at given points in time.

1.2.1 Current accounts

Current accounts record the production of goods and services, the generation of incomes by production, the subsequent distribution and redistribution of incomes among institutional units, and the use of incomes for purposes of consumption or saving. Thus they contain the three different computations of GDP - the production, income and expenditure approaches. Very few countries attempt to derive the three approaches independently of one another. Components of the value added, expenditure and income flows are sometimes estimated from the same basic data source, while some components are derived as residuals.[4]

The production account

The production account records transactions relating to the production process, which is the first stage where an inflow is injected into the system of national accounts. The starting point is the computation of gross output, or the economic value resulting from the production of goods and services, valued at basic prices.[5] The value of goods and services consumed as inputs in a production process, known as intermediate consumption at purchasers' prices[6], is subtracted from output to derive the gross value added of each sector of the economy.[7] Thus, gross value added can be seen as the contribution made by a particular production process to the generation of economic value. By adding the difference between taxes and subsidies on products, the GDP (from the production side) at market prices is derived. If the consumption of fixed capital is subtracted at this stage, the final result of the production account is the total net value added generated in the economy during a given period.

The computation of GDP from the production side is a complex process. One of the main problems concerns the valuation of output, especially for sectors such as general government and financial corporations. Most government units produce non-market output, that is, collectively consumed services or goods, such as street lighting and road maintenance, which are sold at prices that do not reflect their market value or are provided free of charge. In lieu of adequate market prices, the output of non-market units has to be valued at its cost of production. The estimation of the output of financial corporations raises similar concerns. For most industries, output is measured as the value of sales of goods and services adjusted for changes in inventories. The financial intermediation sector, however, only earns explicit charges and fees on a limited range of the services it provides. It garners most of its profits by means of spreads between the interest rates it offers to savers and those charged to borrowers. Given the complexity involved in calculating the

---

4 Organisation for Economic Co-operation and Development (2001).

5 The basic price is "the amount receivable by the producer from the purchaser for a unit of a good and service produced as output minus any tax payable, and plus any subsidy receivable…excluding any transport charges…". Ibid.

6 The purchaser's price is "the amount paid by the producer, excluding any deductible VAT or similar deductible tax, in order to take delivery of a unit of a good or service…includes any transport charges paid separately by the purchaser to take delivery at the required time and place." Ibid.

7 The EU classifies economic activities using the *Nomenclature genérale des activités economiques dans les Communautés Européennes* (NACE). Industries are grouped into sixty categories, which can be aggregated into broader categories. The NSO has released data with a 17-industry breakdown.

contribution of financial intermediation to other production processes and subtracting it as intermediate consumption, ESA 95 creates a notional sector in the national accounts that purchases the imputed output of the financial intermediaries but has no output of its own. This sector is called the financial intermediation service implicitly measured (FISIM). The FISIM includes the difference between the interests and dividends paid in order to raise funds and the property income derived from the use of such funds.

The distribution of income accounts

The next set of accounts, called the distribution of income accounts, essentially constitutes the income side computation of GDP, which is then modified to calculate disposable income. The income approach "adds up all incomes earned by resident individuals or corporations in the production of goods and services".[8] Gross value added is carried down from the production account to the generation of income account. The latter breaks down gross value added in terms of the primary incomes generated in the production process by employees, the self-employed, government and producing enterprises. Government's share is constituted by net taxes on production, while the share of labour, known as compensation of employees, covers wages and salaries gross of income tax plus any employer contributions paid on their behalf (such as national insurance contributions) plus the value of any benefits in kind (such as free petrol). These accounts are designed to show whether value added covers these two shares, and thus indicate the extent to which the production process results in an operating surplus before accounting for interest costs, rents and other financial charges. This surplus also includes mixed income, that is, the revenue generated by unincorporated household-owned enterprises where the owners are not paid wages.

