Unit labour costs in Malta: Trends and international comparisons

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TRENDS AND INTERNATIONAL COMPARISONS

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Abstract

Appraisals of international competitiveness are increasingly focusing on unit labour costs. In this paper, a unit labour costs measure is derived for the Maltese economy for the last two decades. In order to take into account structural shifts, separate indices are also derived for the effective cost of labour in the private and Government sectors, and in manufacturing. These series indicate that unit labour costs in the overall economy rose by 2.3% per annum during the twenty years to 2003, and that the increases registered in the private sector and manufacturing were less pronounced. Malta's overall unit labour costs were estimated to stand at less than two-thirds of those in the EU-15 and the relativity between manufacturing labour costs in Malta and in Europe seems to have remained virtually stable over the last fifteen years. However since 2000, labour productivity has fallen in Malta, while compensation costs in some sectors have remained on the rise, leading to reduced competitiveness.

CONTENTS

Introduction

The International Labour Organisation (ILO) defines unit labour costs (ULC) as *'the labour compensation per unit of gross value added produced'* or else *'nominal labour compensation divided by real value added'*.[1] More simply unit labour costs measure the nominal wage cost of producing one unit of output (defined in real terms). Therefore, this measure involves the comparison of two indicators, namely labour productivity and the average cost of labour used in generating output. When the cost of labour grows at a faster pace than productivity, ULC rise and vice versa. Note that, preferably, the measure of the cost of labour should not only reflect gross wages and salaries but also other labour-related costs such as employers' contributions to social security or health plans. Measured in this way, ULC can serve as a benchmark of the cost competitiveness of utilising labour in a particular country rather than another.[2] ULC also play a determining role in price dynamics, especially in non-tradable sectors like personal services, Government and construction. A higher cost of labour, in fact, leads to an inward shift in the aggregate supply curve and, with unchanged demand, leads to a higher price level – a case of cost-push inflation.

This paper attempts to determine the trend followed by ULC in Malta during the period 1984-2003 and analyse its main determinants. The estimates described in this paper, presented fully in an appendix, are also used to assess the relative cost competitiveness of the Maltese economy vis-à-vis a selected number of trading partners.

1. ULC in Malta
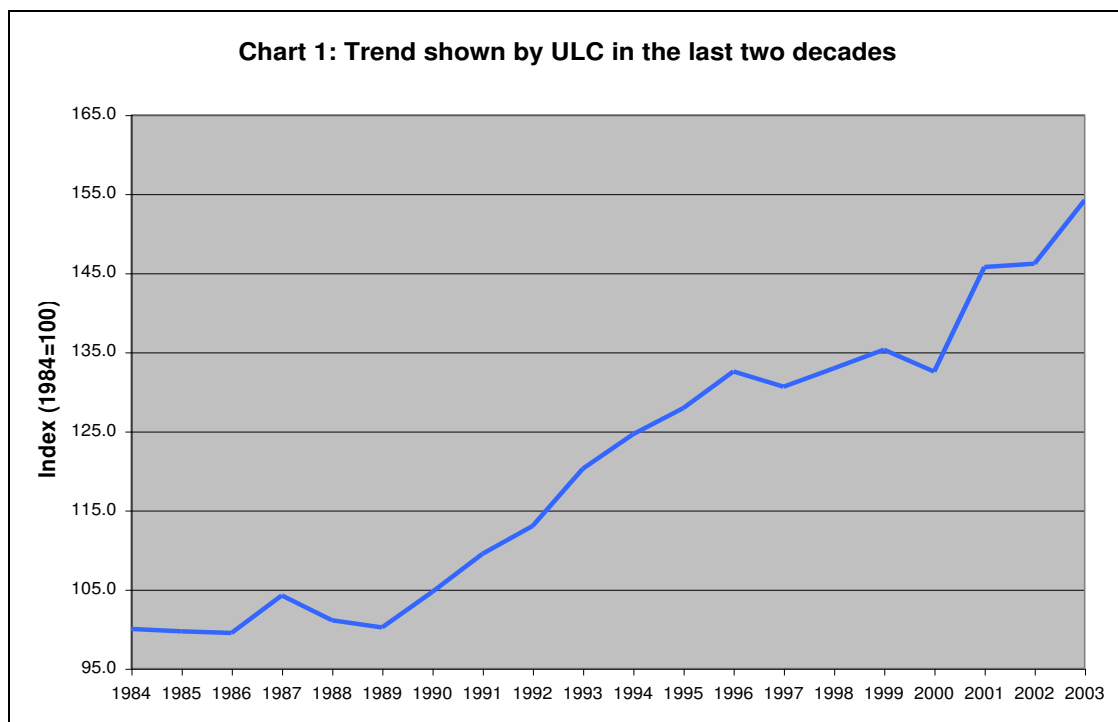
1.1 Overall economy ULC

In line with the established ILO methodology, unit labour costs for Malta were computed using employment income data taken from the National Accounts, as these data include wages and other remuneration, together with the social security

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[1] See ILO (2001-2002).
[2] Sparks & Greiner (1997), Department of Labour (2003) and Chao (2003) provide such comparisons.

contributions incurred by employers.[3]   However, this data category excludes the labour cost of self-employed persons, who constitute a significant part of the Maltese labour market.[4]   Under the System of National Accounts 1953 methodology, the Maltese National Accounts included a category termed '*Income from farming, fishing and private services*'.   However, these data could not be used as a proxy for the imputed labour cost of the self-employed since they inevitably include a profit element.   Thus, in order to derive correctly the average compensation per worker, employment income was divided by the number of full-time equivalent employed, excluding self-employed persons.[5] Labour productivity was, in turn, computed as the real Gross Domestic Product (GDP) per full-time equivalent employed, including the self-employed.[6]   ULC were then derived as the ratio between the average compensation per worker and labour productivity.[7]

Chart 1: Trend shown by ULC in the last two decades

Chart 1 illustrates the development of ULC in Malta for the two decades spanning 1984 to 2003. At the start of this period, it is estimated that, overall, operators needed to spend 40 cents on labour compensation to produce Lm1 of real output. This cost element rose to 61.8 cents for every Lm1 of production by 2003, an increase of around 54%. Therefore, during this period, there was an average annual increase of 2.3% in Malta's ULC. However, as can be seen from Chart 1, growth in ULC was not consistent throughout these two decades. The development of this indicator can be divided into four distinct periods. Up to 1989, ULC were relatively stable. This reflected the fact that growth in employment income per worker and productivity tended to cancel out (see Chart 2).

