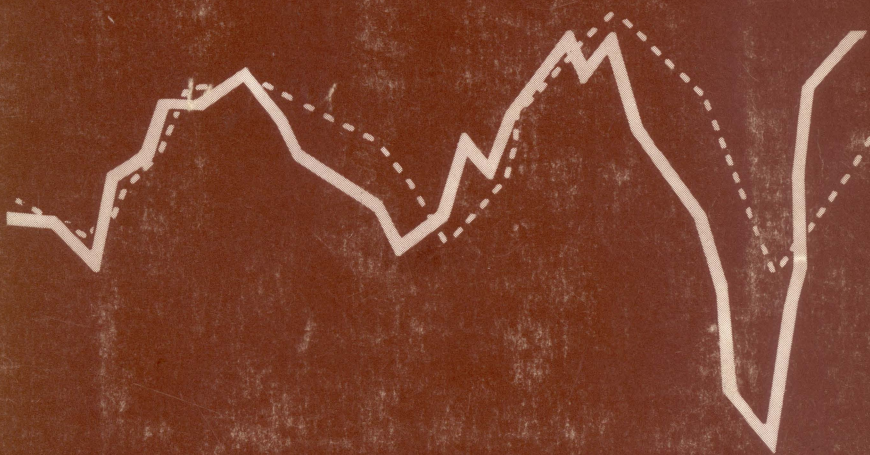


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The Maltese Economy and other papers

Lino Briguglio



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The Papers:

- **The Maltese Economy 1955 – 1979**
- **Some Findings Pertaining to the
Maltese Aggregate Labour Market**
- **The Maltese Official External
Reserves**

Preface

The three papers presented in this book are not directly related to each other since they were written for different purposes. The first paper was used as an introduction to my Ph.D. thesis on the Maltese labour market, the second was the text of a lecture given to sixth-form students, and the third was the text of another lecture, given to the general public.

The principal reason for publishing them together in one volume is that it is cheaper to print them this way rather than individually. Also, although different in style and content, the papers have some thing in common in that all three papers can be read and understood by persons who do not have a specialised knowledge of Economics. Although the results presented in the text required a considerable amount of computational work, the reader is not burdened with detailed technical explanations.

The three papers may also be of use to students sitting for Matriculation examinations in Economics, which require a knowledge of certain aspects of the Maltese economy. Literature for this purpose is not at present very abundant. This volume could provide a source of reading material in addition to that found in Economics textbooks, which usually focus on theoretical and applied aspects related to the British or the U.S. economy.

I would like to record my gratitude to the Council of the C.M.T.U. and in particular to its president, Mr. Salvino Spiteri for the help I received in the publication of this book. A word of thanks also goes to the typist of the manuscripts, and to my family for putting up with the long hours I devote to Economics.

Lino Briguglio

The Maltese Economy 1955 – 1979

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The Maltese Economy 1955 – 1979

1. Introduction

The Maltese economy has undergone major structural changes during the 1955 – 1979 period. In particular, the British military establishments, which during the fifties provided income and employment for a large proportion of the gainfully occupied, were completely phased out by 1979. On the other hand, the manufacturing sector, which was relatively small during the fifties, expanded and during the late sixties and the seventies, absorbed a considerable proportion of the Maltese gainfully occupied population.

This study contains a brief description of the economic development record during the 1955 – 1979 period, and gives an account of the major changes that have occurred in the Maltese economy.

2. Development Planning in Malta – A Brief Outline

The events that led to the formulation of the first five year development plan are of some importance because they highlight the major problem that the successive development plans sought to overcome. This section contains a very brief description of these events. This is followed by a discussion on the achievements or otherwise of the development plans put forward during the period of this study.

2.1 The Main Problems up to the Fifties

Although this study covers the period 1955 – 1979, it is important to note at the outset that the major problem faced by the Maltese economy – that related to the dismantling of the British defence base – resulted from past British military and naval needs, which have given rise to a grossly unbalanced economic structure. Until the early fifties, the livelihood of the Maltese people depended to a large extent on revenues derived from the servicing of the

British military, naval and air establishments.¹ In some ways this was to Malta's advantage, because it enabled the Maltese people to improve their standard of living, and to enhance the quality of the labour force, via acquisition of industrial skills.

The Major drawback connected with the unbalanced structure of the Maltese economy was of course the danger associated with the excessive reliance on a source of income and employment tied to the needs of a foreign country. The growing awareness that Malta's strategic importance was due to decline sooner or later, led to attempts by successive governments to create new forms of economic activity to replace those connected with the British military presence.

An early attempt at outlining a strategy consciously aimed at diversifying the Maltese economy was that by Schuster in 1950² who showed great concern about Malta's excessive dependence on British military expenditure. Schuster did not put forward a detailed development plan, but he listed a number of possibilities which, he suggested, should be considered for long range development of the Maltese Islands. Industrial, agricultural, touristic and infrastructural improvements and expansion were singled out for this purpose. Schuster also stressed the need of efficient production for the export market due to the size limitation of the Maltese market. This strategy was by and large also adopted in the development plans for the sixties and seventies.

Schuster's recommendations however could not be implemented without financial aid. This need was explicitly recognised by the British Government in 1955³ when it decided to back financially a policy for developing the Maltese economy.⁴ At this time the Balogh and Seers Report⁵ was drawn up and by and large reiterated the recommendations of the Schuster report, but considered emigration to be a liability.

During the second half of the fifties the need to implement a coordinated development plan for Malta became much more pressing, since it became increasingly obvious that changes in the British defence policies were resulting in a decline of Malta's importance as a military and naval base.⁶ In January 1959, the British government announced its intention to contribute £29 million over the next five years towards a development programme, and this resulted in the launching of the first development plan for Malta,⁷ covering the years 1959 – 1964.

2.2 The Maltese Development Plans

The first development plan for the Maltese islands had full employment as its major objective, and for this purpose assigned a leading role to industrial production, including ship repair,⁸ and tourism. Because of the smallness of the local market, industrial development was to be geared largely to the export market. This task was by no means easy, since it demanded a high level of efficiency and productivity in relation to those obtainable in the highly competitive markets in Europe.

It was acknowledged also that the attraction of overseas investment and knowhow was essential for industrial development, and this in turn required a system of inducements, provision of adequate infrastructural facilities, and suitable legal arrangements.⁹

The plan had some success in attracting new industries, developing infrastructural facilities, and laying the foundations of a tourist industry. But the employment objectives were not met. The economy could not expand enough to take the slack created by the rundown of the British services,¹⁰ which commenced in 1962. By 1964 an atmosphere of pessimism prevailed, particularly following the Stolper Report (1964)¹¹ which suggested that emigration would have to be stepped up, per capita income would have to fall, and that Malta's absorptive capacity could not be expanded beyond what was achieved during the first plan.¹²

The second five year plan, launched in 1964 – the year of Malta's independence from Britain¹³ – had as an overriding objective the containment of the rundown of the British services. After the lack of success of the first plan, the targets were set with extreme caution. The future looked bleak at the time, and it was expected that unemployment and emigration were to remain at very high levels, and the number of gainfully employed persons was to decrease. Contrary to what the Stolper Report had suggested however, it was planned that per capita income was to remain stable.

The strategy adopted in the second plan was by and large similar to that of the first plan, relying heavily on export-oriented industrial production, tourism and agriculture. However, population policy was given more importance, and emigration was singled out as a tool of policy in this respect. Not much more was expected of the second plan than that it should keep the economy going while the change over from a defence oriented to an export oriented

economy was taking place.

The actual outcome did not however bear out these dismal projections, since by 1969, output per capita and employment had expanded rapidly, and emigration and unemployment were much lower than was envisaged. These achievements were indeed remarkable considering that in 1967 there was an unforeseen setback due to a second rundown of the British services.¹⁴

The rapid expansion of the construction industry, caused by an increased demand for public housing, private buildings¹⁵ and hotels, played an important role in the unexpected economic recovery after 1964. The construction industry generated its own employment, and that of related industries, particularly quarrying. Considerable expansion was also registered in the manufacturing sector, largely due to the policy of attracting export oriented industries, and in the tourist industry, following a programme of hotel building and a sustained advertising campaign.

The third development plan for the Maltese Islands, covering the years 1969–1974, broadly speaking pursued the same objectives and adopted the same strategy of the previous two. The plan also laid stress on the benefits to be obtained by Malta from a proposed association agreement with the E.E.C.¹⁶ via reduced tariffs and quota restrictions on Maltese exports to Europe. This plan was however abandoned in 1971, when there was a change of government.¹⁷

During the sixties, the Nationalist Government did not, as a matter of policy, involve itself directly in the productive sector of the economy, limiting its intervention to a backing role. The Labour Government, elected in 1971, on the other hand, made it manifestly clear that it was not going to adopt a passive stance, and placed greater emphasis than its predecessor on participating in directly productive outlays, even in some areas which were previously regarded to be the domain of the private sector. A new plan was drawn up for the years 1973–1979 based on this philosophy.¹⁸ The plan, like its predecessors, was geared to industrial, agricultural and touristic growth and development, but much more emphasis was placed on the relationship between Malta's economic and political objectives.¹⁹

The seven year period covered by the plan coincided with a new agreement with Britain, whereby the British government bound itself to make an annual rental payment of about Lm14 million up to March 1979, by which date the British Military

establishments were to be completely phased out.²⁰ The Labour Government also took steps to revise the E.E.C. association agreement signed by the previous government, arguing that the arrangements were not to Malta's favour,²¹ and to introduce a new package of investment incentives, arguing that the previous package relied too much on financial gifts and therefore tended to attract firms which threatened to collapse with the expiry of concessionary arrangements.²²

It can be argued that the fourth plan has achieved the target as far as *aggregate* employment and output is concerned. However the manufacturing sector, which was given a very important role in the plan, did not absorb as much labour as was forecast, and to make up for this shortfall, the government had to resort to direct employment in labour corps.²³ On the other hand, the market services sector, particularly tourism, performed much better than was envisaged in terms of employment. As planned, the British military sector was phased out completely by 1979.

2.3 A General Overview of the Development Strategy

The basic objective of successive plans was essentially the same, that is, making Malta a viable economic unit, which by its own efforts would provide jobs for those who seek them. To achieve this objective, measures were taken to promote labour demand and control its supply. The exercise of stepping up demand in a period of British services rundowns, required diversification away from defence occupations to industrial production, tourism and agriculture. Since Malta's internal market was very small, industrial expansion had to be sustained via increased reliance on the export market, and therefore competitiveness was always considered as a *sine qua non* for the success of each plan. All plans insisted on the need for adaptation of attitudes and of methods of production of the changing structure of the Maltese economy.

The objective of achieving and maintaining full employment gave rise to policies regarding labour supply, and to this end successive planners had to consider the population problem. During the sixties, emigration tended to be encouraged and financially assisted,²⁴ but during the seventies emigration was not used as a tool of policy.

The planning process in Malta has been beset by a series of dif-

difficulties, caused by successive, and sometimes unexpected, decreases in British military expenditure during the sixties, and by the hostile international environment, particularly the energy crisis and the inflationary pressures it produced, during the seventies.

The planning exercise has however achieved a satisfactory measure of success, as indicated by the expansion of an export based industrial sector, the development of a large scale tourist industry, the rapid rise in national income, the growth in the number of gainfully employed persons, and the decreased reliance on the British Military expenditure. Whether self-reliance – a major objective in the fourth development plan – had been achieved by 1979 is a matter of debate. It remains to be seen whether Malta can fend for itself without direct financial aid from foreign governments.

3. Structural Changes in the Maltese Economy

The brief outline of the Maltese development strategy, given in the previous section, suggests that during the period of this study, the Maltese economy underwent a process of expansion and diversification. No statistical evidence was given to back this assertion. This section examines briefly how the economy actually changed in terms of structure and availability and allocation of resources, and in terms of employment and unemployment.