National income is computed by adding property income, that is, the returns on financial assets or tangible non-produced assets such as land, to primary incomes. To calculate disposable income, cash and in-kind transfers to and from the government and abroad must also be accounted for. Cash transfers comprise taxes levied on income and wealth and social security benefits and contributions. The in-kind transfers are mainly education and health services provided by the government free of charge.

The use of disposable income account

The remaining GDP compilation approach, that is, the expenditure-side computation, is found in the ESA 1995 framework in the use of disposable income account. The expenditure approach measures total final expenditure on goods and services produced in the economy. This total is obtained from the sum of final consumption expenditure by households, NPISH and government on goods and services; gross capital formation (capital expenditure on fixed and intangible assets, changes in inventories and acquisitions less disposals of valuables); and net exports of goods and services. Finally this sum is subtracted from disposable income to calculate savings - the balancing item that is carried over to the accumulation accounts.

1.2.2 Accumulation accounts

The current accounts, taken as an entire sequence, demonstrate how the flow of savings arises. Accumulation accounts show how savings, supplemented by borrowing, are used to finance the accumulation of assets and/or the repayment of liabilities.

[8] National Statistics Office (UK).

Capital account

The capital account records transactions involving the acquisition of non-financial assets. Savings - the balancing item from the current accounts - are added to net capital transfers to derive the change in net worth. Capital transfers are transactions, either in cash or in kind, in which the ownership of an asset (other than cash and inventories) is transferred from one institutional unit to another, or in which cash is transferred to enable the recipient to acquire another asset, or in which the funds realised by the disposal of another asset are transferred. The flow of total gross capital formation and changes in other non-financial assets (such as the change in inventories) is then subtracted from the flow of savings to calculate net lending/ borrowing.

Financial account

The balancing item on the capital account - net lending/ borrowing - is carried down to the financial account. This account records "by type of financial instrument, the changes in the financial assets and liabilities that compose net lending or borrowing".[9] The financial account is the final account in the full sequence of accounts that records transactions, and so the change in net financial assets should explain the net lending/ borrowing carried down from the capital account. Any discrepancies are due to compilation errors, and thus serve as a quality indicator of the ESA 1995 set of accounts.

Other changes in assets accounts

The value of financial assets does not change solely as a result of transactions. Changes in value due to movements in asset prices are recorded in the revaluation account while other changes, such as catastrophic losses, are recorded in another account.

1.2.3 Balance sheets

The ESA 1995 framework concludes with the compilation of balance sheets for the whole economy. An economy's balance sheet is a statement of the values of the assets (financial and non-financial) and liabilities at a particular point in time of its resident institutional units. The opening balance sheet shows the values of all assets and liabilities at the beginning of the accounting period. The balancing item between assets and liabilities is the economy's net worth, a measure of wealth in the economy constituting the sum of its non-financial assets and net claims on the rest of the world. The changes in the balance sheet account bring together transactions from the capital, financial and other changes in assets accounts. These are then recorded in the closing balance sheet to give the value at the end of the accounting period of all the economy's assets and liabilities and its resulting net worth.

2. Comparing the new and old GDP data

The NSO have been compiling national accounts data since 1954. The framework used until last year was the United Nation's System of National Accounts (SNA) 1953, revised in 1968 and 1993.[10] In 2003, the NSO published its first GDP estimates based on the ESA 1995 methodology, including for the first time the GDP from the production side.[11] The implementation of this framework involved a major overhaul of the existing national accounts framework, as the NSO sought to ensure the exhaustiveness of its data sources and to extend coverage. This was done by introducing new surveys and by means of database sharing arrangements with various institutions, such as the Registry of Companies and the VAT office.

---

[9] Eurostat (1996).
[10] See National Statistics Office (1999).
[11] See National Statistics Office (2003).