Chart 2: Growth in Labour Costs and Productivity
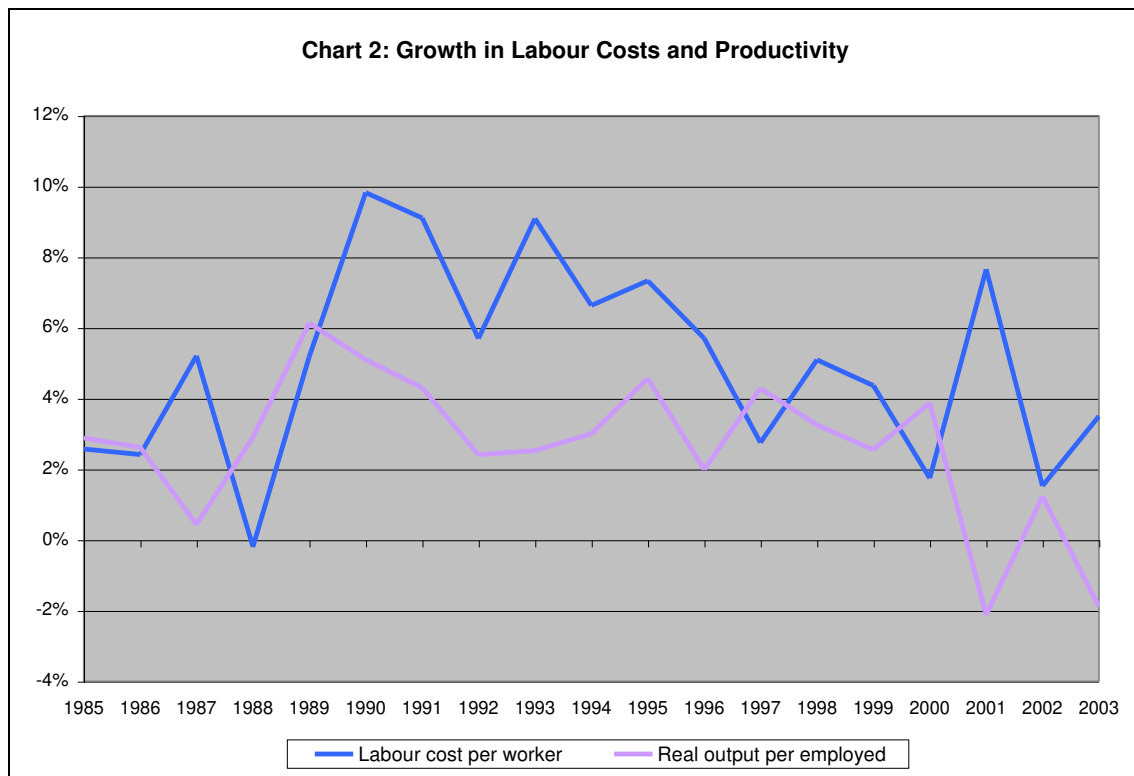
The first half of the 1990s, on the other hand, was characterised by labour costs growing persistently at a higher rate than productivity. During this period labour costs grew, on average, by 7.3% per annum, while the real output per person employed expanded by just 3.8%. This was in part due to the fact that in the immediate aftermath of the 1992 devaluation of the Maltese lira, wages had expanded quite sharply, as workers sought to keep their purchasing power unchanged. Thus, in 1993 alone, unit labour costs rose by 6.4%. During the second half of the 1990s, conversely, growth in average labour costs decelerated significantly, though in some

4

years it continued to outstrip the increase in productivity. ULC remained more or less stable during this period, at around 53 cents for every Lm1 of real output. Then, in the last three years under review, growth in ULC resumed, with an average annual increase of 5%. In contrast to what had happened in the early 1990s, the acceleration in ULC was brought about mainly by a decline in real output per worker. Growth in labour costs, with the exception of 2001, was, in fact, significantly below that which had characterised previous years.

1.2 Private sector ULC

The spike seen in wage inflation in 2001 reflected the coming into force of a major public sector collective agreement, which awarded a wage rise covering some five years at one single go. In order to exclude the influence of developments in the Government sector on overall ULC, an attempt was made to construct a separate ULC measure for the private sector. The main problem involves coming up with a measure of Government output in real terms. The only readily available proxy in the National Accounts is the '*Government consumption of goods and services*' category, which captures the recurrent outlays of the civil service and related public entities, with the main exception of transfer payments.[8] This measure of output may, however, not adequately represent the effective contribution of Government employees to the economy. In particular, under this approach when efforts at fiscal consolidation lower the rate of increase in Government consumption, the output of Government is deemed to have grown at a slower pace. At the same time, if Government spends more money because of higher inefficiency, this approach concludes that output has risen. In both cases, these conclusions may be wrong. Moreover under this kind of analysis, while Government social welfare programmes are not included as output, the wages of employees involved in them are, thus boosting the ULC of Government somewhat arbitrarily.