The data used are annual observations from officially published sources.²⁵ The period covered is 1955–1979. We start from 1955 because this was the first year for which funds were made available for the implementation of a planned economic policy.²⁶ 1979 was the last year for which the data required for this study was available in published form when this study was written. The 25 year period is divided into five five-yearly sub-periods. These subdivisions broadly correspond to the different time spans during which the plans were operative,²⁷ and the findings pertaining to each subperiod may therefore indicate how the economy performed during these periods, and how it changed from one period to another. Also, as shall be shown at a later stage in this study,²⁸ these sub-divisions happen to approximately coincide with the pattern of fluctuations of some labour market variables.²⁹

3.1 The Pattern of Change of Gross Domestic Product

One way of assessing the past performance of the Maltese economy is by examining what economic resources were available, and how they were utilised. This is done hereunder by investigating how the Maltese gross domestic product and imports of goods and services changed during the period under consideration, and how these locally produced and imported resources were allocated into consumption, investment and exports of goods and services.

Table 1 presents the average annual rates of increase or decrease of these variables in real terms,³⁰ during each of the five-yearly sub-periods, and during the whole period.

The pattern of change of gross domestic product at constant prices indicates that the only period of contraction was 1960–1964, which, as already noted earlier, was characterised by a severe rundown of British military expenditure.³¹ The decline of GDP during this sub-period could possibly have been larger than 1.1% per annum had investment in plant and machinery not increased at the high rate that it did during this period. It shall be shown at a later stage that this fall in GDP during the 1960–1964 sub-period was accompanied by a decline in aggregate gainful employment and a rapid increase in emigration and unemployment.

Table 1. Annual Rates of Change (Percent) of GDP, Imports and Total Final Expenditure at Constant Market Prices. Averages for 1955–1979 and Sub-Periods.

	1955–59	1960–64	1965–69	1970–74	1975–79	1955–79
Gross Domestic Product	3.6	-1.1*	8.2	6.9	11.8	6.3
Imports of Goods and Services	6.1	2.7	12.5	0.6*	6.6	5.2
Total Final Expenditure	4.6	0.6*	10.2	4.1	9.7	5.9

**indicates that the estimate was not different from zero at the 95% level of statistical significance.*

Another sub-period of interest is 1970–1974, which cannot strictly speaking be described as a period of contraction since GDP continued to grow at 6.9% per annum, but there was a decline in the rate of growth compared with the 8.2% of the previous sub-

period. This reflects the difficulties that were experienced during this period. As we shall show below although GDP continued to grow during 1970–1974, aggregate employment did not, and had employment not been created by government in labour corps during this period,³² the adverse effects on employment would have been more severe. During this period unemployment and emigration tended to increase, which is again an indication of the difficulties experienced in this period.

The other sub-periods, that is 1955–1959, 1965–1969 and 1975–1979 were characterised by positive rates of growth of GDP. Relatively high rates of growth occurred in the 1965–1969 sub-period, when the performance of the economy surpassed all expectations, as indicated earlier. During these sub-periods, total gainful employment grew, whereas unemployment and emigration declined.

3.2 Changes in the Share of Locally Produced and Imported Resources

The pattern of change shown in Table 1 has resulted in changes in the relative share of GDP and Imports in total available resources. Table 2 shows what broad changes have occurred during the period of our study.³³

It can be seen from Table 2 that during the whole period, about 57.1% of total resources were produced locally, while 42.9% were imported. The share of imports tended to increase until the 1965–1969 sub-period, and to decrease thereafter, reflecting the slower rate of growth of imports, than of gross domestic product during the seventies, as shown in Table 1. The high percentage of imports during the whole period and the sub-periods, is one indication of the high degree of openness of the Maltese economy.

Table 2. Percentage Share of GDP and Imports in Total Resources. Averages for 1955–1979 and Sub-Periods (1954 Market Prices).

	1955–59	1960–64	1965–69	1970–74	1975–79	1955–79
GDP	58.0	54.8	53.3	56.1	63.7	57.1
Imports of Goods and Services	42.0	45.2	46.7	43.9	36.3	42.9
Total Final Expenditure	100	100	100	100	100	100

The composition of GDP at factor cost has changed during the period of our study. Table 3 shows that the fastest growing sector was manufacturing. A further breakdown of this sector would indicate that manufacturing itself changed its structure, with the textile, clothing and machinery industries expanding their relative share.

The British military establishments, on the other hand, reduced their share of GDP, from an average of 21.6% in 1955 – 1979, to an average of 2.3% in 1975 – 1979. As already explained, this is in line with the development strategy adopted in the Maltese Development plans. This sector was completely phased out by 1979.

The changes in the other sectors were not as dramatic as those pertaining to manufacturing and the British Military establishments. Construction and quarrying and private services tended to decrease their share. The share of government tended to increase up to the 1970 – 1974 sub-period, and to decrease moderately during the last sub-period. It should be recalled here that these are only average changes, and do not adequately illustrate the year to year fluctuations of these shares.

Table 3. Net Output of Broad Economic Sectors as a Percentage of GDP at Factor (Current) Cost. Averages for 1955 – 79 and Sub-Periods.

	1955 – 59	1960 – 64	1965 – 69	1970 – 74	1975 – 79	1955 – 79
Manufacturing	10.0	16.5	20.8	24.3	32.7	20.8
Construction and Quarrying	5.0	4.4	4.4	4.2	2.9	4.2
Market Services	35.8	33.6	33.3	30.4	30.9	32.8
Agriculture and Fishing	6.4	7.3	7.2	7.2	5.3	6.7
Government	15.9	17.8	19.8	21.8	19.8	19.0
British Military Services	21.6	15.0	9.5	6.3	2.3	11.0
Property Income	5.3	5.4	5.0	5.8	6.1	5.5
GDP at Factor Cost	100	100	100	100	100	100

As noted earlier, Malta imports a relatively high percentage of its requirements. Almost all imports consisted of merchandise.³⁴ During the 1955 – 59 sub-period, about 62% of imported goods was for consumer use, but this percentage has tended to decline,

and during the last sub-period only about 30% of imported goods was for consumption. On the other hand, industrial supplies and capital equipment, which averaged 38% of all imported goods in 1955 – 1959, increased their share to about 70% in the last sub-period. This in a way reflects the rapid expansion of industrial production in Malta, which required increasing amounts of raw material, semi-processed goods, and capital equipment.

Although the study of foreign trade is beyond the scope of this study, it would seem pertinent to point out that the Maltese industrial production, particularly that oriented towards the export market, tended to have a high import content. Some reasons of this are that Malta lacks natural resources, that the interindustry dependence is very weak,³⁵ and that there are limitations as to what could be produced locally given the small size of Malta. As a consequence of the expansion of industrial production, and of the growing imports for consumption, the trade deficit in the Maltese balance of payments has tended to widen during the period of our study. Also the balance between imports and exports of goods and services – the resource gap – has been consistently unfavourable, although the deficit was much smaller than the trade gap, and did not show a tendency to increase. The reason for this is of course that exports of services, particularly in the tourist industry, have tended to outweigh imports of services.

Despite the negative resource gap, the Maltese balance of payments registered a surplus in the current account in almost all years of our study, due to net inflows of investment income and net transfers from abroad. This favourable balance, together with net inflows of capital from private and official sources, has resulted in the accumulation of a considerable amount of foreign reserves.

The problem of excessive imports, in relation to exports did not therefore prove to be a major constraint to Malta's development in the past, due to the fact that other inflows of foreign exchange more than made up for the deficit. But in the coming years, when transfers from abroad are likely to decline, the need to close the gap will be of major importance.

3.3 The Pattern of Change of Employment and Unemployment

The changes in the economy just described gave rise to changes in employment and unemployment. Employment and unemploy-

ment in Malta have followed a cyclical pattern as shown in Table 4.

Table 4. Annual Rates of Change (Percent) of Employment and Unemployment Rates. Averages for 1955 – 1979 and Sub-Periods.

	1955 – 59	1960 – 64	1965 – 69	1970 – 74	1975 – 79	1955 – 79
Employment (Persons)	2.6	-0.8	3.2	0.2*	2.4	1.5
Employment (Manhours)	2.2	-0.8	2.5	-1.0	0.7	0.9
Unemployment Rate	-7.4	19.7	-22.0	9.5	-10.9	0.4*

**indicates that the estimate was not different from zero at the 95% level of statistical significance.*

It can be seen from Table 4 that employment measured in persons has tended to increase during the 1955 – 59, 1965 – 69 and 1975 – 79 sub-periods, and to decrease during the 1960 – 1964 sub-periods. This pattern is more or less followed when employment is measured in manhours (defined as persons multiplied by average weekly hours of work) but since average weekly hours have tended to decrease during the period of this study, the rates of increase of employment measured in hours are somewhat smaller than those for employment measured in persons. Of interest is the fact that employment of persons did not decline in the 1970 – 74 sub-period, whereas employment measured in manhours did. This suggests that if weekly hours of work were not decreased during this sub-period, unemployment would have been higher than that actually registered.

The cyclical pattern just described also emerges, but in reverse, when the changes in the rates of unemployment are considered. The unemployment rate is here measured as the average number of persons registered as unemployed during any one year as a percentage of the labour force for that year. It can be seen from Table 4 that the rates of unemployment tended to decrease during the first, third and fifth sub-periods, and to increase during the other two sub-periods.

Of some interest, is the fact that when the unemployment rates were increasing, emigration tended to increase also. It is probable that the rates of unemployment would have increased at a much faster rate during the second and fourth sub-period had emigration not been available as an outlet.

The general conclusion that emerges from Table 4 is that the worst period as far as employment is concerned was that for 1960 – 1964. The 1970 – 1974 sub-period was also a difficult one, but not as much as that of the first half of the sixties. The fastest rates of increase in employment, and rates of decline of unemployment and emigration occurred during the second half of the sixties. The 1955 – 59 and 1975 – 79 sub-periods were also characterised by increasing employment and decreasing unemployment and emigration, but these changes were of a smaller magnitude than those for the 1965 – 1969 period.

Of interest also in this respect, is how the composition of employment changed during the period of this study. The relevant data is given in Table 5.

Table 5. Employment by Broad Economic Sectors and by Sex, as a Percentage of Total Employment.

	1955 – 59	1960 – 64	1965 – 69	1970 – 74	1975 – 79	1955 – 79
Manufacturing	11.6	18.2	21.3	27.0	31.3	21.9
Construction and Quarrying	6.7	8.6	10.7	8.0	4.2	7.6
Market Services	26.2	28.4	29.8	30.4	30.8	29.2
Agriculture and Fishing	10.1	8.9	7.3	6.3	6.4	7.8
Government	19.7	19.6	20.6	22.9	25.2	21.6
British Military Services	25.6	16.2	10.3	5.3	2.1	11.9
Total	100	100	100	100	100	100
Male	83.9	81.8	79.6	76.0	74.0	79.1
Female	16.1	18.2	20.4	24.0	26.0	20.9

Table 5 shows that during the period of our study, employment in manufacturing, has increased its share from 11.6% in 1955 – 1959 to 31.3% in the last sub-period. This was the fastest growing sector as noted earlier with respect to the structure of GDP. The sector which declined at the fastest rate in terms of employment was that of the British Military establishments. Again this is in line with what has been noted earlier with respect to the changing structure of the Maltese economy.

Another finding that emerges from Table 5 is that female employment as a percent of the total has increased from 16.1% in 1955 – 59 to 26% in 1975 – 79. The reason for this is that female between 1955 and 1979, whereas male employment has increased by

only about 0.8% per cent per annum during the same period. The bulk of the increases in female employment occurred in the manufacturing sector, mostly in the textile, clothing, and electric machinery industries.