Table 1
NOMINAL GDP: LEVELS AND GROWTH RATES

	1999	2000	2001	2002
GDP at market prices (Lm millions)				
SNA 1953	1456.1	1562.8	1634.4	1680.4
ESA 1995	1576.4	1668.3	1752.7	1803.8
Difference in Lm millions	*120.3*	*105.5*	*118.3*	*123.3*
Difference in percentage points	*8.3*	*6.8*	*7.2*	*7.3*
Nominal GDP growth (%)				
SNA 1953	-	5.8	5.1	2.9
ESA 1995	-	7.3	4.6	2.8

Source: NSO.

Consequently, data on various smaller and non-corporate enterprises, such as those in the NPISH category, were collected and compiled for the first time.[12] Government statistics were also enlarged to include "all institutions which are other non-market producers whose output is intended for individual and collective consumption, and are mainly financed by compulsory payments made by units belonging to other sectors, and all institutional units principally engaged in the redistribution of national income and wealth".[13] These changes resulted, among other things, in an upward revision of Malta's nominal GDP of, on average, Lm117 million between 1999 and 2002, or 7.4% (see Table 1). The new methodology also indicates that average nominal GDP growth for 2000-2002 was 4.9%, up from the previous 4.6%.

While the differences in the overall level and growth rate of GDP may appear to be relatively small, the ESA 1995 data shed new light on the structure of the Maltese economy. Taken from the income-side computation, the new GDP data indicate that both compensation of employees and gross operating surplus and mixed income are much larger than seemed to be the case under the old compilation. On average, compensation of employees during 1999-2002 came to Lm775.8 million under the ESA 1995 framework, which is Lm72 million, or 10.2%, more than the amount reported under the old methodology. Although data on total full-time equivalent employment have not yet been published by the NSO, this suggests that the average wage in Malta is significantly higher than previously thought. Similarly, the gross operating surplus and mixed income component was, on average, Lm81.8 million, or 12.5%, higher than the corresponding component in the SNA 1953 national accounts.

The expenditure-side computation of GDP compiled according to the new framework also shows some major differences. The ESA 1995 data indicate that exports and imports together constitute 172.5% of nominal GDP, down from 189.6% under the old methodology. The degree of openness of the Maltese economy, although still one of the highest in the world, is therefore

[12] The final consumption of the NPISH sector stood at Lm27.9 million in 2002, or 1.6% of GDP.
[13] General government consumption expenditure was reported at Lm383.5 million in 2002, compared with the Lm340.9 million reported as government consumption expenditure for the same year under the old framework.

Table 2
DIFFERENCE IN BREAKDOWNS (AVERAGE 1999-2002)

%

	SNA 1953	ESA 1995
Breakdown in GDP by income components		
Compensation of employees	44.5	45.6
Gross operating surplus and mixed income	41.1	43.1
Taxes less subsidies	14.4	11.3
Breakdown in GDP by expenditure components		
Private consumption expenditure	63.8	66.9
Government consumption expenditure	19.5	20.9
Gross fixed capital formation	23.4	22.9
Changes in inventories	-1.0	-0.8
Exports of goods and services	92.0	83.3
Imports of goods and services	-97.6	-89.2
Statistical discrepancy	-	-3.9

Source: NSO.

Table 3
BREAKDOWN OF PRIVATE CONSUMPTION (1999)[1]

% of total

	SNA 1953	ESA 1995
Food, beverages & tobacco	32.7	25.5
Clothing & footwear	7.7	7.6
Furniture, furnishings, housing, gross rent, fuel & power	17.3	20.1
Medical care & health expenses	4.3	2.9
Transport & communication	22.6	22.4
Recreation, entertainment, education & culture	9.7	10.6
Miscellaneous goods & services[2]	26.7	33.7
Balance of expenditure of residents & non-residents	-20.9	-22.7

[1] Some categories have been merged to facilitate comparisons.

[2] Including outlays in restaurants and hotels.

Source: NSO.