The estimated ULC for the private sector shows a relatively slower increase over the two decades, though its trend mirrors that followed by the ULC of the overall economy (see Chart 3). The private sector's ULC, in fact, grew on average by 2% per

annum during the twenty-year period to 2003.[9] Between 1984 and 1990, the private sector had to pay an average of 38 cents in labour costs for every Lm1 produced. By 1996, this proportion had risen to 48 cents. The private sector's ULC then remained stable until 2001, when it started to rise again to reach 56 cents by end 2003. While the spike in ULC in the early 1990s was the consequence of a rapid rise in wages, the increase registered in recent years appears to be driven primarily by a significant drop in productivity.[10] Wage inflation, in fact, was below that registered in previous years, though labour costs were boosted by an increase in social security contribution rates.

Chart 3: The Influence of the Government Sector
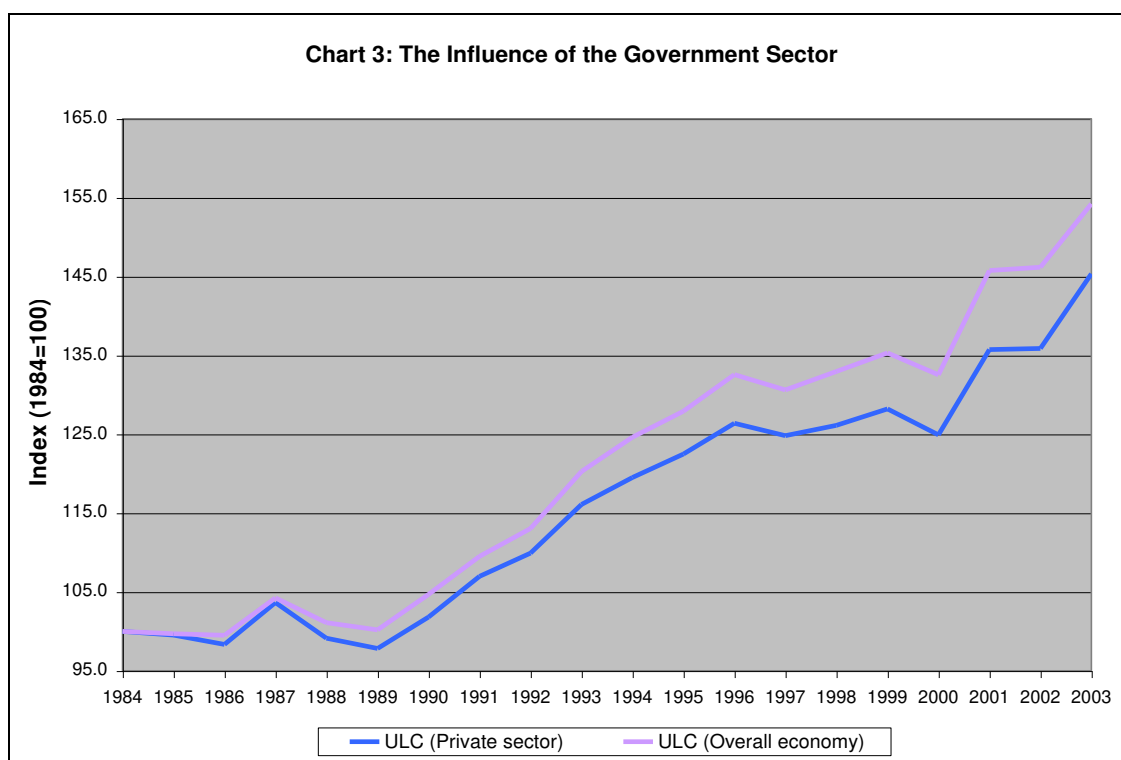
By contrast, labour costs in the Government sector (comprising the civil service and entities financed directly from the budget) appear to have accelerated gradually over the years. In 1984, there was a positive gap of about 33% between average employment income in the private and the Government sectors. This gap narrowed progressively and after the 2001 collective agreement, mentioned earlier, the two sectors operated on similar labour cost bases.

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[8] Capital expenditure was not considered as Government output because many projects are carried out by the private sector, and more importantly because this investment usually is not concerned with increasing Government's own output but rather constitutes an improvement in societal welfare.
[9] The real output of the private sector was derived as the difference between real GDP and real Government consumption.
[10] Estimates made in Delia (2004) also indicate a slowdown in productivity in recent years.
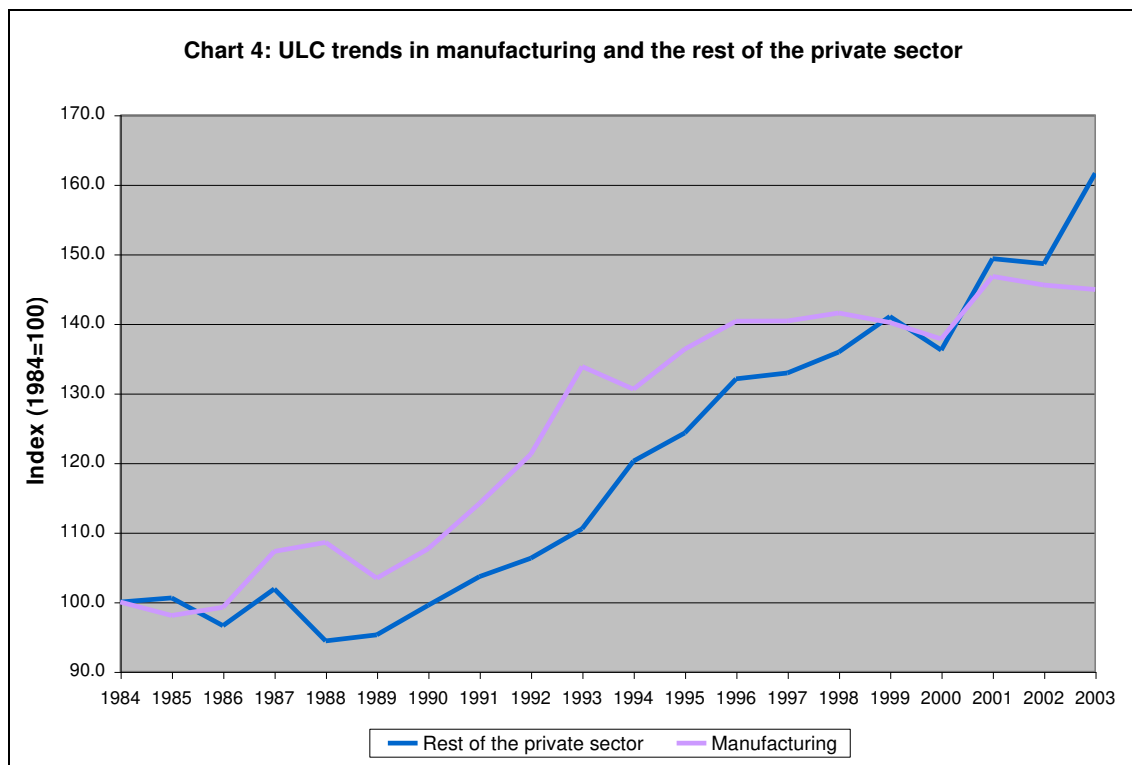
1.3 Manufacturing