Finally a few comments can be made here about labour productivity. During the period of this study, output per person, and output per manhour have increased at a very rapid rate. Comparing Table 4 with Table 1 it can be seen that GDP increased at a much faster rate than employment, suggesting that on average, more output was produced per person or per manhour. Taking the economy as a whole, labour productivity per person increased by an average of 4.8% per annum, between 1955 and 1979.

3.4 Changes in the Composition of Total Final Expenditure

The changes in Total Final Expenditure shown in Table 1, were brought about by changes in its components, namely consumption, investment and export expenditures, as shown in Table 6.

Table 6. Annual Rates of Change (Percent) of the Major Components of Total Final Expenditure, at Constant Market Prices. Averages for 1955 - 1979 and Sub-Periods.

	1955 - 59	1960 - 64	1965 - 69	1970 - 74	1975 - 79	1955 - 79
Private	4.6	1.9	10.2	3.3	8.2	5.8
Consumption						
Government	2.9	-0.2*	5.1	1.5	8.2	5.2
Consumption						
Construction	9.1	-4.0*	16.2	-7.9*	12.4	2.7
Investment						
Machinery	15.9	12.4	19.4	-11.8*	2.4*	6.6
Investment						
Exports of Goods and Services	2.1	-3.2	8.7	10.9	11.4	5.9

**indicates that the estimate was not different from zero at the 95% level of statistical significance.*

The rates of change shown in Table 6 were accompanied by changes in the composition of Total Final Expenditure as shown in Table 7.

Table 7. Percentage Share in Total Final Expenditure Averages for 1955 – 1979 and Sub-Periods. (1954 Market Prices).

	1955 – 59	1960 – 64	1965 – 69	1970 – 74	1975 – 79	1955 – 79
Private	45.0	45.9	45.9	48.9	44.1	45.9
Consumption						
Public	8.9	9.5	8.5	8.9	8.1	8.8
Consumption						
Gross Investment	11.2	12.6	16.0	13.1	9.8	12.6
Exports of Goods and Services	34.9	32.0	29.6	29.1	38.0	32.7
Total Final Expenditure	100	100	100	100	100	100

It can be seen from Table 7 that during the period of this study the share of investment tended to increase until the 1965 – 69 sub-period and to decrease during the seventies. A closer examination of published data on gross investment³⁶ reveals that during the 1955 – 1979 period, about 36% of fixed investment came from the public sector, the bulk of which was in construction of dwellings and other buildings including physical infrastructural developments. On the other hand, the bulk of private fixed investment, which averaged 64% of the total during the same period, was in plant, machinery and equipment.

Of interest on the question of investment is its financing. About 70% of finance available for investment during the period of this study came from local savings, originating mostly from households and private corporations up to the first half of the seventies. After 1975, government savings, coming from surpluses in its current account played an important role in domestic savings, averaging around 22% of the total. Apart from local savings, there were capital transfers from abroad, mostly of an official nature.

A look at the Maltese National Accounts would indicate that during the period of this study, a relatively high percentage of National Savings have been invested abroad. This may be regarded as an undesirable state of affairs in a country like Malta which needs to step up its productive base to promote employment. For example, during the seventies, when transfers of capital (to) abroad were relatively high, investment in machinery tended to decline, in absolute terms as well as a percentage of GDP. The returns from foreign investments in the past were however beneficial in that they made up for the chronic deficit on goods and services in the balance

of payment. Before leaving the question of investment it should be noted that the 1955 – 1979 averages for the composition of gross investment do not adequately illustrate the considerable year to year changes that have occurred.

Another important item of total final expenditure is exports of goods and services. The share of this item tended to be quite high, as can be seen from Table 7, averaging 33% during the whole period. It is interesting to note that the percentage share of exports of goods and services was always higher than that of imports of goods and services, except during the last sub-period.

Since these variables are measured in real terms, and since the price of imports has increased at a faster rate than that of exports in the period 1975 – 79³⁷ it seems that in real terms the resource deficit during this sub-period would have disappeared if the terms of trade had not been unfavourable during the period of the study.

As regards the composition of exports, the share of merchandise in total exports increased from an average of 12% in 1955 – 59 to 57% in 1975 – 79. The bulk of merchandise exports consisted of industrial products, of which clothing and textiles have had a large and growing share since the second half of the sixties. As regards exported services, the majority of foreign exchange earnings came from activities associated with the British military base during the fifties and early sixties, but with the development of the tourist industry, receipts from foreign travel increased rapidly, and by 1972 they became the major item of foreign exchange earnings from exported services. As already noted, revenues associated with the British military base ceased altogether by 1979.

The final item of total final expenditure that we shall consider is consumption. Throughout the period of our study, private and public consumption averaged around 55% of Total Final Expenditure. The pattern of change of the share of consumption may be of interest since this share of total final expenditure did not decline in 1960 – 1964, which period, as already noted, was characterised by declining economic activity.

The reason for this could possibly be that consumers attempted to maintain living standards. The high percentage share registered in 1970 – 75 may also be attributable, amongst other things, to the implementation of the exchange control act during this period, and the banking difficulties in 1973/74³⁸ which may have resulted in a reduction of the Maltese average propensity to save.

4. Major Problems Faced by the Maltese Economy

An important conclusion that emerges from this study is that attempts by successive Maltese governments to expand local production and phase out the traditional dependence on British military expenditure were by and large successful.

As was noted, this has resulted, amongst other things, in the expansion of an export oriented industrial sector and a relatively large tourist industry. We have shown that imported goods and services formed a large percentage of available resources, but during the seventies, local production increased its share at the expense of imports.

Some disturbing features pertaining to the Maltese economy include the fact that the amount of financial resources invested abroad tended to be too high, particularly during the seventies.³⁹ Considering that capital formation is indispensable for the future growth and development of the Maltese economy, the need to channel local savings into viable economic projects cannot be overemphasised.

Also, import requirements tended to be too high particularly in the export oriented industries, reflecting the lack of natural resources in Malta, and the low degree of inter-industry dependence. This means of course that increasing reliance on industries such as textiles and clothing are likely to be accompanied by rapid increases in imports of industrial supplies and capital equipment. The severity of the problem might be reduced if inter-industry linkages are improved, since this would result in an increased share of local value added.

Another area of concern is that an excessively high percentage of exported goods consist of textiles and clothing, and that exported goods in general are almost exclusively directed towards E.E.C., particularly to the United Kingdom and Germany. This carries the risk that adverse economic conditions, changes in tariff and quota arrangements,⁴⁰ and even changes in tastes in E.E.C. countries will have disastrous effects on Malta's economy. It would seem that this danger of putting too many eggs in one basket is at present being taken very seriously, and efforts are being made to diversify the structure and direction of exports.⁴¹

Tourism has had an important beneficial effect in terms of foreign exchange earnings and employment, but excessive reliance on tourism presents a danger in that the tourist industry tends to be

quite volatile, depending as it does on the whims and fancies of foreign travellers, and on the successes or failures of competing tourist resorts.⁴²

As far as the future is concerned however, the most pressing problem would seem to be that of maintaining the possibly increasing the degree of self-reliance that has been achieved in the past. The developments during the past 25 years, discussed in this study, would seem to indicate that Malta, though poorly endowed as far as natural resources are concerned, and faced with the additional problem of a small domestic market, has shown itself capable of expanding with increased reliance on its own initiatives.

Appendix: Basic Statistics on the Maltese Economy for 1979.⁴³

The Maltese population at the end of 1979 amounted to 318051, of which 118601, or about 37% were gainfully employed. The composition of the gainfully employed was as follows: 6% were in agriculture and fishing, 39% in industrial production,⁴⁴ 23% in public administration, and 32% in market services.⁴⁵ About 27% of all gainfully employed persons were females, mostly working in manufacturing production, distributive trades, and private services.

In 1979, the gross national product at market prices was valued at Lm338.7 million, which amounts to about Lm1074 per capita.⁴⁶ Of this Lm13 million was net property income from abroad, and Lm32.1 million were taxes less subsidies. The shares of gross domestic product at factor⁴⁷ cost were 4% agriculture, 43% industrial production, 13% public administration, and 40% market services.

Imports of goods and services during the same year were valued at Lm307.7 million of which 88% were merchandise imports (C.I.F.) and the rest services, consisting mainly of transportation and travel. About a third of imported merchandise consisted of consumer goods, the rest of industrial supplies and capital equipment.

These locally produced and imported goods and services were utilised as follows: 39% as private and public consumption, 13% as gross domestic product at factor cost⁴⁷ were 4% agriculture, 43% was valued at Lm83 million was mostly purchased by the private sector, the bulk of which was for manufacturing production and

construction of dwellings. About 30% was purchased by the public sector, mostly for construction.

Exports of goods and services were valued at Lm290.8 million,⁴⁸ of which about 55% were merchandise, mostly manufactured products, with textiles and clothing constituting the major group of exported goods. Exports of services consisted mainly of travel,⁴⁹ transportation and government transactions mostly of a non-military nature.⁵⁰ The balance between imports and exports of goods and services was negative, amounting to Lm16.9 million, but the balance of payments on current account was favourable by Lm18.8 million, due to net inflows of investment income and transfers from abroad.⁵¹ Together with net capital inflows,⁵² this favourable balance resulted in net additions of official foreign reserves, which at the end of 1979 were valued at Lm394 million. This amounts to about 15.5 months in terms of import coverage for 1979.⁵³

Notes:

1. This was considered to be a major weakness of the Maltese economy. On this question see, for example, the Report of the Royal Commission (1912) para. 74, Balogh and Seers (1955), para. 22 – 41, and Bowen Jones et al. (1959), chapters 5 and 6.
2. The Schuster report was an examination of the then existing economic situation, and an investigation of the possibilities for developing new sources of revenue with a view to financing long range development policy. The report was drawn up at the invitation of the Maltese prime minister.
3. This followed the Malta Round Table Conference in London, which comprised representatives of all political parties at Westminster, and considered questions arising from proposals by the Maltese prime minister for a close association between Malta and Britain. The report was drawn up after the conference heard statements and received memoranda from various organisations and individuals in Malta.
4. See Malta Round Table Conference Report (1955), para. 58 – 61.
5. Balogh and Seers were appointed by the Maltese government to advise on what economic aid could legitimately be claimed for the British government, to carry out a general survey of the Maltese economy, and to suggest how Malta's economy could be improved and strengthened by capital development projects. It appears that following the advice given by Balogh and Seers, the Maltese labour government actually drew up a developmental plan, but this was not published or given legal status.
6. The British defence white paper of 1957 (CMD 124) relegated Malta's position in the British defence structure. The decline of importance of the naval dockyard in Malta, and the consequent loss of jobs, was associated with this line of defence policy.