Table 4
BREAKDOWN OF GDP BY INDUSTRY (2000)[1]

% of total

SNA 1953		ESA 1995	
Agriculture & fishing	2.3	Agriculture & fishing	2.5
Construction & quarrying	2.8	Construction, mining & quarrying	4.6
Manufacturing	25.6	Manufacturing	22.7
Transport & communication	6.5	Transport & communication	10.7
Wholesale & retail trades	11.0	Wholesale & retail, repairs	10.8
Insurance, banking & real estate	8.0	Financial intermediation	6.4
Property income	10.5	Real estate, renting & business	11.8
Private services	11.6	Hotels & restaurants	7.7
		Other community, personal services	3.8
Public administration	14.8	Public administration	6.8
		Education	5.6
		Health & social work	4.9
Government enterprises	6.1	Electricity, gas & water supply	1.8

[1] Some categories have been merged to facilitate comparisons.

Source: NSO.

around a tenth less than was previously indicated by official data. The size of the external deficit, however, remained roughly at the levels reported under the SNA 1953 accounts. Conversely, the new GDP data indicate a much larger share of consumption, both private and public, in aggregate expenditure (see Table 2). Total final consumption expenditure was, on average, reported to be Lm174.2 million, or 13.2%, higher than the corresponding component in the SNA 1953 accounts. Given that the figures for total imports of goods and services remained broadly unchanged, this upward revision suggests that the import content of consumption is smaller than previously thought (see below).[14]

The two national accounting frameworks employ different classifications of private consumption, which are not strictly comparable.[15] However, an analysis of the breakdown of private consumption reveals that under the ESA 1995 framework outlays on food, beverages and tobacco make up a significantly smaller proportion of total consumption outlays (see Table 3). By contrast, the new GDP methodology reports a larger expenditure on miscellaneous goods and services, a category that is dominated by outlays on restaurant and hotel services. This may in part reflect the fact that, under the ESA 1995, expenditure by tourists in Malta is higher than under the SNA 1953 framework. Outlays on

[14] It should be noted, however, that the ESA 1995 framework includes a statistical discrepancy which balances the total of the expenditure components with the results of the output approach computation of GDP. The size of the discrepancy is close to the difference (in terms of percentage points of GDP) between consumption under the two sets of GDP data.

[15] This breakdown, as defined in the SNA 1953 set of accounts, is only available up to 1999.

Table 5
PER CAPITA VOLUME INDICES OF GDP IN PPS

EU-15 = 100

	1999	2000	2001	2002
EU-15 + acceding countries	**91**	**91**	**91**	**91**
Selected EU countries				
Portugal	70	70	71	71
Greece	65	66	67	71
Spain	84	83	84	84
Acceding countries				
Czech Republic	-	60	61	62
Estonia	35	37	39	40
Cyprus	74	76	78	76
Latvia	34	35	37	39
Hungary	48	49	51	53
Malta	**71**	**71**	**70**	**69**
Poland	41	41	41	41
Slovenia	67	66	68	69
Slovakia	43	44	45	47

Source: Eurostat.

other services (such as rent and recreation), which are more labour-intensive and hence have a lower import content, are significantly larger than those reported in the SNA 1953 set of accounts.

The most consequential innovation of the new national accounting framework is the compilation of GDP data from the production side, which is the primary approach under the ESA 1995 framework. Previously, the NSO concentrated mainly on the income-side compilation. The new data can be used to define economic activity in finer detail and, more importantly, are fully consistent with the classifications used for other related data, such as those on employment and credit. One of the main changes introduced was the apportioning of public sector activity into specific economic areas. Thus, for example, activity in the Public Works Department is recorded under construction and quarrying, resulting in a more accurate measurement of this kind of economic activity (see Table 4). This apportionment also affected the size of the transport & communication sector. But there appear to have been only slight changes in the relative size of other traditionally private sector activities, such as wholesale & retail and agriculture & fisheries. Other ESA 1995 categories give very similar shares when accumulated to form categories comparable to those in the SNA 1953 accounts. However, the size of the manufacturing sector is significantly smaller under the new framework, while the share of services is correspondingly greater. This is in line with the previously mentioned indication of a lower import content in gross output.