The rise in private sector ULC, however, does not necessarily mean that Malta's competitiveness, in terms of the cost of labour, deteriorated by this amount every year. The rise in the ULC could, in fact, simply reflect structural changes in the Maltese economy, which during these two decades progressively shifted from capital-intensive sectors such as manufacturing to areas like tourism and financial services, which are more labour-intensive. This process, known in academic literature as deindustrialisation, is '*primarily a feature of successful economic development*' and several studies indicate that it is not a direct consequence of globalisation and the associated increase in competition from low-wage countries.[11] While the share in consumption of manufactured goods has tended to remain stable, or even drop in some cases, in most developed economies the fast productivity growth that characterises manufacturing has tended to reduce the labour input needed by this industry.

Rowthorn and Ramaswamy (1997) report that '*in the most advanced economies, employment in manufacturing declined from about 28% of the workforce in 1970 to about 18% in 1994*'. Two-thirds of this drop was attributable to high productivity growth in manufacturing, while the remaining third was on account of a faster increase in the consumption of services. Services, in fact, seem to be quite income elastic, so that the increased productivity (and hence income earned) in manufacturing has ended up generating a higher demand for services, while leaving demand for manufactured products relatively unchanged. Data for Malta covering the share of manufacturing employment indicate a similar pattern as that found in middle- and high-income countries. Manufacturing's share in Malta's gainfully occupied population rose from around 17% in 1964 to 33% in 1981, and thereafter declined gradually to 23% in 2003. However, nominal turnover per employed[12] increased from around Lm1,250 in 1964 to Lm9,700 in 1981, and continued rising to over Lm49,500 in 2003.

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[11] Refer to Rowthorn & Ramaswamy (1997) and Rowthorn & Ramaswamy (1998) for extensive studies on this phenomenon common to most high- and middle-income countries.
[12] Turnover is used as a proxy for production.

These trends mirror those observed in other middle-income economies. While the relative size of manufacturing industry has declined, its productivity seems to have outstripped that of most other sectors. However, making accurate estimates of productivity, and in turn ULC, in the Maltese manufacturing sector is complicated by the fact that no industry-specific price index has ever been published. Data in nominal terms indicate that the wage share in the manufacturing sector has dropped from 60.2% in 1984 to 55% in 2003. By contrast, the wage share in the rest of the economy increased slightly. This does not necessarily mean that manufacturing's ULC have declined over time, since the latter depend on real, and not nominal, output, and price developments in manufacturing and the rest of the economy may have diverged significantly.

Chart 4: ULC trends in manufacturing and the rest of the private sector

Given that more than three-quarters of manufacturing sales are directed to the export market and that these exports comprise around two-thirds of total exports of goods and services, the deflator for the latter National Accounts category can serve as an adequate proxy for price developments in this sector. The ULC indicator calculated on the basis of this proxy suggests that the burden of labour costs rose more moderately in manufacturing compared with the rest of the Maltese economy. The ULC of manufacturing are estimated to have grown by nearly 45% during the last

twenty years, or by an average of 1.9% per annum, while in the rest of the private sector[13] the wage cost of production grew by 2.5% per annum. While manufacturing's ULC remained relatively stable after 1996, ULC in the other privately owned sub-sectors continued to escalate (see Chart 4).

Manufacturing's increasing exposure to the rigours of international competition created pressures for wages and productivity growth to move in relative synchronisation. On the other hand, in most non-tradable sectors the expansion of labour costs was sustained by continued growth in consumption. The latter was at first buoyed by a quick expansion in earnings and later on, when income growth slackened, by a large drop in the household saving rate and an expanding fiscal deficit.

2. International comparisons

The gradual removal of trade and foreign investment barriers, supplemented with huge improvements in transport and communications networks, has led to a surge in the international exchange of goods and services in recent decades.[14] As a result, most industries are now operating in an environment characterised by increased competition. Even in sectors previously considered to be non-tradable, for example most personal services, developments such as the spread of the Internet are making markets contestable. This has led to heightened interest in assessing the international competitiveness of national economies or regional blocks. Given that input prices tend to be relatively outside the control of most firms and small economies, appraisals of international competitiveness have tended to focus on exchange rates, Government-induced costs and, increasingly, unit labour costs.[15]

At the outset, it is important to point out the difficulties that beset these panel data exercises. Obtaining reasonably comparable data for a large sample of countries is, as

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[13] Property income (after taking into account changes in the GDP deflator) was excluded from the output of the rest of the private sector.

[14] International Monetary Fund (2004) indicates that during the two decades studied in this paper, the volume of world trade grew by an average of 6% per annum, exceeding by more than half the annual average growth in world output.

