Lorenzo Bini Smaghi: Growth and inflation in the euro area – the importance of productivity in the services sector

Keynote speech by Mr Lorenzo Bini Smaghi, Member of the Executive Board of the European Central Bank, at the Ludwig Erhard Lecture, Brussels, 28 October 2008.

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1. Introduction[1]

I would first like to thank the organisers for inviting me to give the "Ludwig Erhard Lecture" this year. It is both a privilege and a pleasure for me to be here today. I would like to discus an issue – productivity in the services sector – which might seem a bit disconnected from the pressing economic and financial situation we are currently experiencing. I will try to show that, on the contrary, the issue is quite relevant for the conduct of economic policies and the prospects for recovery of our economy.

In my speech today, I'd like first of all to explain why services productivity matters to monetary policy. Then I'll look at a few facts on labour productivity performance and the links between productivity and inflation in the services sector. Finally, I'll consider the policy responses, particularly in the field of structural reforms.

2. Services productivity and monetary policy

Productivity in the services sector matters not only to each and every one of us as consumers. It is also important for central banks in general, and for the ECB in particular. Let me mention three key dimensions in this respect. The first two dimensions have to do with the nexus between productivity and inflation, both from a longer-term and a cyclical perspective.

Over the longer term, in a world of rising commodity prices other components of inflation need to grow more slowly, if at all, for overall inflation to be in line with central banks' objective to maintain price stability. Since energy and food account for over 30% of the consumer price index in advanced countries, it is simple arithmetic that inflation in manufacturing and services should increase at a pace well below the definition of price stability, which in the euro area is close to, but below 2%. For manufacturing goods this has been the case over the past decade, but not so for services prices. Limited competition and poor productivity growth have been at the root of services price inflation remaining at a pace that is not consistent with price stability over the medium term, as I will argue in more detail later.

Second, from a more cyclical perspective, poor productivity growth may exacerbate the effect of negative supply shocks and, more generally, tends to intensify growth slowdown. Low productivity growth reduces potential output growth and makes it more likely, ceteris paribus, that negative supply shocks will lead to very low growth or even a recession, at least temporarily. This might, on the other hand, also reduce the equilibrium level of the real interest rate.

Poor productivity growth also prevents inflation from falling adequately when growth is slowing, by keeping unit labour costs excessively high. A high degree of nominal price and wage rigidities slows down the response of the economy to exogenous shocks, thus making the economy less resilient and the adjustment process less efficient. As a consequence, the transmission of monetary policy is affected in important ways – mainly by decelerating the

[1] I thank Christophe Madaschi for his input in the preparation of these remarks.

pass-through of nominal interest rate changes to final demand and prices. Poor productivity growth creates inertia in both wage and price inflation and slows down the process by which the economy returns to its natural level of activity, thus making the task of monetary policy to ensure price stability more complicated.

In the presence of structural rigidities, the central bank has to delay monetary easing when faced with a negative supply shock because of the persistence of inflationary pressures even during the downturn. We are currently experiencing this problem in the euro area, as the persistence of strong underlying wage dynamics in nearly all countries, in spite of the slowdown, has maintained pressure on the underlying dynamics of inflation. In the second quarter of this year, for instance, in spite of the overall negative GDP growth, nominal wages have increased by 3.5% and unit labour costs by 3.2%. This has contributed not only to sustain higher inflation but also to increase unemployment, especially in countries with indexation.