Table 6
PRICE LEVEL INDICES OF GDP

EU-15 = 100

	1999	2000	2001	2002
EU-15 + acceding countries	**96**	**96**	**96**	**96**
Selected EU countries				
Portugal	71	71	72	73
Greece	78	75	76	76
Spain	80	81	82	83
Acceding countries				
Czech Republic	-	43	47	51
Estonia	47	48	51	53
Cyprus	80	80	80	82
Latvia	39	43	44	45
Hungary	43	45	47	53
Malta	**63**	**66**	**68**	**67**
Poland	45	49	55	53
Slovenia	70	68	69	70
Slovakia	39	41	41	42

Source: Eurostat.

3. New indicators and comparative data available under the ESA framework

The transition to the ESA 1995 framework not only leads to a reassessment of the size and structure of the Maltese economy, as described above, but also greatly enhances the scope for the use of national accounts data by analysts and policymakers. The new methodology allows direct comparisons to be made between the Maltese economy and those of other countries that use the same compilation method.[16] At the same time, the new GDP data can be used to compute a host of previously unavailable economic indicators.[17]

Following the NSO's adoption of ESA 1995, Eurostat published data on Malta's per capita GDP in purchasing power parity terms, comparing it with that of the current and prospective EU Member States (see Table 5).[18] Purchasing power parities are price relatives that show the ratio of the prices in national currencies of the same basket of goods and services in different countries. Thus these data, which are not distorted by differences in exchange rates or in the deflators used, provide an accurate benchmark of the real volume of production/total expenditure in per capita terms in Malta compared with the EU average. From them it emerges that

[16] See Eurostat (2004).
[17] This process is expected to continue as the ESA 1995 project is still in its early stages. See National Statistics Office (2003).
[18] See Eurostat (2003).

Table 7
COMPARATIVE BREAKDOWN OF GDP BY MAIN AGGREGATES (2002)

%

	Malta	EU-15
Breakdown of GDP by income components		
Compensation of employees	44.8	51.2
Gross operating surplus and mixed income	40.0	36.4
Taxes less subsidies	15.2	12.4
Breakdown of GDP by expenditure components		
Private consumption	68.7	58.3
Government consumption	21.3	20.6
Gross fixed capital formation (including inventories)	18.9	19.4
Exports of goods and services	77.7	35.1
Imports of goods and services	-81.4	-33.4
Statistical discrepancy	-5.2	0

Sources: Eurostat; NSO.

Malta, with Slovenia, has the second-highest GDP per capita among the new EU Member States, and one that is only marginally below that of Greece and Portugal. In terms of overall price relativity, the situation appears to be quite similar, although prices in Malta have more room for catching up than those in Cyprus and Slovenia (see Table 6).

The new data reveal several differences between the structure of the EU-15 and that of the Maltese

Table 8
GROSS OPERATING SURPLUS & MIXED INCOME AS A PERCENTAGE OF GROSS VALUE ADDED (2000)

%

	Malta	EU-15
Agriculture & fisheries	78.1	75.3
Manufacturing, quarrying & energy	51.0	39.9
Construction	52.7	41.2
Wholesale & retail, repairs, hotels, transport, communication	52.7	44.4
Financial intermediation, real estate, renting & business	73.6	64.9
Public administration, education, health, other services	24.6	22.4
Overall economy	**50.8**	**44.7**

Sources: Eurostat; NSO.