[15] See Turner & Golub (1997), O' Mahony & van Ark (2003) and Commission of the European Communities (2003).

yet, not possible, despite the progress made thanks to the efforts of agencies such as the ILO, International Monetary Fund (IMF), Bureau of Labour Statistics (BLS) and Eurostat and the research of academic institutions like the Groningen Growth and Development Centre (GGDC).[16] Most databases remain restricted in coverage to the main industrial countries, due to the complex statistical issues involved in constructing comparative ULC data.[17] Employment, nominal output and labour cost data tend to be compiled using disparate methodologies. However, the main hurdle to construct strictly comparable data lies in the compilation of measures of labour productivity in real terms. This involves the use of purchasing power-adjusted exchange rates − showing the amount of a country's currency that is required to purchase a standard set of goods and services worth one unit of the currency of a base country.[18] While to a certain extent, this problem has been surmounted with respect to overall GDP, with organisations such as the World Bank, the Organisation for Economic Co-operation and Development (OECD) and Eurostat, compiling measures of overall output in purchasing power parity terms, comparable indicators for specific sectors such as manufacturing are still relatively unavailable.

The use of ULC as measures of competitiveness has also been debated on theoretical grounds. The cost of labour represents 'only a fraction of the total costs of a company, ignoring the influence of for instance, research and development expenditure, distribution costs and capital costs'.[19] While the cost of labour may be lower in developing economies, leading to a lower ULC, the cost of capital tends to be quite higher. In the case of durable consumer and investment goods, competitiveness may be determined by other factors, such as product quality, customisation, warranties and after-sales service. Similarly, in sectors with rapid technology improvements, and thus with the prospect of recurring high productivity gains, labour costs may not exert a major influence on final product prices.

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[16] The GGDC is a research group of economists and economic historians at the Economics Department of the University of Groningen (Netherlands). It is at the forefront of comparative studies of productivity and ULCs, contributing directly to the databases of the ILO and the EU.
[17] Examples of these databases are ILO (2000, 2001), IMF (2004) and Directorate Generale ECFIN(2004).
[18] The statistical issues involved are described in Thomas & Vachris (1999) and in Monnikhof & van Ark (2000).
[19] See European Central Bank (2003).

Movements in the ULC may also reflect factor substitution, without necessarily implying more cost-efficient production and a consequent gain in international competitiveness. Turner & Golub (1997) argue that in countries, or industries, where firms retain workers during recessions,[20] short-term movements in ULC may be difficult to interpret, due to changes in productivity induced by the business cycle. At the same time, the direction of causation between compensation costs and productivity is unclear. For instance, a rise in wages unaccompanied by higher productivity may induce investment and technological progress, and end up raising productivity, so that that an increase in ULC may not necessarily have negative economic effects in the long term.[21] However, while the above considerations must be kept in mind when looking at developments in ULC, this indicator remains very relevant as a measure of cost competitiveness, especially in those sectors of labour-intensive and mass market manufacturing that are not characterised by rapid technological changes.

In this light, an assessment of Malta's competitiveness can be made by looking at comparative trends in ULC. The first approach used is based on a simple comparison of the growth in national ULC of the whole economy. This analysis is then enhanced by computing and comparing ULC adjusted for differences in relative national prices. Due to data unavailability, a similar assessment of international competitiveness in manufacturing cannot be made. However, panel data on nominal wages in the sector could be compared. Competitiveness was also assessed by looking at relative country rankings of labour costs per employed and nominal gross value added per employed in industry. Given the lack of a comparative ULC indicator for manufacturing, however, this analysis is not as theoretically rigorous as that done for the overall economy.

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[20] This phenomenon, known as labour hoarding, arises, for instance, due to high hiring and firing costs, or is used to enhance the loyalty of workers, particularly those holding skills in short supply.

[21] In the early 1980s in Singapore the National Wages Council recommended large wage increases and Government hiked social contribution rates with the express intention of forcing firms to restructure

2.1 Comparing overall economy ULC

The European Commission's regular publication 'European Economy' contains data on ULC for the EU Member States, Japan and the United States (see Table 1). These data are, however, calculated using national currencies and output is not adjusted for purchasing power parity. As a result, they are not strictly accurate as a measure of competitiveness, because movements in the cost of labour due to changes in exchange rates are ignored, as are shifts in relative national price levels. The latter omission may hinder analysis considerably, as many of the countries are a different stage of development and thus price dynamics may be quite divergent. Thus, for instance, growth in ULC is strongest in lower-income economies, such as Poland and Hungary, and that in countries like Portugal, Greece and Spain rises moderated gradually in line with economic convergence.

Table 1
ANNUAL CHANGE IN ULC: TOTAL ECONOMY

%

	1986-90	1991-95	1996-2000	2001	2002	2003
United States	3.2	2.1	2.1	2.2	-1.0	0.1
Japan	0.4	1.2	-1.2	-1.5	-3.1	-3.4
EU-15	4.0	2.9	1.4	2.9	2.2	2.5
EUR-12	3.2	3.1	0.9	2.5	2.2	2.4
AC-10	~	~	10.1	8.7	2.8	0.7
Malta	1.0	4.1	0.7	10.0	0.3	5.5
Selected EU countries						
Ireland	2.1	1.6	1.3	5.7	-0.3	5.7
Italy	6.2	3.1	1.7	3.1	3.5	4.0
Portugal	11.6	9.8	4.0	5.3	3.8	3.8
Greece	16.2	11.3	5.2	0.9	4.7	5.6
Spain	7.3	5.2	2.5	3.4	3.3	3.6
Cyprus	~	~	-0.5	2.5	4.7	3.4
Hungary	~	14.7	12.0	12.0	8.2	10.3
Czech Republic	~	~	7.8	7.5	5.2	0.3
Slovenia	~	~	7.2	9.0	6.8	3.6
Poland	~	29.1	12.5	11.5	0.5	-3.2
Slovakia	~	~	6.2	3.0	4.4	3.8

Source: Statistical Annex European Economy (2004), Data for Malta: Author's estimates

Despite the limited statistical comparability of these data, they indicate that Malta's ULC did not grow at an excessive rate during the last two decades. In fact, the expansion was smaller than that registered in Greece, Portugal and Spain, countries at

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away from labour intensive processes and boost the capital stock. According to Bercuson (1995), to a large extent this policy proved successful.

a slightly higher stage of economic progress. Between 1986 and 1990 and, again, between 1996 and 2000, the average growth in Malta's ULC was even lower than that recorded in Ireland, the United States and the EU-15. This assessment is, however, marred by the post-2000 performance, when Malta's ULC rose substantially on the back of higher public sector pay and a slowdown in productivity.