7. The 1959–1964 plan was basically a government expenditure plan, supplemented by policy proposals.
8. The highest priority of investment was given to the conversion of the naval dockyard to a commercial ship repair yard. See para. 10 of the Plan.
9. During the plan period, industrial policy included the setting up of an industrial estate, building and lettering of factories at nominal rates, and making available of grants and loans and other inducements to attract industries. For a discussion on these incentives schemes, see Busuttill (1970).
10. Refer to “The Next Five Years, Statement on Defence” (CMD 1639, 1962) which spelled out the changes in British defence policy. These changes adversely effected not only those employed with the British military establishments, but also those who made a living from spending by British servicemen and their families.
11. At the request of the government of Malta, the United Nations sent a mission to study the economic problems of Malta, and to help in the formation of a second five year plan. The Stolper report (1964) was the document containing the findings and proposals of this United Nations mission.
12. The government of Malta did not accept this view, and held that it was necessary to bolster absorptive capacity to avoid a serious reduction in employment and drop in per capita income.
13. Malta has had an eventful political and constitutional history under British rule, which commenced in 1802. See for example, Blouet (1967) and Cremona (1964).
14. As a result of the 1967 rundown of the British forces stationed in Malta, an Anglo-Maltese joint mission, headed by Lord Robens was appointed to report on ways and means whereby Malta’s industrial base could be strengthened to absorb additional jobs. The Robens report (1967) amounted to a revision of the second development plan.
15. A considerable amount of construction of private buildings was geared to the speculative market with foreign participation. This has been considered as a major drawback, since it unduly pushed up the price of private dwellings. A considerable amount of the profits went to foreign operators.
16. The E.E.C. association agreement came into effect in April 1971. To all intents and purposes the agreement amounted to a preferential trade agreement favouring Malta. The agreement was to be effective for a period of five years, with provisions for extension, the ultimate aim being the formation of a customs union between Malta and the E.E.C. On this agreement see Causon (1972) and Apap Bologna (1977).
17. Malta had a Nationalist Government between 1962 and 1971, and a Labour Government between 1955 and 1959, and since 1971. During the period 1958–1962, following the resignation of the Labour Government, Malta was governed by an Executive Council.
18. See Development Plan (1973–1980), pp. 60–61.
19. During the seventies, the labour government pursued a policy of what it called active neutrality, involving a commitment to non-alignment. This commitment was expressed by the dismantling of superpower affiliations. The agreement with Britain in 1972, providing for a phased withdrawal of British forces, and the development plan launched after the agreement, were described as forming part of this political objective.

20. See "Agreement between the Government of Malta and the Government of the United Kingdom" (1972).
21. For the labour government's views on this question see Development Plan 1973-1980, pp. 11-12, and Development Plan for Malta, 1981-1985, pp. 72-75.
22. For a brief description of these changes, see Development Plan, 1973-1980, pp. 12-13, and Development Plan 1981-1985, pp. 126-128.
23. The labour corps were set up by government to provide productive employment on infrastructural projects to unemployed males, and to provide training in a trade to these men. The corps were first set-up in 1972.
24. The Balogh and Seers Report (1955) had considered emigration to be a waste of skills and this line of thought has by and large been that held by the labour government during the seventies. The reports by Wood (1946), Schuster (1950) and Stolper (1964), on the other hand considered that emigration was one method of improving living standards and reducing unemployment.
25. The data were obtained from various issues of "The National Accounts of the Maltese Islands", "The Census of Production" and "Annual Abstract of Statistics". The deflators used were obtained from Waldorf (1969) for the years 1954-1966 and from the "National Accounts . . ." for the other years.
26. Although the first published plan covered the years 1959-1964, the planned policy for economic diversification away from defence activities was actually initiated by the labour government in 1955. See note 5 above.
27. Strictly speaking the period 1970-1974 does not correspond to a period when a development plan was in operation, since the plan covering this period was shelved by the labour government in 1971.
28. See Section 3.3 of this study.
29. On plotting the data for most variables, there appeared to be a cyclical pattern, whose peaks and troughs fell, by and large, on the last year of each sub-period.
30. The term "real" here means that the current money value of the variable, whose rate of change is being estimated, was deflated by an appropriate price index in order to remove change due to prices. In this instance all deflated values have been obtained from officially published data (see note 25). The base year of the respective price indices is 1954. The rate of increase or decrease was estimated by applying the Ordinary Least Squares method of regression to the equation $Y_t = Y_0 e^{rt}$ where Y stands for the variable, measured in real terms, whose rate of change is being estimated, and r is the rate of change. The test of statistical significance of the estimate of r was carried out on the basis of the 't' distribution.
31. During this period, income from employment from the military sector declined by an average of 6.6% per annum.
32. The number of persons engaged in the labour corps (see note 23 above) stood at about 1500 at the end of 1972, 4400 at the end of 1973 and 3400 at the end of 1974.
33. Five year averages rather than single year observations are presented. One advantage of using averages is that the undue influence of exceptional values in any one year is reduced. These averages may be regarded as some sort of mid-point observations for each sub-period.
34. The data on imports which follows is not tabulated, but the figures in the text do give an indication of the broad changes that have occurred.

35. Metwally (1977) analysing the input-output matrix for the Maltese economy for 1973 concluded that total intermediate output is less than one third of total input requirement (op. cit. p. 16). The problem of a low degree of linkage between local industries is particularly evident in the textile and clothing industries, where dependence on foreign technology tended to be rather high. On the character of the clothing and textile industries in Malta, see Grech (1979).
36. The statistics on the composition of investment and exports to be discussed below will not be tabulated. The major changes are given in the text.
37. During the 1975 – 1979 period, the value index of imports rose by an average of 8.7% per annum, whereas that of exports rose by an average of 6.2% per annum.
38. On this question see the Annual Report of the Central Bank of Malta 1974, p. 26.
39. Of interest in this respect is that during the sixties, when official foreign reserves were being accumulated at a slow rate, investment in machinery increased at a very rapid rate. On the other hand, during the seventies, when the accumulation of official foreign reserves was preceeding at a very fast rate, investment in machinery increased at a very slow rate.
40. For example, in 1978, the E.E.C. commission took a unilateral decision to halt all exports to the U.K. of certain items of garments, and to impose import quotas on other items of garments.
41. See for example, Development Plan 1981 – 1985, p. 66, p. 109 and p. 121.
42. Malta has suffered from the adverse effects of the volatile nature of the tourist industry. For example, the lifting of the £50 limit on the amount of money British tourists were allowed to spend outside the Sterling Area resulted in a sharp reduction of British tourist. Also, changes of a political nature in Spain have brought about major changes in tourist inflows to Malta. Similarly changes in the British economy, and in the exchange rate of sterling are likely to have major impacts on the Maltese tourist industry.
43. Most of these statistics are taken from the “Economy Survey 1980” published by the Economic Division of the Office of the Prime Minister.
44. Industrial production here includes manufacturing, shiprepair and ship-building, construction, quarrying and oil-drilling, and electricity and gas.
45. Market services here include wholesale and retail trades, banking, insurance and real estate, transport and communications, and personal and other services.
46. Since the Malta Pound, United States dollar exchange rate in 1979 was approximately £M1 = \$2.9, this was equivalent to \$3126 per capita. This was higher than the 1979 GNP per capita of all low income countries and most middle income countries, as classified in the World Bank’s “World Development report 1981” (see Table 1, p. 184).
47. G.D.P. at factor cost is computed by subtracting net property income from abroad, and expenditure tax (less subsidies) from G.N.P. at market prices. In 1979, G.D.P. at factor cost amounted to Lm293.7.
48. Exports of goods and services amounted at about 89% of the gross domestic product in 1979. This was very high indeed compared to an average of 11% in low income countries, 20% in middle income countries, 19% in industrial market economies, and 65% in oil exporting countries. These percentages are given in “World Development Report 1981”, table 5, pp. 142 – 143. According to this table, Singapore had the highest share of exports, which stood at 187% of G.D.P. in 1979.

49. The biggest source of foreign exchange earnings from invisible exports was tourism, which accounted for about 58% of the total.
50. Before 1979, foreign exchange earnings from governmental transactions in the current account of the balance of payments came mostly from transactions connected with the British military base.
51. One item included in transfers from abroad was the rent for British defence facilities. This source of foreign exchange receipts was relatively very small in 1979, and ceased altogether after March of that year.
52. Capital transfers include direct investment and loans from foreign sources. It should be noted that Malta's foreign debt is relatively small, and this is one aspect in which Malta differs from many developing countries, where debt servicing constitutes major problems.
53. This figure is quite high by international standards. For a comparison see "World Development Report 1981", table 15, pp. 162 – 163.

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Some Findings Pertaining to the Maltese Aggregate Labour Market

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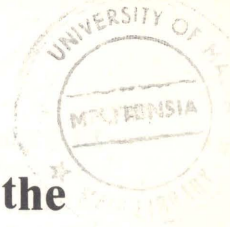
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Notes Pertaining to the
Matters Appointed to be Discussed



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Some Findings Pertaining to the Aggregate Maltese Labour Market

1. Introduction

Like any other market, the labour market has two sides. On the one hand, there is demand, which in the labour market can be measured by *employment*, i.e. the number of workers that employers are willing to take on to produce goods and services. On the other hand there is supply, which in the labour market can be measured by the *labour force*, i.e. the number of people who are willing to work whether employed or registering for employment.

The difference between the number of persons employed and the number of people in the labour force is unemployment. Some factors that influenced labour demand, labour supply and unemployment in Malta, during the past years, will be discussed in this article which also presents some of the findings from a study on the Maltese labour market carried out by the present author.¹

During the past 25 years in Malta the number of persons employed has increased, and the composition of employment has changed. In 1955 the number of persons employed amounted to about 80,000 and increased to about 120,000 in 1980. Of these, about 19% worked with the British military establishments in 1955, and about 10% worked in the manufacturing sector. By 1980, there was no employment with the British military establishments in Malta, and the percentage of workers in manufacturing increased to 33%.²

2. Labour Demand³

The number of persons employed, and the composition of employment are variables that belong to the demand side of the market. It is of interest to explore what factors have had the most important influences on these changes in labour demand, since this helps us to understand one side of the market that is mostly responsible for changes in unemployment.

2.1 The Influence of Output on Labour Demand

One variable that is directly related to employment is output. A firm that expands output is expected to employ more people, and a firm that reduces output is expected to discharge workers. The net output of goods and services of all firms⁴ put together is called the Gross Domestic Product (GDP). We expect therefore that if GDP increases in real terms, aggregate employment will increase also.

The extent to which labour employment responds to changes in output in turn depends on other factors, such as, for example, the ease with which new employment can be recruited as output expands, and the ease with which employees can be discharged, as output contracts. Since "hiring" and "firing" employees involve costs, such as training costs, redundancy payments, legal constraints, and so on, we do not expect that firms immediately adjust their employment according to the level of output. This short run *partial adjustment* is an important factor when analysing the relation between employment and output.

In the study carried out by the present author, already referred to, it was found that on average, had there not been costs of adjusting employment, and had everything else remained constant, firms would have increased their employment by 8% with a 10% increase of GDP measured in real terms.⁵ This estimate refers to the aggregate employment measured in manhours,⁶ and can be regarded as some form of weighted long run response by all firms to the changing demand for their output.⁷

Before proceeding further, there are some points which have to be clarified. All the estimates, such as the one presented earlier, are estimates of *elasticities*. For example, if labour demand increases by 8% as output increases by 10%, then the elasticity of labour demand with respect to output is 0.8. Also, all estimates were produced after calculating and excluding the effect of other factors. This was necessary in order to isolate the effect of one variable on another. In the above case, labour demand increased by 8% as output increased by 10%, if we hold wage rates constant. In actual fact, published statistics show that in the past 25 years output has increased by a very much higher percentage than employment. The reason for this is that as output was increasing, wages were increasing also, thereby partly offsetting the effect of increased production. I shall come back to this point later.

The elasticity of labour demand with respect to output can be regarded as a long run response, in the sense that it applies in the absence of costs of "hiring and firing". In the short run, adjustment is expected to be only partial. The mentioned study suggests that in any one year, only about 65% of the response was actually carried out. This means that the *short run* elasticity of labour demand with respect to output was much less than the *long run* elasticity of 0.8. The estimates produced by the mentioned study suggest that *in any one year*, for every 10% increase in output, labour demand increased by only 5.2%, that is with an elasticity of 0.52.

2.2 The Effect of Wage Rates

Wage rates can be regarded as the price of labour. We expect that as the price of labour increases, less of it would be demanded by firms. The extent to which labour demand can be changed as its price changes, in turn depends on the ease with which labour can be substituted by machinery. This is called the elasticity of factor substitution, and in general we expect that factor substitution is easier in the long run than in the short run. This is again due to the costs of adjustment. Thus for example, given that a firm desires to reduce its employment and increase its machinery, the extent of this desired change depends on the ease with which employees can be discharged. On the other hand, if a firm desires to increase its employment when wage rates decrease, the change depends on the ease with which new employees can be recruited.