Table 9
COMPARATIVE BREAKDOWN OF HOUSEHOLD FINAL CONSUMPTION EXPENDITURE (2000)

%

	Malta	EU-15
Food & non-alcoholic beverages	20.6	12.4
Alcoholic beverages, tobacco	4.0	3.5
Clothing & footwear	7.6	6.3
Housing, water, electricity, gas & other fuels	10.4	20.1
Furnishings, household equipment & maintenance	9.5	6.6
Health	2.8	3.1
Transport	17.5	13.2
Communication	5.6	2.4
Recreation & culture	10.1	9.4
Education	1.3	0.9
Restaurants & hotels	21.4	8.8
Miscellaneous goods & services	9.2	9.5
Balance of expenditures of residents abroad & expenditures of non-residents on the economic territory	-20.0	3.8

Sources: Eurostat; NSO.

economy (see Table 7). For instance, employee compensation in 2002 accounted for a significantly smaller share of overall income in Malta than in the EU-15. This lesser wage share reflects the lower employment rate in Malta, which in 2002 stood at 54.5%, as against 64.2% in the EU-15. On the other hand, the share of the self-employed in total employment was virtually identical. The share of profits was relatively higher across the board (see Table 8), but the greatest disparities were in manufacturing and construction, suggesting that the wage bill in these sectors was lower than in the EU-15.

Expenditure-side data reflect the openness and small size of the Maltese economy. Thus, while the EU-15 countries as a whole typically have a positive trade balance, the Maltese economy runs a structural deficit in its external trade. This, in turn, can in part be explained in terms of the relative stage of development. Lower-income economies usually are net borrowers, investing more than they are able to save. Although the data (see Table 7) indicate that gross fixed capital formation as a percentage of GDP in Malta is similar to the EU-15, this is largely due to the large negative inventory change in the data for Malta. At the same time, while the share of consumption in GDP is substantially higher in Malta than in the EU-15, one must keep in mind the existence of a large statistical discrepancy in the Maltese data that may distort the comparison.[19]

[19] The statistical discrepancy is the difference between GDP computed from the production side and the sum of the expenditure components.

Table 10
COMPARATIVE BREAKDOWN OF GROSS VALUE ADDED BY INDUSTRY (2000)

%

	Malta	EU-15
Agriculture	2.8	2.2
Fishing	0.2	0.1
Mining & quarrying	0.3	0.7
Manufacturing	21.5	20.5
Electricity, gas & water	2.2	2.2
Construction	4.3	5.6
Wholesale & retail, repairs	12.1	12.0
Hotels & restaurants	8.1	3.0
Transport & communication	11.5	7.3
Financial intermediation	4.4	5.3
Real estate, renting & business	12.8	22.1
Public administration, defence & social security	7.4	6.6
Education	6.1	5.1
Health & social work	5.3	6.4
Other community, social & personal services	4.0	3.9
Private households with employees	0.2	0.5
Extra-territorial organisations & bodies	0	0.1
FISIM	-3.2	-3.6

Sources: Eurostat; NSO.

A breakdown of household final consumption expenditure reveals that consumption patterns are roughly similar (see Table 9). The Maltese spend relatively more on food, beverages, tobacco, clothing and footwear, and less than the EU-15 on utilities and heating fuels. This may be because of the longer and colder winters in Europe and the large subsidies on water and electricity enjoyed by consumers in Malta. Expenditure on transport, communication, restaurants and hotels is also substantially higher in Malta, partly reflecting the large outlays on these categories by tourists, which account for more than a fifth of total consumption expenditure in Malta. By contrast, consumption by EU-15 households in other countries exceeds that of visiting tourists.