Table 2
COMPARATIVE ULC LEVELS: TOTAL ECONOMY

EU-15 1999=100

	1999	2000	2001	2002
EU-15	100.0	100.5	101.0	100.7
AC-10	~	44.7	49.2	49.2
Malta	61.3	62.4	64.5	63.8
Selected countries				
Ireland	85.1	86.5	90.6	86.8
Italy	81.7	81.0	83.2	85.0
Cyprus	79.4	80.0	79.6	82.8
Spain	81.0	81.5	82.6	82.1
Slovenia	73.5	74.5	75.3	76.0
Greece	78.7	74.9	73.9	72.6
Poland	44.0	47.8	56.5	53.0
Hungary	37.0	38.9	42.3	47.3
Czech Republic	~	36.9	40.0	46.5
Slovakia	29.6	31.1	31.1	31.6
Bulgaria	27.8	27.4	29.3	29.5
Turkey	34.1	35.6	29.1	28.8

Source: NewCronos Database, Data for Malta: Author's estimates

To arrive at a more precise judgement of the cost of labour in Malta, data from Eurostat's NewCronos database were utilised to construct comparative ULC levels on the basis of compensation per employee denominated in Euro and GDP in PPS per employed person.[22] While methodological issues still restrict the comparability of employment figures and national accounts compilation methods are as yet not fully harmonised, these data (see Table 2) can be considered as fairly indicative. Predictably, these data suggest that the cost of labour is higher in Malta than the average of the other acceding countries, but lies quite below that present in the EU-15. Malta's estimated overall ULC are, however, significantly lower than those present in countries at a similar stage of development, such as Greece, Slovenia and Cyprus, suggesting that given its relative productivity levels, Maltese labour is not excessively priced. The data indicate that Malta's ULC have converged by two percentage points

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[22] Data for Malta on employment were based on full-time equivalent estimates derived in Grech (2003).

towards the EU-15 level during the period 1999 to 2002, the same pace as Slovakia and Slovenia, but faster than Ireland and Spain (where, however, labour is relatively more expensive). Transition economies such as Poland, Hungary and the Czech Republic have experienced a much sharper rate of convergence, indicating that their cost advantage is dissipating rapidly, while Malta has retained its competitive position with respect to Cyprus and Italy.

Chart 5: Compensation per Employee and Apparent Labour Productivity in 2002
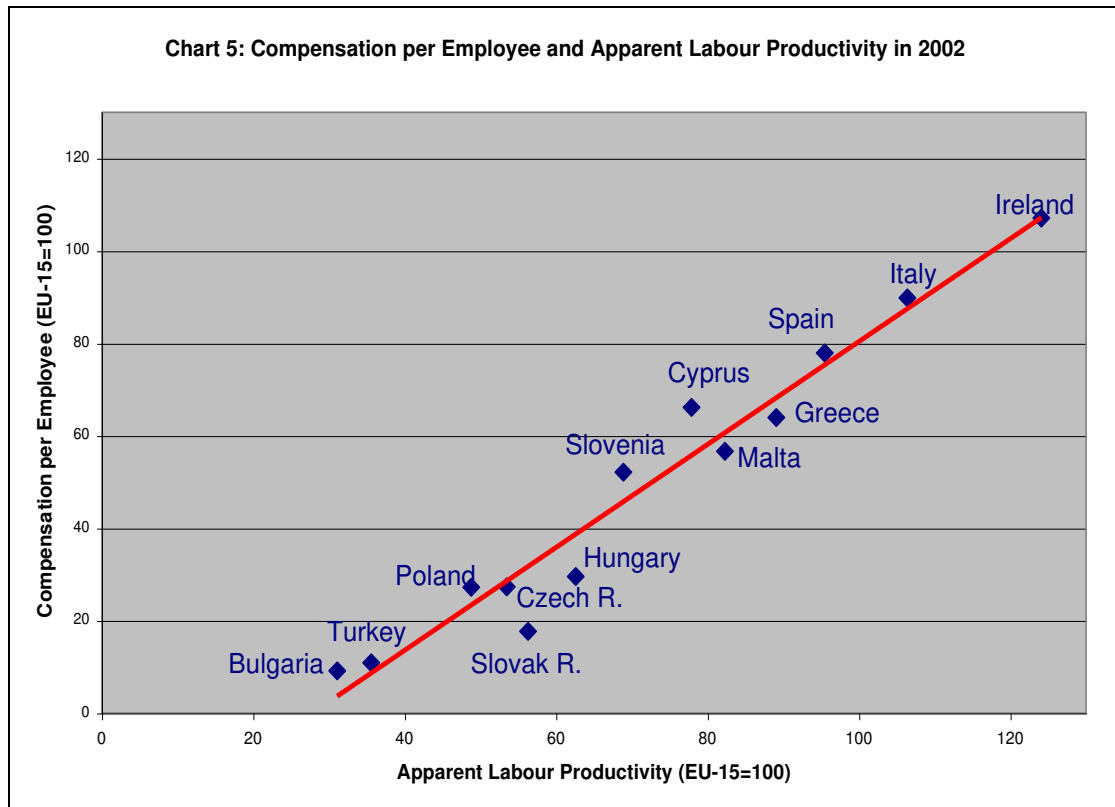
Economic theory postulates that compensation per employee and labour productivity follow each other closely. If this were not the case, firms would have to finance wage rises by tapping into profits, or raising prices. In a competitive environment, if such a situation persists firms would either close down or relocate to cheaper destinations. A panel of 13 countries (six above and six below Malta's relative GDP per capita) confirms the close link between labour costs and productivity (see Chart 5).[23] Most countries' relative rankings in terms of compensation per employee and GDP per worker are similar, indicating that more productive countries tend to have higher wages, and vice versa. The data, however, indicate that there is not a one-to-one