Finally, differences in productivity growth largely explain the divergences in price and costs dynamics experienced within the euro area over the last decade. These divergences do not have a direct impact on monetary policy, since the latter is targeted to the euro area as a whole, but rather on the ability of some countries to sustain economic growth over time. Countries accumulating losses of competitiveness, because of lower productivity growth, will have to catch up over time either through a relative pick up in productivity or through lower rates of growth of wages, which will have a negative impact on growth. In this respect, structural reforms may help to reduce cross-country differences in key regulations and institutions, and thus align adjustment processes across countries. In fact, recent research on the intra-euro area impact of structural reforms shows that the variance of the responses of national outputs to an interest rate tightening would be – at the peak and after the implementation of such reforms – roughly one-sixth of the level that it achieves in conditions of cross-country heterogeneity in terms of price and wage rigidity.[2]

3. Key features of past productivity growth

When comparing the euro area's economic performance with that of the US over the longer term, there is evidence of clear underperformance in output growth. Since 1995, the annual growth rate for the euro area has averaged 2.2% per year compared with 3.1% in the US. One of the main reasons for the euro area's disappointing performance is the low trend growth in labour productivity. Between 1980 and 1995, hourly labour productivity in the euro area grew on average by 2.3%, and between 1995 and 2007, it grew by only 1.3%. In the US over the same periods, the figure went from 1.2% to 2.1%.[3]

Understanding developments in services is crucial to our understanding of developments in the economy as a whole. Services account for 69% of the euro area economy and 70% of total employment.[4] Private sector services represent roughly half of the economy, and government-related services make up the rest. And it's the private sector services that mainly account for the gap in labour productivity growth between the euro area and the US. From 1995 to 2005 their hourly labour productivity in the euro area only grew by 1.0% compared with 2.9% in the US. Of the private sector services, distribution services, including the

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2 These results are obtained using a multi-country DSGE model of the euro area, which is calibrated to the three largest Member States, namely France, Germany and Italy. Structural reforms were simulated by reducing the degree of price and wage rigidity and sectoral mark-ups to the lowest level prevailing in the euro area. See Altissimo, F., T. Blattner and S. Siviero (2008). "A Multi-Country DSGE Model of the euro area: Lessons for structural policies", forthcoming.

3 Figures at the sectoral level are from EUKLEMS database and are not fully comparable with figures for the whole economy mentioned earlier in the speech.

4 EU KLEMS database.

wholesale and retail trade sector, have been the main reasons for the gap, followed by finance and business services (excluding real estate). In the wholesale and retail trade sector, for instance, hourly labour productivity grew on average by 1.4% in the euro area, while it grew on average by 4.6% on the other side of the Atlantic.

What lies behind these labour productivity developments?

Specific policies aimed at increasing employment, particularly in the unskilled segment of the labour market, have certainly contributed to the slowdown in labour productivity growth, especially in services, which are usually more labour-intensive. However, developments in labour supply are only part of the story. To a large extent, the slowdown in labour productivity growth can be attributed to a marked slowdown in total factor productivity (TFP) growth, which is generally taken as a measure of technological progress and improvements in the organisation and overall efficiency of production. Between 1980 and 1995, TFP for the whole economy grew on average by 1.5%, before declining to 0.8% between 1995 and 2007.[5] And private sector services significantly contributed to this decline. Indeed, TFP growth in these services slowed down from 0.6% between 1980 and 1995 to -0.1% between 1995 and 2005.[6]

Several authors, such as Oliner and Sichel (2002), have already highlighted the major role of innovation and information and communications technology (ICT) in the revival of labour productivity growth in the US.[7] Moreover, it has been argued that the effect of ICT dissemination, as measured by ICT investment, has been particularly important in explaining the differences in labour productivity growth developments in some market ICT-using services sectors between the euro area and the US. Since the early 1980s, investment in ICT in the United States has been double that of the euro area.[8] Basu and others (2003) find, for instance, that industries with faster growth in ICT capital in the 1980s and early 1990s had faster TFP growth rates in the late 1990s.[9] It seems that the ICT investments in some private sector services in the US have sparked further innovations in managerial processes, procedures and organisational structures, and facilitated complementary innovations. The full benefits of the productivity acceleration however can only be reaped if there are no obstacles to organisational change.[10] In this regard, the structural characteristics of the euro area economies – as reflected by labour market rigidities and the lack of competition in product markets – did not allow European firms to exploit the benefits of new technologies to their full extent.