The importance of the tourism industry in the Maltese economy can also be gauged from the data on value added, which show that hotels and restaurants account for 8.1% of overall gross value added, more than double the proportion in the EU-15. The share of transport and communication is also significantly higher in Malta, while that of manufacturing and public sector activities are only marginally larger. By contrast, the data for the EU-15 indicate a much more extensive real estate, renting and business

Table 11
SELECTED COMPARATIVE INDICATORS (2000)

%

	Malta	EU-15
Mining & quarrying		
Value added as a percentage of output	55.1	56.8
Operating surplus as a percentage of output	24.9	35.1
Manufacturing		
Value added as a percentage of output	27.0	30.5
Operating surplus as a percentage of output	10.7	9.6
Electricity, gas & water		
Value added as a percentage of output	38.2	34.1
Operating surplus as a percentage of output	-1.5	21.2
Construction		
Value added as a percentage of output	57.6	35.0
Operating surplus as a percentage of output	25.0	10.4
Wholesale & retail, repairs		
Value added as a percentage of output	81.7	50.2
Operating surplus as a percentage of output	42.1	6.4
Hotels & restaurants, transport & communication, real estate, renting & business		
Value added as a percentage of output	52.3	45.4
Operating surplus as a percentage of output	22.4	17.9

Sources: Eurostat; NSO.

sector, and a larger share of construction, health, social work and financial intermediation in economic activity. It is estimated that the overall value added per worker in the Maltese economy in 2000 was about 84% of that in the EU-15 countries.[20] While productivity in financial intermediation, transport, communication, hotels and restaurants is on a par with that in Europe, certain smaller sectors such as mining, quarrying and utilities lag far behind. Thus, while there are still possibilities for productivity gains in the Maltese economy, it seems that in order to catch up with the EU-15 the main emphasis will have to be on increasing the employment rate and bringing it closer to the European average.

In terms of the share of value added in total

[20] This estimate is based on employment data computed from labour force survey data for both Malta and the EU-15. Eurostat usually computes value added per worker on the basis of national accounts employment data. However, the NSO has yet to publish these data.

Table 12
SECTORAL PERFORMANCE INDICATORS FOR MALTA (2000)

%

	Net value added to output	Employee compensation to net value added	Operating surplus to output
Agriculture	51.5	23.0	39.4
Fishing	21.0	53.4	9.5
Mining & quarrying	43.8	43.1	24.9
Manufacturing	23.1	56.0	10.7
Electricity, gas & water	21.4	119.5	-1.5
Construction	52.5	51.9	25.0
Wholesale & retail, repairs	75.5	43.6	42.1
Hotels & restaurants	38.7	64.2	13.6
Transport & communication	39.5	60.6	15.3
Financial intermediation	57.0	51.1	27.9
Real estate, renting & business	47.9	19.8	38.4
Public administration, defence & social security	57.3	100.0	0
Education	73.2	90.5	6.8
Health & social work	58.9	91.9	4.7
Other community, social & personal services	64.3	64.4	21.9
Private households with employees	100.0	5.3	94.7
Extra-territorial organisations & bodies	87.3	100.0	0
Overall economy	**38.1**	**61.1**	**15.0**

Source: NSO.

output (see Table 11), the Maltese economy compared well with the EU-15 in 2000. This indicates that despite the high dependence on imports, Maltese firms are still able to enhance the value of products. For example, manufacturers in Malta create 27% of the total value of their output locally, only marginally less than their European counterparts. Their profitability is also slightly higher. On the other hand, the performance of the electricity, gas and water supply sector in Malta compares unfavourably with that in the EU-15, with the sector operating at a loss and wages constituting a far larger share of its output. Construction, wholesale and retail, by contrast, appear to be characterised by substantially higher profit margins. National accounts data indicate that operators in the distributive trades are allocating to themselves a margin of over 40% of the final value of the product or service they offer to consumers. This is more than seven times the margin charged by their counterparts in the EU-15. However, the size of this margin may be a consequence of the small size of the market and the relatively small turnover. The net value added

per employee in the distributive trades is in fact below the average for the whole economy, indicating that earnings per capita in the sector are not out of line with the rest of the economy.[21] Since the market is small, operators in this industry have to charge high margins in order to achieve an income that is comparable to that earned in other areas of activity. The same considerations apply to construction, agriculture and fisheries and other mainly locally-oriented sectors, such as financial services and real estate.