14

relationship between apparent labour productivity and labour costs, as GDP per worker tends to exceed average compensation significantly. This is mainly due to the fact that the measure of productivity utilised assumes that any increase in output is solely due to labour, and thus ignores the return due to additional capital and technology. Irrespective of these considerations, the cross plot of relative labour remuneration and productivity demonstrates that Maltese labour is definitely not overpriced. Only Hungary and the Slovak Republic have an apparent advantage in terms of a wider gap between productivity and labour costs.[24]

2.2 Benchmarking labour costs in manufacturing

As was argued in a previous section of this paper, a persistent rise in the ULC of the total economy may not be caused by wage claims constantly outstripping productivity growth, but rather reflect a structural transition towards the more labour intensive services sector. Since most of the above-mentioned economies are passing through this phase, it may be more appropriate to assess competitiveness by looking at measures of the ULC for a specific sector, such as manufacturing. However, due to data unavailability, it is virtually impossible to construct at present a panel of sector-specific ULC, and competitiveness analysis must perforce focus on less accurate and academically rigorous benchmarking exercises.

In the United States, the BLS regularly issues comparative data on hourly industrial compensation costs.[25] These data indicate that hourly compensation costs in US manufacturing rose from $13.01 in 1985 to $19.76 in 2000 (see Table 3). In Europe the rise was quite larger, from $7.92 to $18.60, while hourly labour costs in the newly industrialised Asian economies (Singapore, Korea, Taiwan and Hong Kong) increased from $1.65 to $6.95 during the same period.

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[23] The correlation coefficient between the two sets of data (for 2002) was found to be 0.95. A similar correlation can be found between the relative ULC and GDP per capita levels, indicating that more-developed countries have a higher cost of labour.

[24] The latter means that profit shares are relatively higher, a factor that may attract firms to operate in these countries. However it could simply be due to a different composition of output or competition.

[25] Department of Labour (2003). These data are used in Bikoi, Moglia & Sparks (2002), Cobet & Wilson (2002), Dean & Sherwood (1994), and Kmitch, Laboy & van Damme (1995).

Table 3
HOURLY COMPENSATION COSTS IN MANUFACTURING

US $

	1985	1990	1995	2000	2002	Average % Annual Growth	
						1985-2002*	1995-2002*
US	13.0	14.9	17.2	19.8	21.3	2.9	3.1
Europe	6.3	12.7	23.7	22.3	18.8	6.4	-3.3
Japan	7.9	17.2	21.8	18.6	20.2	5.5	-1.1
Asian Newly Industrialised Economies	1.7	3.7	6.5	7.0	7.1	8.6	1.2
Selected countries							
Malta	2.6	4.7	5.8	6.2	6.7	5.6	1.9
Ireland	6.0	11.8	13.8	12.5	15.1	5.4	1.3
Portugal	1.5	3.8	5.4	4.8	~	6.7	-1.8
Spain	4.7	11.4	12.8	10.8	12.0	5.6	-0.9
Italy	7.6	17.5	16.2	14.0	14.9	3.9	-1.2
Germany	9.5	21.8	30.3	23.4	25.1	5.7	-2.7
France	7.5	15.5	19.4	15.7	17.4	4.9	-1.5
Taiwan	1.5	3.9	5.9	5.9	5.4	7.6	-1.1
Korea	1.2	3.7	7.3	8.2	9.2	11.8	3.3
Singapore	2.5	3.8	7.3	7.6	7.3	6.4	-0.1

* Up to 2000 for Portugal

Source: Bureau of Labour Statistics (US), Data for Malta: Author's estimates

Data on hours worked by employees in manufacturing do not exist for Malta. Assuming that workers had worked a standard 40-hour week throughout, compensation costs are estimated to have risen from $2.59 in 1985 to $6.22 in 2000. According to these estimates, therefore, the relativity between labour costs in European and Maltese manufacturing remained stable at about 3 during the fifteen years to 2000, while costs in the Asian economies converged to those in Malta. The BLS' data for 2002 show that costs had risen by 7.4% to $21.33 in the US, by 9.7% to $20.26 in Europe and by 4.3% to $7.08 in the newly industrialised Asian economies. Estimates for Malta indicate an increase of 6.9% to $6.65 per hour. By 2003 personnel costs had, however, risen to $8.38 in Malta, boosted upwards by a 15% appreciation of the Maltese lira against the US dollar.

Quite interestingly, the BLS data point out that labour costs slowed down significantly across the globe during the second half of the 1990s and the first years of the 2000s, with the exception of the US. They actually dropped in nominal terms in continental Europe, Japan and some Asian economies. Wages continued to rise, though at a much slower pace, in Ireland and Malta.

In its NewCronos database, Eurostat provides a comprehensive set of manufacturing performance indicators. While these data suffer from a limited time frame (covering only 1995 to 2001) and country coverage (extended to EU Member States and candidate countries), the underlying compilation methods and definitions are more consistent. They present a very similar picture to that given by the BLS data. Malta's labour cost per employed is, in fact, reported at just over a third of the European average. Manufacturing firms in Malta face lower labour costs than those in European Mediterranean countries, but higher than in Portugal and Slovenia, two countries at a similar level of economic development (see Table 4). Costs in Malta are also higher than in most other new Member States, but this is offset by the fact that gross value added per employed in Maltese manufacturing is significantly larger. There is, in fact, a positive gap between the relative levels of value added and costs in Maltese manufacturing that is larger than that of most other Member States.