The mentioned study suggests that in the long run, for every 10% increase in wage rates, measured in real terms,⁸ employment tended to decrease by about 9%. However, because of partial adjustment, in any one year, the response to a change of 10% in wage rates was only a reduction of 5.6% in employment. The elasticity of labour demand with respect to wage rates is therefore negative, and equal to -0.56 in any one year.

2.3 Keeping Other Things Constant

How is it, one may ask, that labour demand in Malta has increased in the past years, when it is known that its price i.e. wage

rates, have also increased. The answer to this question lies in the fact that as wages were rising, output was rising also. As has already been established, output has a positive effect on labour demand, in that as it increases, labour demand increases also. To estimate the effect of wage rates on labour demand, we have first of all to remove the effect of output, and of other factors, which also affected labour demand when wages were changing. In the case of Malta it is probable that the negative effects of wage rates on labour demand have been more than offset by the positive effect of output. During the past 25 years, output has increased at a faster rate than wage rates, both measured in real terms for the economy as a whole, the former increasing at an average rate of 6.3% per annum, whereas the latter at an average rate of 4.8% per annum.⁹

The question as to whether or not wage rates affected labour could therefore be put as follows: "Do we expect that an increase in wage rates reduces labour demand, if output and other variables remained constant?" The answer to this is "yes" theoretically and the question can be investigated empirically by using suitable methods¹⁰ to estimate and isolate the effects of all variables that systematically affect labour demand.

2.4 Technological Change

We expect that as technology improves, less labour is demanded, other things remaining constant. Thus for example, a firm that makes use of labour-saving modern equipment, would tend to reduce its labour requirements, if output and wage rates do not change. Technological progress embodied in machinery is very often labour-replacing for a particular firm. However it need not result in a loss of jobs since improved technology may promote efficiency and competitiveness, which in turn may bring about increased sales. Also, for the economy as a whole the process of innovation itself may create new jobs. Thus for example, the introduction of computers, may reduce the need for certain repetitive tasks in a firm, but the business in computer software and hardware may produce new jobs elsewhere.

Another change related to technological progress is the increase in efficiency embodied in the workers themselves, due to improvements in education and better acclimatisation to the industrial environment. Such changes may also result in changes in labour demand by an individual firm, other things remaining equal.

It is very difficult to measure the effect of such changes, and in most studies on labour demand, allowance is made for technological change by assuming that its effect changes smoothly over time. The study on labour demand by the present author did not produce conclusive evidence on the effect of technological change. This is possibly due to the fact that technological changes did not produce a *systematic* effect on labour demand for the economy as a whole, even though it may have had an effect on individual firms.

2.5 Other Factors

Other factors which are expected to influence labour demand include the average weekly hours of work, and the composition of output. Thus, for example, the number of weekly hours in Malta have decreased from about 45 in 1955 to about 40 in 1980. This reduction in weekly hours of work results in an increase in the number of workers, other things remaining equal. For example, the number of persons required to produce a given output in a 40 hour week, are less than those required to produce the same output in a 45 hour week.

The composition of output affects labour demand in that certain types of production require a higher labour content than others. It is necessary to distinguish here between the volume of output, which as we have shown, has a positive (short run) elasticity of 0.52, and the composition of output, which in Malta may have had a negative effect on labour demand. This is due to the fact that the military sector, which had a relatively high labour content, has been largely replaced by the industrial sector, which has a lower labour content. However within the industrial sector itself, the composition of output has tended to change in favour of production with a high labour content, such as the textile and clothing industries.

2.6 The Usefulness of Research on Labour Demand

The general conclusion that emerges from the foregoing is that labour demand in an economy is determined principally by output, wage rates, technological change, hours of work, and the composition of output. The impact of these variables on labour demand in

turn depends on the ease with which labour demand can be adjusted.

The study of labour demand is important for practical purposes because it sheds light on the impact of the variables that affect it. Thus for example, such a study may provide information about the likely effects of increases in wage rates on labour demand – information that is useful to unions in their wage bargaining.

Such a study may also provide estimates on the degree of labour absorption of one sector compared to another. This is useful information to the policy makers in their attempt to promote employment by expanding production in areas with a high rate of labour absorption. In some instances, the study of labour demand can also produce information regarding the degree of substitution between labour and capital, the degree of economies that can be obtained from large scale production, and the effect of technological progress.

3. The Labour Force¹¹

During the past 25 years in Malta, the size of the labour force has changed considerably. The most important changes that have occurred were related to female employment. In 1955, the size of the labour force was about 85,000 persons, of whom about 15% were females. By 1980, the labour force consisted of about 124,000 persons of whom about 26% were females. The reason for this changing composition of the labour force was of course that the average rate of increase of the female labour force was much faster than that of males.

In many studies on the labour force, the most interesting results related to its female component, and research interest focuses on the behaviour of female labour supply.¹² It is to be noted here that the male and the female component of the labour force, taken as aggregate sex-groupings, may be expected to behave differently, since, in general, most males of working age are institutionally expected to form part of the labour force, whereas most females are not.

3.1 Labour Supply and Population

A variable that is likely to affect the male and female labour force to the same extent is the size of the working age population. In general, we expect that as the size of the working age population increases, the size of the labour force increases by a proportional amount, if the composition of the working age population does not change. In practice, the working age population changes not only in size, but also in composition. The study by the present author suggests that changes in the size of the Maltese labour force would have been approximately proportional to changes in the working age population, had everything else remained constant. This finding indicates that a policy aimed at reducing the size of the working age population, would reduce the size of the labour force, and therefore reduce unemployment, other things remaining constant.

3.2 The Discouraged Worker Effect

There are a number of variables which are expected to affect males and females separately. It is not possible in this short presentation to deal adequately with all these factors, and only the most important ones will be dealt with here. One of these is the change in economic activity. In many countries, it has been observed that the size of the labour force changed with business fluctuations. This has prompted researchers to investigate the response of the labour force to variables directly related to business cycles, such as, for example, the rate of unemployment.

A finding very often reported in studies on the male labour force is that the number of persons working, or registering for work, tends to decrease as unemployment increase. This pattern of behaviour is associated with what is often referred to as the "discouraged worker" effect.¹³

This effect may occur because in times of low economic activity, difficulties or costs of finding a job tend to increase, and persons that would otherwise seek employment, give up and opt out of the labour force. For this reason, it is possible that the labour force contracts in times of recession, even if the size of the working age population does not change.

Another related consideration is the "added worker" effect, which suggests that during low levels of economic activity, pressures are brought to bear on persons to join the labour force to

supplement the loss of income caused by job losses on the part of heads of families. Thus contrary to the *discouraged worker* effect, the *added worker* effect is expected to result in an increase in the size of the labour force, other things remaining equal.

Since the two effects may operate at the same time during business fluctuations, it is possible that cyclical changes in the size of the labour force are the *net outcome* of the two effects. The object of research on the short run changes of labour supply is to determine which of the two effects predominates. In the study by the present author, the result suggests that the discouraged worker effect predominated, when the aggregate labour force was considered. When the male and female labour forces were analysed separately, the result indicated that the discouraged worker effect was stronger in the case of males, and the added worker effect was stronger in the case of females.

3.3 The Effect of Wages and Other Income

Another important factor affecting the size of the labour force is income. We can distinguish between two broad categories of income, namely income from employment, and non-employment income. We shall consider the income from employment first.

As is well known, wages may be regarded as the income foregone by not participating in the labour force. Thus the utility obtained from non-market activities, such as leisure or housework, has to be viewed against the income lost by not working. It is to be expected therefore, that as wage rates go up, non-market activities become less attractive, and market work becomes more attractive, possibly resulting in an increase in the size of the labour force. This effect, termed the *substitution effect*, therefore, implies that as wage rates increase, labour supply increases also. But wages also have what is called an *income effect* in that it is possible that as income increases, leisure activities become more attractive and market work less attractive. The income and substitution effects therefore move against each other. In many studies on the aggregate labour force, it has been found that wage rates have a positive effect on the labour force suggesting that the substitution effect outweighs the income effect. This result has also been obtained from the study of the author, with an elasticity of about 0.03, which is quite small.

However, when the male and female labour forces were considered separately, it was found that the male labour force did not increase as wage rates increase, other things remaining constant. This possibly reflects the fact that males are institutionally determined to form part of the labour force, irrespective of wage rates. On the other hand, the female labour force was found to respond positively to changes in wage rates. The total effect of a 0.3% increase in the labour force as wage rates rise by 10% can therefore be regarded as some form of weighted average response by males and females.

The effect of incomes, other than wages, is difficult to analyse. These incomes include those associated with affluence, such as profits, interests and dividends, and those associated with poverty such as social assistance benefits. Many researchers on the effect of non wage income admit that it is not easy to measure the impact of this variable, and evidence as to whether its effect is positive or negative is not conclusive. This is also the case with the results of the study by the author. The reason for this could possibly be due to the fact that non-wage income does not have a systematic influence on the size of the labour force, or that the different ways in which it affects different population groupings have tended to cancel each other out.

3.4 Attitudinal Changes and Employment Opportunities

As already indicated, it is the female labour force that has attracted most of the research on labour supply. In Malta not much research has been done on the subject, but a brief look at published statistics on the male and female labour forces will suggest that whereas the proportion of the male working age population in the labour force has not varied much during the past 25 years, the proportion of females of working age in the labour force has increased quite rapidly. These proportions, which are termed *participation rates*, indicate that during the past 25 years there were factors which have influenced the female labour force and the male labour force differently.

In Malta, a variable that may have had a systematic effect on the size of the female labour force is *attitudinal change*. Thus, for example, the negative reactions to a woman joining the labour force are now much weaker than they were 25 years ago. The

reasons for this change are various, and include changes in religious attitudes, increased compatibility between the role of mother and worker, due to the proliferation of mechanised gadgets in the home, a lower birth rate, better education, and an increased awareness of women's rights and women's emancipation.

Another factor which is likely to have had a systematic influence on the size of the female labour force are employment opportunities. As is well known, many jobs have been open to female workers with the process of industrialisation in Malta. One can distinguish between "static" and "progressive" jobs, the former tending to be routine and do not necessitate an increase in skill acquisition, while the latter are associated with a high degree of commitment.¹⁴ The increase in repetitive and standardised jobs has increased employment opportunities for females, since these jobs do not require long term commitment, as is the case with jobs that require a high degree of training. Moreover, employers may find it advantageous to employ females in such jobs because it is not necessary to reward with incremental pay those employees with a low level of accumulated skill, which does not require high recruiting costs to replace.

It is not easy to disentangle the effects of changing attitudes, and the effect of better employment opportunities, on the size of the female labour force, since these changes tend to move together. For example, it is likely that the changing employment opportunities have themselves contributed to the attitudinal changes regarding female employment that have occurred in the past years. The study by the author suggests that during the past 25 years in Malta the female labour force would have increased by about 2% per annum if the working age population, the effect of business fluctuations, and the wage rates remained constant. This implies that attitudinal changes and employment opportunities may have had an independent systematic effect on the labour force.

3.5 Further Research on Labour Supply

Most studies on the labour force conclude with the remark that further research is necessary. This is also true of the study by the present author. The findings are plausible, and accord with those proposed in other works. But because some of the factors that influence labour supply are difficult to measure, it is not possible to

identify and isolate the effect of such variables as attitudinal changes, education, etc. This notwithstanding, most studies confirm the hypothesis that changes in the working age population have an approximately proportional effect on the size of the labour force, and that the overall reaction to a decrease in economic activity is a decline in the labour force.¹⁵

Most findings also come up with the conclusion that the long run increases in the overall participation rate (i.e. the percentage of the working age population which is in the labour force) have been mostly caused by female members of the labour force.