Operating margins in these sectors are in fact quite high when compared with the overall average of 15% (see Table 12). It should be kept in mind, however, that the imputed wage of self-employed persons is included with "operating surplus and other mixed income" under the ESA 95 methodology, inflating the gross operating margin calculations. Hence, in sectors such as construction, agriculture, mining, quarrying, real estate, wholesale and retail, where there are many sole traders, employee compensation as a percentage of net value added is relatively low. By contrast, publicly-owned sectors tend to have a large wage share, reflecting the labour intensity of the product or service provided. On an overall basis, around 38% of the total gross output of the Maltese economy is constituted by locally-generated net value added. The highest value added components are to be found in services and the construction sector, as these are labour-intensive and use few imports. However, even manufacturing and tourism have a significant value added component, and one that compares favourably with the European average.

Conclusion

The release of ESA 1995 GDP data for Malta has ushered in great changes in the way in which the Maltese economy can be analysed. The new data are comparable with those of other EU Member States, permitting analysts and policymakers to better assess the relative performance of the Maltese economy and the "catching up" that needs to be achieved to converge with the European average. They also provide more statistical information on the various economic activities that take place in Malta, and thus a more comprehensive picture of the local economy. The new national accounts, in particular, permit the computation of a number of indicators, such as gross operating rates and the value added component of output. These reveal that the Maltese economy has achieved a relatively high degree of convergence with the European average, especially when compared with other new Member States. This results from the high degree of openness and the prevalence of European foreign direct investment in the island. Productivity levels and operating margins appear to be quite close to the EU average in the manufacturing sector and in market-oriented services such as financial intermediation, hotels, transport and communication. However, some industries, such as the utilities, greatly under-perform compared with their European counterparts while the employment rate lags significantly behind that of the EU-15.

REFERENCES

Carson, Carol S. & Lucie Laliberté (2001). "Manuals on Macroeconomic Statistics: A Stocktaking to Guide Future Work", *Working Paper WP/01/183*. USA: IMF.

European Central Bank (2004). "The Acceding Countries' Economies on the Threshold of the European Union", *ECB Monthly Bulletin February 2004*, pp.45-56.

Eurostat (1996). *European System of Accounts ESA 1995*. Luxembourg: Eurostat.

[21] Computed on the basis of LFS data, earnings per employee stood at Lm7,441 in 2000 in the wholesale and retail sector, in contrast to Lm8,519 in the overall economy.

Eurostat (2002). "Economic Portrait of the European Union 2002", *Panorama of the European Union*. Luxembourg: Eurostat, pp. 87-94.

Eurostat (2003). "Labour Force Survey Results 2002", *European Social Statistics*. Luxembourg: Eurostat.

Eurostat (2003). "Purchasing Power Parities and Related Economic Indicators for EU, Acceding and Candidate Countries and EFTA", *Press Release No. 64/2003*.

Eurostat (2004). "An Overview of the Economies of the New Member States", *Press Release No. 17/2004*.

International Monetary Fund (2000). *Monetary and Financial Statistics Manual*. USA: IMF.

National Statistics Office (1999). *National Accounts of the Maltese Islands: Sources and Methods*. Malta: NSO.

National Statistics Office (2003). *Labour Force Survey 2002*. Malta: NSO.

National Statistics Office (2003). *Annual Report 2003*. Malta: NSO.

National Statistics Office (2003). "Implementation of the European System of Accounts (ESA 1995)", *Press Release No. 195/2003*. Malta: NSO.

National Statistics Office UK (2001). *UK ESA95 Gross National Income Inventory of Methods*. UK: NSO UK.

Organisation for Economic Co-operation and Development (2000). *System of National Accounts 1993*. France: OECD.

Organisation for Economic Co-operation and Development (2001). *Quarterly National Accounts: Sources and Methods*. France: OECD.