Table 4
COMPARATIVE INDICATORS: MANUFACTURING (2001)

	Labour cost per employed	Gross value added per employed
EU-15	100.0	100.0
AC-10	20.2	29.1
Malta	38.4	46.5
Selected countries		
Ireland	91.9	256.1
Italy	81.0	82.0
Spain	72.3	76.6
Portugal	35.3	38.5
Cyprus	44.3	48.8
Slovenia	37.8	~
Poland	21.6	~
Hungary	19.6	23.8
Czech Republic	18.8	20.9
Slovakia	14.3	18.2
Bulgaria	5.6	5.7
Turkey	6.4	~

Source: NewCronos Database

Ireland's much higher positive gap is due to the fact that its gross value added is boosted by the substantial profits reported in two specific sectors, chemicals and

radio, t.v. & communications.[26] Here gross operating profit rates stand at around 50% and 40% respectively, by far higher than those in the same sectors in other countries, and in other sectors of Irish manufacturing, and could possibly reflect transfer pricing on the part of multinationals rather than actual output.[27] Eurostat data, in fact, indicate that labour costs constitute just 8.4% of the Irish manufacturing's total production value, compared with the European average of 18.9% (see Table 5). In Malta, the incidence of labour costs relative to vale added is only marginally larger than that in the other new Member States, and significantly smaller than that in the EU-15.

Table 5
LABOUR COSTS AS A % OF TOTAL PRODUCTION VALUE: MANUFACTURING (2001)

	%
	2001
EU-15	18.9
AC-10	13.9
Malta	15.0
Selected countries	
Ireland	8.4
Italy	14.5
Spain	16.9
Portugal	16.4
Cyprus	19.4
Slovenia	20.8
Poland	13.7
Hungary	12.0
Czech Republic	13.9
Slovakia	12.7
Bulgaria	12.2
Turkey	16.9

Source: NewCronos Database

It should be noted, however, that while gross earnings for Maltese manufacturing workers are much smaller than those in Europe, the relativity in terms of net earnings is substantially better. Paternoster (2004) reports that 'all acceding countries have lower levels of net earnings than the Member States except for Malta, where the net

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[26] Refer to Eurostat (2002).
[27] Gropp & Kostial (2000), in fact, conclude that 'the low tax rate in Ireland appears to have greatly contributed to the country's success in attracting foreign direct investment'.

earnings are above those of Greece and Portugal, and Cyprus, where the net earnings are above those of Spain". Social security contributions in Malta are, in fact, on the low side of the European spectrum.

Conclusion

The effective cost of labour faced, on average, by operators in the Maltese economy has increased by 2.3% per annum over the last twenty years.[28] This development, however, should not be misconstrued as evidence that Malta's competitiveness has been declining significantly over time, as the country's overall ULC remain at less than two-thirds of those found in the EU-15, and in most of the period under study they grew less than in the more-developed European countries. The increase in Malta's ULC was also partly on account of a shift towards more labour-intensive industries such as services, and was also buoyed in recent years by the convergence of salaries in the Government sector to those in private industry. In manufacturing, the annual average growth in ULC appears to have been more moderate so that the relativity between labour costs in Malta and in Europe remained virtually stable over the last fifteen years.

Even for the overall economy, Malta's ULC do not appear to be out of line with the country's relative productivity ranking, and, in fact, the positive gap between labour productivity and compensation is higher than that in most EU Member States. However, since 2000 Malta's labour productivity has fallen significantly, reversing in part the catching up that had characterised previous decades, while compensation costs in some sectors, such as Government and non-tradable services, continued to rise. These developments must be reversed if Malta's competitiveness is to be safeguarded.

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[28] The retail price index rose by an annual average of 2.1% during the same period, suggesting some relationship between domestic inflation and the cost of labour, possibly induced by wage indexation.

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Appendix: Estimated ULC series for Malta

	Overall Economy	Government Sector	Private Sector
1984	40.07	53.56	38.26
1985	39.95	52.89	38.08
1986	39.87	53.95	37.62
1987	41.77	54.63	39.66
1988	40.51	55.64	37.93
1989	40.15	54.94	37.42
1990	41.95	58.22	38.95
1991	43.89	58.99	40.92
1992	45.29	60.84	42.05
1993	48.19	66.26	44.41
1994	49.94	68.26	45.72
1995	51.26	69.93	46.85
1996	53.12	71.57	48.35
1997	52.34	72.06	47.75
1998	53.28	76.94	48.25
1999	54.22	79.29	49.04
2000	53.11	78.82	47.79
2001	58.41	87.28	51.93
2002	58.58	87.40	51.98
2003	61.80	86.04	55.60

The above data show how many cents were spent in labour costs in each sector for every Lm1 worth of real output.

ULC indices (1984=100)

	Manufacturing	Rest of Private Sector
1984	100.00	100.00
1985	100.58	98.06
1986	96.60	99.25
1987	101.88	107.28
1988	94.40	108.56
1989	95.27	103.42
1990	99.51	107.65
1991	103.64	114.17
1992	106.29	121.22
1993	110.54	133.84
1994	120.25	130.59
1995	124.29	136.35
1996	132.08	140.36
1997	132.91	140.40
1998	135.93	141.55
1999	141.05	140.18
2000	136.20	137.82
2001	149.36	146.81
2002	148.63	145.58
2003	161.64	144.93

The above indices are less accurate than the other ULC series, as manufacturing value added was not deflated with an industry-specific index, but with the export deflator (which also covers tourism, re-exports of oil, etc).