The study of the labour force is of importance because it sheds light on what variables are likely to have the most important effect on unemployment, if demand for labour remains unchanged. Thus, even if firms do not reduce demand for labour, we may experience an increase in unemployment if the size of the working age population increases. The study of labour supply may also produce information on the extent of "hidden unemployment" which occurs due to the fact that persons tend to opt out of the labour force as unemployment increases.

4. Wage Determination

Up to now, we have dealt with wages as if they were determined independently of labour demand and supply. We have argued that wage rates affect labour demand negatively, and labour supply positively, but we have not considered the effect that labour demand and supply themselves have on wage rates.

4.1 The Workings of Labour Markets

In the market for a commodity, we expect that if something is overabundant, its price will tend to fall, and conversely, if something is in short supply, its price will tend to rise. This is most likely to happen in a *free* market, but the forces of supply and demand will also be felt in an *administered* market. A case in point is the oil market, where the presence of excess supply has resulted in a downward pressure on oil prices, even though its supply was administered by an international cartel.

As already argued, labour has a price, which we call the wage

rate, and this is likely to be affected by the presence of excess supply of labour (unemployment), or excess demand for labour. Thus, if there are too many workers seeking a job, and too few jobs available, we may expect a downward pressure on wage rates.

The labour market may be regarded as an administered market, i.e. the price of labour is not exclusively determined by market forces. The reason for this is, of course, that trade unions and employers negotiate wage rates, and the results of such bargaining may differ from those that would have been produced by market forces alone. Moreover, governments also intervene in the labour market and impose minimum wage rates, which again may differ from the minimum wages produced by a free labour market. This notwithstanding, it would be a mistake to assume that market forces do not operate in wage determination. For example, in the late sixties in Malta, the high level of economic activity produced an increase in labour demand, which in turn produced an upward pressure on wage rates. On the other hand, in the early sixties, the low level of economic activity resulted in a low level of labour demand, which brought about a decrease in real wage rates.

It would be a mistake also if one assumes that wage rates are determined by market forces alone, and nothing else. It is probable that trade unions exert an upward push on wage rates, and that in the absence of union pushfulness, the downward adjustment in wage rates, during periods with high levels of unemployment, would have been higher. For example, had there been no unions in Malta, the high level of unemployment during the early sixties could have brought about a much faster decrease in wage rates than that which was actually registered.

4.2 Empirical Research in Desquilibrium Economics

In reality, wage rate changes are likely to be determined by a mixture of market forces and non-market forces. The object of empirical research on this subject is to estimate the impact of these two forces. The model used by the present author tested and supported the assumption that the variables which affect labour demand and labour supply, and therefore determine the rate of unemployment, in turn affect wage rate changes. It also supported the assumption that union pushfulness and the ability of firms to pass wage increases on to the consumer, have had an independent effect on wage rate changes.

It is worthwhile describing briefly here how the system just described works. The overall hypothesis is that labour supply, labour demand and wage rates are simultaneously determined. The model used by the present author allows for such interrelationships and appropriate econometric methods have been used to produce the estimates. This theoretical area of investigation is not a new one, but the empirical approach is relatively new, since it enters into the realm of *disequilibrium economics* – an approach particularly suited to the labour market which is not normally characterised by equilibrium.¹⁶

4.3 Direct and Indirect Effects of GDP and of Population Changes

The methods used for estimating the Maltese labour market interrelationship allows for the *direct and indirect* effects of variables on the rate of unemployment. Thus for example, GDP is expected to have a direct effect on labour demand, as explained earlier in Section 2.1. However, since GDP affects labour demand, it affects also the balance between labour demand and labour supply, and therefore unemployment. Unemployment – excess labour supply – should in turn affect wages, which affect labour demand.

The direct effect of GDP on labour demand, and the indirect effect of GDP via wage rates combined together give the *total* effect of GDP on labour demand. Similarly the size of the working age population has a direct effect on labour supply, as already argued above, and therefore, it affects the balance between labour demand and labour supply, which in turn affects wage rates and therefore indirectly labour supply. The total effect of the size of the working age population on labour supply is therefore the sum of the direct effect and the indirect effect via its impact on wage rates.

Of interest also in this respect is that the labour market variables discussed so far are themselves influenced by the market for goods. Thus for example, GDP is determined by other factors on the demand side, including consumption and exports, and these in turn are likely to be influenced by wage rates. For instance, if wage rates are pushed up, personal incomes are likely to increase, thereby stimulating consumption, which results in an increase in GDP and therefore of employment. On the other hand, an increase

in wage rates may reduce Malta's competitiveness in the export market, thereby reducing exports, which results in a decrease in GDP and therefore of employment. This shows that the labour market itself is not determined independently of other markets within the economy.

The model formulated and estimated by the present author concentrated on the labour market. A large macro-economic model would allow for the simultaneous determination of many markets and the larger the model, the larger would be the number of inter-relationships considered.

The difference between labour demand and labour supply, which is one way of measuring involuntary unemployment, is therefore influenced by the direct and the indirect impacts of all the variables that affect labour demand and labour supply. The findings reported below have been computed after direct and indirect effects have been taken into consideration. As may be expected, it is not an easy task to summarise in a few paragraphs the results obtained from a somewhat complicated procedure, but it is hoped that from the brief summary given below, the reader obtains an idea of the magnitude of changes required in certain variables to reduce the rate of unemployment.

Thus, for example, the estimates produced by the present author suggest that during any one year, GDP would have to increase by about 7% to reduce the rate of unemployment from 5% to 4%, and from 4% to 3%, etc., so that GDP would have to increase by about 37% to reduce the rate of unemployment from 5% to zero. Similarly, the size of the working age population would have to decrease by about 3% in any one year, to reduce unemployment from 5% to 4%, and from 4% to 3% etc., so that the working age population would have to decrease by about 15% to reduce the rate of unemployment from 5% to zero.

The changes required in the working age population are impossible to achieve, especially nowadays when the option of emigration is no longer available. The changes required for GDP are more within reach. However it has to be remembered that there are other factors which affect the rate of unemployment besides market forces. In particular the pressures exerted by trade unions may bring about wage rate increases, as argued above, and these may partially offset the positive impact of increases in GDP. It should be emphasised here that this is not an argument against union activity – which the present author wholeheartedly supports

– but a description of what is likely to happen when a policy of stimulating demand is resorted to in an attempt to reduce unemployment.

4.4 Simulation and Policy Implications

The estimates of the relationships between the different labour market variables, together with the data used to estimate these relationships, were fed into a computer programme which performs simulations, that is, it uses variables considered to be independently determined to predict the dependent variables. In our case the dependent variables were labour demand labour supply, real wage rates and the rate of involuntary unemployment. To simulate these variables, data on real GDP, the size of the working age population, trade union pushfulness, changes in the price level, and others, were used.

The simulated values of the dependent variables were then compared with those obtainable from published statistics. In general the time paths of published data on labour supply, labour demand and real wage rates were similar to those simulated. This suggests that the model satisfactorily replicated the labour market in Malta. It should be stressed here that the dependent variables produced by the system described above were computed on the basis of the estimates produced by the model itself. Had the model not produced acceptable values of labour demand, labour supply and wage rates, its validity would have been questioned.

This means that when the present author applied suitable econometric methods, plausible estimates of the relationships between the labour market variables were obtained, and these estimates produced satisfactory predictions. This does not mean that the model is 100% trustworthy, since a margin of error should always be expected. It does mean however that there are methods better than guesswork which can be used to analyse the effects of policy measures on labour demand, labour supply and wage rates.

Thus, for example, the fact that non-market forces were found to be, to an extent, responsible for real wage rate increases, sheds light on the need to consider such forces when incomes policies are resorted to. Also, the extent of the interrelationships between the dependent variables of the model has important implications regar-

ding, for example, the indirect effect of output on wage rates, via its direct effect on labour demand.

6. Conclusion

The findings presented in this brief article were obtained by formulating a model of the Maltese labour market and applying officially published statistics to the model. The interrelationships that the model describes are in a way self evident and can be understood without the use of econometric models and methods. But it is useful to have, not only an understanding of the *direction* in which certain variables effect others, but also *estimates of the magnitudes* of the likely effect of these interrelationships. Such estimates can only be obtained from suitable econometric models and methods if they are to be relied upon.

Notes:

1. The findings are presented in Briguglio (1982) and Briguglio (1984).
2. For a description of the changes that have occurred in a number of important Maltese labour market variables. See Briguglio (1982), Chapter 5.
3. The analysis of Labour Demand is usually undertaken by assuming that there is an underlying relationship between output, Labour and Capital. This relationship is called the "Production Function".
4. The term "firms" as used here refers to all institutions employing labour, including government departments.
5. GDP measured in real terms is obtained by removing the effect of price changes from GDP measured at current prices.
6. Manhours refer to the number of hours of work demanded by firms. In practice manhours data is usually obtained by multiplying the number of persons employed by the average number of hours paid for by firms.
7. The labour demand relation tested by the present author was derived from the C.E.S. production function, and incorporated a partial adjustment scheme. For a disussion of labour demand relations see Briguglio (1983). See also Briscoe and Peel (1975).
8. The data for real wage rates may be obtained by dividing the total income from employment by the number of hours worked by wage and salary earners during a given period, and then deflating the result by an appropriate price index.
9. The estimates of rates of growth are taken from Briguglio (1982) Chapter 5.
10. The method most often used for estimating economic relationships is that of Least Squares. The method used by the present author is a modified version of Theil's Two Stage Least Squares method, which is the Least Squares method applied to simulatnaeous systems of equations.

11. The size of the labour force is often used as an index of aggregate labour supply. It should be noted however that this index may not be precise, firstly because labour supply varies not only with persons but also with hours of work, and secondly because the figures for the involuntarily unemployed component of the labour force may not be known. In practice the registered unemployed are included to take account of involuntary unemployment, but as is well known, involuntary unemployment and registered unemployment may differ.
12. See for example Mincer (1962).
13. See for example Corry and Roberts (1974).
14. For a discussion on this question see Standing (1978).
15. This reaction appears to have taken place recently. The monthly data for 1982 suggests that a considerable number of persons who were gainfully employed and lost their job did not register as unemployed. The outcome of this is that the size of the labour force has decreased during this twelve month period.
16. An excellent discussion on the problems of estimating markets in Disequilibrium is given in Bowden (1978). On this question see also Briguglio (1982), Chapter 4.

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The Maltese Official External Reserves

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This presentation is a slightly modified version of the text of the first Annual C.M.T.U. Lecture delivered by the author in January 1984.

The Maltese Official External Reserves

1. Introduction

This study is mainly concerned with a division of the Balance of Payments called Official Financing. This division contains information about the nation's additions or reductions of official foreign reserve assets during a given period. The study is divided into three parts. The first is a description of official external reserves, the second explains how these reserves are generated, and the third contains an assessment of the arguments put forward to justify the holding of external foreign reserves.

2. What are External Reserves?

Countries keep external reserves for several reasons, the most important of which being to back the local currency, to take corrective measures in time of balance of payments difficulties, and to earn a return from the investments of such reserves.

In general, a nation's official reserves refer to its gold, Special Drawing Rights, IMF Reserve Tranche position,¹ and convertible currencies in the hands of the Monetary Authorities. At the end of 1982, the official reserves of Malta were those shown in Table 1.

Table 1. The Composition of Total Official External Reserves (1982).

Gold and other precious metals	Lm 28.2 million
IMF Reserve Tranche Position	Lm 11.8 million
Special Drawing Rights	Lm 9.7 million
Convertible Currencies	Lm399.0 million
Total External Reserve	Lm448.7 million

Source: Central Bank Annual Report (1982).

As can be seen from the above table, the bulk of Malta's official external reserves are convertible currencies. Convertible currencies refer to those currencies which can be exchanged easily for

one another and are acceptable as payment in the international trade transactions. At the end of 1982, the composition of the convertible currencies held by the monetary authorities was as follows:

Table 2. The Composition of Convertible Currencies held by the Monetary Authorities (1982).

	Lm (million)	Per Cent
Deutsche Mark	163.7	41.0
Japanese Yen	90.7	22.7
US Dollar	56.9	14.3
Swiss Franc	42.0	10.5
Dutch Florin	41.9	10.5
French Franc	1.1	0.3
Italian Lira	0.9	0.2
Other Currencies	1.8	0.5
Total	399.0	100.0

Source: Central Bank Annual Report (1982)

The above table shows that the largest portion of convertible currencies held by the Monetary Authorities in 1982 were Deutsch Marks, with the Japanese Yen and the American Dollar taking second and third place respectively.

The policy adopted by the Monetary Authorities appears to be one of moving out of overvalued currencies into those which are likely to appreciate in the short/medium term. The management of the external reserves is entrusted to an Investment Committee which has to follow certain broad requirements,² as provided for by the Central Bank of Malta Act. These include that:

- the Central Bank shall at all times maintain a reserve of external assets consisting of precious metals, cash, securities and deposits and internationally traded commodities.
- the value of these reserves shall not be less than 60% of the Central Bank's notes and coins issued, and of the Bank's deposit liabilities.
- the assets held can take various forms, but are mostly of a short term nature. Not more than 25% of the assets can be held in securities which mature beyond five years.

3. The Source of External Reserves

In any one year Malta receives amounts of foreign exchange as a result of international transactions and political agreements. For example in 1982 Malta received about Lm174 million worth of foreign exchange from merchandise exports to a number of countries. Malta also received about Lm77 million worth of foreign exchange from tourism, and about Lm64 million worth from its investment income. We will have much to say about this income at a later stage in this study.

Foreign exchange was also received from remittances from emigrants, transfers resulting from governmental deals, and from direct investment in Malta by foreigners. Government also procured loans from foreign governments for development purposes.

The second column of Table 3 below gives a break-down³ of the amounts received from different sources mentioned above, for the year 1982.

Table 3: Inflows and Outflows of Foreign Exchange (1982) Lm(millions)

Current A/c	Inflow	Outflow	Balance
Merchandise	173.5	291.0	negative
Gold	—	2.2	negative
Insurance/Freight	5.0	32.5	negative
Transportation	42.7	23.3	positive
Travel	76.6	23.7	positive
Investment Income	63.8	11.8	positive
Other	22.0	21.9	positive
Transfers:			
Private	24.0	2.1	positive
Government	9.1	.3	positive
Current Account Total	416.7	408.8	8.0 positive
Capital A/c			
Direct Investment	8.6	—	positive
Private Investment		2.2	negative
Government Loans	0.9	—	positive
Institutions	—	1.4	negative
Errors & Omissions	8.9	—	positive
Capital Account Total	18.4	3.6	14.8 positive
Adjustment for revaluation of external reserves	7.4		
Official Reserves		30.2	30.2 negative

Source: National Accounts of the Maltese Islands, 1982.

There are some points of interest to be made here. First inflows do not necessarily occur by actual transfer of currency notes and coins. In the case of tourism, there is a considerable amount of actual change of notes in Malta, but in the case of merchandise trade, the operation is carried out mostly by means of book-keeping entries within the banking systems of Malta and abroad.

Secondly, these earnings are mostly generated by the private sector. Merchandise export, which is by far the most important item of foreign exchange inflows, is carried out mostly by private firms selling clothing, textiles, machinery and other goods. The inflows which originate directly from government are mostly those resulting from political agreements and from loans from other governments for development. The question arises here as to what happens to the foreign exchange earned by private firms.

As is well known, dealings in foreign exchange are regulated by the Exchange Control Act of 1972, which stipulates that only authorised dealers can buy or sell foreign exchange.⁴ Commercial banks are obliged to sell foreign exchange to the Central Bank if their holdings exceed the limit set by the Central Bank itself. In practice all inflows of foreign exchange pass through the banking system in Malta, and the surpluses of foreign exchange in the banking system are transferred to the Monetary Authorities.

These surpluses are of course arrived at after deducting the foreign exchange needs for imports and other transactions financed by foreign currencies. Column 3 of Table 3 gives a breakdown of the foreign exchange outflows during 1982, and compares them with the inflows described above.

As can be seen from the table, the most important requirements of foreign exchange are those financing imports of merchandise, including consumer goods, industrial supplies, and capital goods. In 1982, the total amount of foreign exchange required for this purpose was worth about Lm291 million.

4. Outflows Compared with Inflows

Some conclusions may be arrived at by comparing the inflows with the outflows of foreign exchange shown in Table 3. The fourth column of the table gives the balances between these flows. For the purpose of the table, a negative balance occurs when outflows of foreign exchange exceed the inflows.

Firstly, our balance of trade i.e. the difference between exports and imports of goods, was negative. This has always been the case with Malta during the past 30 years.⁵ The balance between imports and exports of services is positive, the only unfavourable balance being that with respect to freight and insurance. This was however more than offset by the favourable balance on travel and transportation. When taking goods and services together, however, the balance remains negative due to the large deficit in the merchandise balance. This is called the resource gap, and the negative balance has existed in all years during the past three decades.

If, however, we take the Current Account as a whole, and add transfers from abroad and investment income, the deficit is wiped out and is turned into a surplus of Lm8 million. Malta has enjoyed a surplus on current account for most years between 1954 and 1982.

Malta received other inflows of foreign exchange on Capital Account which further increased the surplus by Lm14.8 million, bringing the total surplus to Lm22.8 million. After making the adjustment for the impact of the revaluation of the Maltese Lira on our foreign assets, the surplus is increased by Lm7.4 million, bringing the total amount to Lm30.2 million. This surplus amount is held by the monetary authorities, and constitutes an amount which is not spent on imported goods and services or other non-official outflows. The sum constitutes the net addition to Malta's official reserves, which is disposed of by the Monetary Authorities and utilised in ways they see most fit, according to the broad guidelines imposed by the Central Bank of Malta Act.

5. The Accumulation of Official External Reserves

During the past years, the balance of payments in Malta was such that the Monetary Authorities have found it possible to increase their holdings of foreign reserves. The amount of Lm448.7 million held during 1982 represents the accumulated funds held by the monetary authorities during the past years.⁶ The more we import as a nation, the less will be the *surplus* inflows of foreign exchange, and everything else remaining equal, the lower the official reserves. In a way, the accumulation of official reserves reflects claims which we have on foreign countries, which could have been, but which were not translated into imports of consumer and producer goods and services.

For example, if private firms and the government imported more machinery to create new enterprises during 1982, the surplus foreign exchange forming part of the external reserves would have been reduced. The same thing would have happened if less restrictions on imports of consumer goods were imposed. Similarly, had the government introduced a package of incentives to encourage locals to invest or consume more, the amount of foreign reserves would have been less than that reported in Table 3. Ironically, in any one year, foreign exchange reserves can increase dramatically if firms refrain from buying new plant and machinery, and if consumers accept, or are forced to accept, a lower standard of living.

This consideration is of utmost importance since it exposes the fallacy that the accumulation of external reserves is some sort of indicator of economic well-being. To highlight this fallacy we shall give an example of a household.

In any one year, a household may earn a surplus of funds, that is its inflows may exceed the outflows, and may decide to utilise these funds in a number of ways, including:

1. buying of goods and services to improve the standard of living of the members of the household. These goods and services may be *non-durable* goods which give immediate utility, such as food, and *durable* goods which yield a longer lasting utility, such as furniture, kitchen gadgets, etc.
2. saving the funds and thereby putting them at the disposal of other users, making a return in the process.

Now both these uses of surplus funds are beneficial to the household, the first because the result is an immediate improvement in the quality of life of the household, and the second because the result is an earning of income which may be used in the future. The more frugal the household is, the more savings can be accumulated. In the extreme case, the household may forego the chances of having a decent standard of living to accumulate a large quantity of savings.

In the case of a nation, the government may opt to impose a deterioration in the quality of life of the people in order to accumulate reserves, which are then utilised by others abroad. The question is, of course what is the right balance between excessive frugality and spendthriftiness.

The millions of pounds' worth of foreign exchange ac-

cumulated by the Monetary Authorities are invested according to a portfolio established by an Investment Committee. As already indicated this ensures that demand liabilities of the Central Bank are properly backed, and at the same time, an income is earned on these assets by investing them abroad. As already noted also, the Central Bank of Malta Act stipulates that the external reserves should amount to at least 60% of the Bank's notes and coins and demand deposits with the Central Bank.

In practice, the bank holds much more than the 60% stipulated by law. In 1982, the ratio was about 104%. Now it is not unwise to keep a certain amount of flexibility above the legal minimum, because the authorities need to make sure that they can take quick corrective measures in a severely adverse balance of payments situation. For example, as things are at the moment, there is no doubt that if next year Malta experiences a sudden foreign exchange shortfall, Malta can easily make up for it by drawing on its external reserves.

The other advantage of keeping external reserves, already referred to above, is that these reserves may be held as deposits with first class banks, as marketable securities and as other holdings which earn a return. In 1982 for example, a considerable amount of the income from foreign investments shown in Table 3 came from official reserves invested abroad.

Against these advantages one must of course place the disadvantage that, while Malta craves for investment, our Monetary Authorities have opted for a policy of transferring funds abroad. In fact, one of the major sources of foreign exchange outflows is external reserves of the Monetary Authorities.

6. Why Hold Official External Reserves

The holding of the excessive amounts of foreign assets held by the Monetary Authorities has been justified on various grounds including that:

- (a) Malta may suffer sudden foreign exchange shortfalls, and the holdings of reserves is the best way to allow for such a contingency;
- (b) Malta would suffer balance of payments deficits if the inflow of investment income from abroad is not kept up;

- (c) Malta lacks natural resources, and the holding of external reserves can be viewed as some sort of compensation for this lack;
- (d) Malta has reached the limit of what it can absorb by way of investment, and the government is justified in using excess funds to earn income from abroad;
- (e) The volume of reserves is an indicator of the strength of the Maltese economy.

These arguments will be dealt with hereunder one by one.

(a) Making allowance for the possibility that a country may suffer sudden foreign exchange shortfalls is a very good reason for keeping foreign reserves in excess of that stipulated by law to back the Central Bank's demand liabilities. In a country like ours, sudden changes in the pattern of foreign trade may easily give rise to foreign exchange problems and the reserves may be called upon to close the gap created by shortfalls. One way to measure the extent to which external reserves are sufficient for this purpose is to compute the number of months' worth of imports that can be purchased by the external reserves.

In 1982, imports of goods and services amounted to about Lm395 million, which is equivalent to about Lm33 million per month. Given that the official external reserves amounted to about Lm449 million, the coverage was approximately 14 months. I have examined the coverage in months of the external reserves of many countries, industrialized as well as developing ones, European as well as non-European, big and small, and found that compared with these countries, Malta's coverage in terms of imports of goods and services is excessive.

To give a few examples, in Cyprus, which is also a small developing country, in the Mediterranean, the coverage was only for about 5 months in 1982. In Spain the coverage was for about 4 months, whereas in Singapore it was for about 6 months. In the developed countries of Western Europe and North America, the coverage also tends to be smaller than that of Malta.⁷

Can it be assumed that Malta is wiser than most countries in the world in keeping so much funds tied up in foreign currencies rather than use them to promote investment? One may not subscribe to the view that keeping about Lm200 million worth of foreign reserves⁸ in excess of that legally required to back the Monetary Authorities' liabilities, is a sound way of promoting Malta's economic development.

(b) It is true that Malta would have suffered a balance of payment deficit on Current Account in 1982 if the inflows from the foreign investment were zero. But this is only taking a static view of the situation. If a portion of the external reserves were domestically invested, or used to encourage domestic investment, the exports that could be generated by such investment in the long run could well make up for the foregone investment income from abroad.

(c) That Malta lacks natural resources cannot be disputed – and it is a great pity that Malta is underutilising its most important resource, labour. There are countries, however, which like Malta lack natural resources, but do not opt to rely on the accumulation of foreign reserves to make up for this. It can be argued that expanding and modernising the capital stock of the nation is a more appropriate way of making up for the lack of natural resources.

(d) The argument that Malta lacks investment opportunities has been put very forcibly by a prominent M.D.C. official.⁹ This appears to be a very pessimistic attitude, and if taken to its extreme, would imply that we ought to forget about Malta's economic development, given that Malta has now reached its maximum absorptive capacity. This view was also expressed in the Stolpler Report of 1964.¹⁰ As is well known, Stolpler was wrong. By 1965 the economy started to pick up and expanded at a very rapid rate during the next four years.

It can be argued that the view that the government's policy of investing abroad is correct on the grounds that Malta has reached the limit of its absorptive capacity has dangerous implications. The danger arises because such a policy encourages people to think that we should lose faith in the ability of the Maltese economy to expand and generate more wealth. It is a view that approves of a policy of transferring funds abroad, funds that could very well be used to modernise the means of production, and to inject and encourage entrepreneurial attitudes by way of incentives, such as investment subsidies.

This view also contradicts the other that Maltese nationals should transfer their foreign holdings into Malta. As is well known, while the government is transferring money abroad, the Maltese public is being asked to invest in Malta. The recent case of expecting private individuals to repatriate money in order to buy stock in Air Malta aircrafts is an example.¹¹

(e) Another argument to justify the holding of excessive reserves by the local monetary authorities is that the magnitude of the reserves constitute some form of indicator of the strength of the Maltese economy. This argument has been put forward by several government spokesmen. It has also been put forward in official Central Bank publications.¹²

One may not agree with this view. For example, it would have been quite possible for Malta to experience a decline in the GDP at the same time as increasing its holdings of official foreign reserves. In practice, for instance, had Malta imported less investment goods in 1982, the Monetary Authorities would have had left to themselves a larger amount of foreign exchange.

7. External Reserves as an Indicator of Development?

The accumulation of reserves could in fact be one reason for the unhealthy situation in which Malta now finds itself. Rather than an indicator of well-being, the extent of our reserves could represent an indicator of how much Malta has neglected the need to expand and refurbish its capital stock. This seems a hard and unfair statement to make, but a look at published statistics on investment will indicate that this is not the case. For example, data on investment in machinery measured in real terms, as published in "The National Accounts of the Maltese Islands" suggests that the pattern of change of this variable has often moved in the opposite direction of official external reserves.

For example, investment in machinery, measured in real terms, was at relatively low levels during the seventies, and only reached the 1969 level again after 10 years, that is in 1979. This was at a time when official foreign reserves were increasing at a fast rate. On the other hand, investment in machinery increased at a very fast rate during the second half of the sixties — a period during which the accumulation of reserves proceeded at a relatively slow rate.¹³

It should be kept in mind that one reason for the substantial increase of Malta's official reserves during the seventies was the exchange control legislation, which restricted the freedom of private individuals and institutions to hold foreign exchange. It has already been noted that most of our inflows of foreign exchange are generated by the private sector, but the ownership of these funds is

actually transferred to the authorities in return for local currency, and the Monetary Authorities then earn a return by investing these funds abroad.

There is nothing wrong in exercising exchange control if this is used to control the flight of capital abroad. But this is *not* what is happening in Malta. The control exercised by the government in this respect is only giving rise to a change of ownership, but transfers to abroad are still taking place, spurred on by the government itself.

Again, a look at publishing statistics would indicate that during the seventies, a considerable amount of funds have been available for investment, but a large chunk of these funds have been transferred abroad.¹⁴ While Malta was in dire need of investment, the authorities looked elsewhere to generate wealth.

The low level of investment during the seventies was not of course felt immediately, because the capital stock built up during the sixties was still there to be used, but the slow rate at which it was being replaced and updated, was bound to have, sometime or other, unpleasant repercussions. And this is possibly one reason for the unemployment problems that we now have.

The investment performance of the seventies is not the only reason for the present high levels of unemployment. It has been shown that lack of exports – the principal cause of unemployment in Malta – may have been partially caused by deficient demand from abroad, and by reduction of competitiveness, principally caused by our overvalued currency.¹⁵ But there should be no doubt that the lack of productive investment during the seventies is an additional reason.

Investment on a larger scale than that carried out during the seventies would have permitted Malta to diversify its productive base, and to modernise its physical capital stock to improve productivity, and therefore competitiveness.

The Development Plan for 1980–1985 suggests that Malta had failed to carry out a process of diversification, and that by 1980 Malta still depended excessively on low skill intensive production. There was reference in the plan to the need of shifting away from labour intensive methods of production during the eighties, towards others which require more sophisticated skills.¹⁶ In turn, it is stated in the plan, this will require increased use of modern technology. The question arises here as to whether or not this could have been done during the seventies when Malta had more than

enough funds at its disposal, and as to why did the government opt to transfer funds abroad rather than lay down the foundations for such an important change.

8. Conclusion

The most important conclusions that can be drawn from this presentation are the following:

1. In most years the inflows of foreign exchange have been such that the Monetary Authorities have succeeded in accumulating foreign exchange reserves. The amount in 1982 was about Lm450 million, well in excess of the amount required by law to back the Central Bank's demand liabilities.
2. The accumulation of such high levels of reserves has been made possible because of exchange control regulations and controls of imports.
3. The principal benefits being derived from the holding of excess foreign reserves is income from abroad from their investment. The principal disadvantage is that such reserves could have been used to expand and update Malta's capital stock, and to improve our quality of life.
4. It is not necessarily true that the amount of reserves constitute some form of indicator of Malta's well-being. For example, our reserves could have been bigger still in 1982, even if our GDP had declined, if at the same time stiffer import controls were imposed.
5. The present high rates of unemployment were not exclusively caused by the international recession, but could be partially of Malta's own making. The lack of investment during the seventies could be one reason for this.

**APPENDIX: Some Statistics Pertaining to the Maltese
Balance of Payments**

	1	2	3	4	5	6
	Trade Gap	Resource Gap	Net Investment Income from Abroad	Balance on Current Account	Increase of Official Reserves	Accumulated Official Reserves
1960	-25.8	-5.4	3.4	4.9		23.3
1	-24.8	-3.8	3.2	4.8	-	23.3
2	-24.2	-5.6	3.8	2.7	2.9	26.2
3	-24.9	-6.9	4.0	1.7	0.7	26.9
4	-27.7	-10.0	4.1	-0.3	0.8	27.7
5	-26.5	-9.0	4.3	2.2	2.9	30.6
6	-28.2	-8.2	4.4	6.1	4.0	34.6
7	-30.6	-12.1	4.8	3.4	4.9	39.5
8	-37.3	-17.1	5.8	2.0	25.4	64.9
9	-45.6	-22.4	6.5	-0.7	-5.4	59.5
1970	-51.0	-28.4	7.3	-2.3	7.4	66.9
1	-46.6	-25.2	7.5	2.4	7.6	74.5
2	-41.5	-23.4	8.3	9.7	28.8	103.3
3	-52.2	-22.7	7.5	13.3	14.6	117.9
4	-87.4	-38.0	12.5	5.1	16.3	134.2
5	-80.5	-22.4	18.3	25.1	49.3	183.5
6	-82.5	-23.9	18.2	26.6	54.3	237.8
7	-95.9	-34.7	19.1	19.5	33.2	271.0
8	-89.6	-19.9	16.9	30.6	53.0	324.0
9	-119.9	-16.9	13.0	18.8	20.7	344.7
1980	-157.0	-21.4	35.0	29.1	28.1	372.8
1	-158.6	-36.5	41.2	39.7	51.7	424.5
2	-156.0	-74.8	52.0	8.1	30.2	454.7

Source: National Accounts of the Maltese Islands.

Notes on Column Headings

1. *The Trade Gap* as measured here refers to the balance between merchandise export (f.o.b. excluding ship repairing and ship-building) and imports (c.i.f.).
2. *The Resource Gap* refers to the balance between exports and imports of *goods and services*.
3. *Net Investment Income* from abroad covers income on Government's and Banks' overseas investment plus interest on private overseas investment paid through the local banks or the post office to residents in Malta, less income on foreign investment in Malta.

4. The *Balance on Current Account* covers the resource gap and Net Investment Income from Abroad as well as Government and Private Transfers of foreign exchange.
5. The figures for the *Net Additions* to the official external reserves were arrived at after deducting all the outflows from the inflows of foreign exchange with the exception of those pertaining to the Monetary Authorities.
6. The *Official Reserves* include those held by the Monetary Authorities, as well as the National Insurance Fund, A/C Court and Other Deposits, A/C Monte di Pieta, A/C Immovable Property and A/C Trust Funds. The bulk of the Official Reserves were however those held by the Monetary Authorities. In 1982, for example, the Official Reserves held by the Monetary Authorities amounted to Lm448,721, whereas the other Official Funds amounted to Lm5989.

Notes:

1. For a description of these Maltese official reserves, see "The Accounts of the Central Bank", in the *Central Bank of Malta Quarterly Review* (1982) Vol. 15, No. 3, pp. 17 – 25.
2. See the Central Bank of Malta Act, Section 19. A description of the amendments recently made in the Central Bank of Malta Act is given in the *Central Bank of Malta Quarterly Review*, (1981) Vol. 14, No. 3, pp. 28 – 31.
3. A more detailed breakdown of the inflows and outflows of foreign exchange is given in the National Accounts of the Maltese Islands, issued annually by the Central Office of Statistics.
4. See Act No. XLIX of (1972).
5. Time series data pertaining to the Balance of Payments of the Maltese Islands between 1960 and 1982 are given in the appendix.
6. See appendix for data on the amount of accumulated official reserves, and on the year to year changes of these reserves, for the years 1960 – 1982.
7. These ratios were computed using data from the *International Financial Statistics*, IMF (October 1983).
8. The figure was arrived at by calculating the amount legally required as backing for the Central Bank demand liabilities for 1982, i.e. 60% of Lm431.7 million = Lm259 million and subtracting it from the Lm449 million actually held by the monetary authorities for 1982.
9. See presentation by Dr Alfred Sant to a debate on the 1984 budget reproduced in *The Sunday Times*, 27th November 1983.
10. At the request of the Malta government, the United Nations sent a mission to study the economic problems of Malta and to help in the formulation of a development plan for 1964 – 1969. The Stolper report (1964) was the document containing the findings and proposals of this United Nations mission.

11. In August 1982 the Central Bank of Malta offered Bonds for public subscription for the purpose of financing three new Boeing 737-200 aircraft. The funds eligible for subscription were repatriated overseas investments or the annual investment allowance of Lm500. Despite the attractive rate of interest paid, the bond issued was very much undersubscribed.
12. See, for example, the *Central Bank Quarterly Review*, (1978), Vol. 11, no. 4, p. 19, where it is stated that the Central Bank's holdings of external reserves reflect the country's economic development.
13. See Table 6 in Briguglio P.L., "The Maltese Economy 1955 - 1979" (the first paper in this publication) for a description of the rates of change of investment in machinery.
See also the letter by the present author to the Editor of *The Sunday Times* of the 15th January 1984. The letter shows that between 1954 and 1982, the ratio of Investment to GDP (both variables measured in real terms) was at its lowest levels during the seventies and early eighties.
14. For a description of the composition of National Savings and of how these savings were utilised, see the National Accounts of the Maltese Islands. It will be observed from these statistics, that during the past decade, a relatively high proportion of savings were transferred to abroad.
15. The present author is in the process of publishing an econometric study on the question. On the question, see also Delia (1982) and CMTU (1983).
16. See *Malta: Guidelines for Progress*, pp. 124 - 125.

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