4. Productivity and the single market

For the ECB, long-term growth prospects matter, but our main focus is of course on inflation developments. Let me therefore now turn to the role of productivity in shaping inflation

5 Source: European Commission.

6 EU KLEMS database.

7 See Oliner and Sichel (2002), “Information technology and productivity: where are we now and where are we going?” Federal Reserve Board. See also Jorgenson, D., M.S. Ho and K. Stiroh (2002), “Information Technology, Education, and the Sources of Economic Growth across U.S. industries”, mimeo.

8 ICT investment represented roughly 3% of GDP in the United States compared with 1.5% in the euro area over the period 1980-2005 (source: OECD productivity database).

9 Basu, S., J. Fernald, N. Oulton, and S. Srinivasan. 2003, “The Case of the Missing Productivity Growth: Or, Does Information Technology Explain why Productivity Accelerated in the United States but not the United Kingdom?”, NBER Macroeconomics Annual.

10 See for, example, van Ark, Bart and Inklaar, Robert, 2006, “Catching up or getting stuck? Europe’s troubles to exploit ICT’s productivity potential”, GGDC Research Memorandum GD-79, Groningen Growth and Development Centre, University of Groningen.

dynamics and some characteristics of inflation in services more generally. I will touch on inflation at an area-wide level, but also – and mainly – on inflation differentials within Monetary Union.

At an area-wide level, unit labour costs resulting from wage and productivity developments are a key predictor of inflation. Wage increases not covered by productivity gains push up production costs, which eventually add to price pressures. When looking at price developments across sectors, it appears that in the euro area, the prices of services have increased faster than the prices of goods over the last two decades. Evidence of this inflation gap can be found by looking at the main HICP components and gross value added deflators. For instance, when using the GDP deflator at factor cost, inflation in private sector services has been on average 0.8 percentage points higher than in the manufacturing sector.[11] Similar developments have been found for the US and other industrialised economies, but the gap in the euro area has been more persistent than in the US. The persistent divergence between services and goods inflation in the euro area clearly reflects a weakness in productivity growth in services activities.

Turning to individual euro area countries, several ECB studies show that the differences in unit labour cost developments across individual euro area countries have also clearly been associated with differences in their HICP inflation rates over the last ten years.[12] Countries such as Greece, Ireland, Italy, Luxembourg, the Netherlands and Spain, which, over the period, had above-average unit labour cost growth rates also recorded higher-than-average inflation rates. When looking more closely at the contribution of wages and productivity, at the aggregate level, to the cross-country differentials in cost competitiveness – as captured by unit labour costs – we see that much of it can be explained by developments in compensation per employee. However, in several cases which have experienced major competitiveness losses, lacklustre productivity growth has been an important factor contributing to this loss. This holds as well for sectoral cost competitiveness. For instance, over the last ten years, the gap in labour productivity growth between manufacturing and private sector services has been more than twice as high as the gap for the average growth in compensation per employee. The stronger increase in unit labour costs in private sector services relative to the manufacturing sector has therefore been largely driven by the relative weakness of labour productivity growth in those services in the euro area.

Inflation differentials across sectors and countries have of course a number of causes and cannot entirely be attributed to productivity gaps. One important element is the degree of competition to which a sector is exposed and its impact on prices. In this respect, remaining institutional restrictions on services sector competition not only go hand in hand with low productivity performance, but also with higher profit margins and more price stickiness. For instance, even though caution is required when interpreting mark-ups, it is worth mentioning that over the last 20 years (1981-2004) mark-ups in private sector services, defined as the price to marginal cost ratios, were 1.56 in the euro area compared with 1.36 in the United States and 1.18 in manufacturing and construction sectors in the euro area and 1.28 in the US.[13]

Finally, extensive empirical research on price flexibility and inflation persistence shows that the frequency of price changes in a given month in the euro area is considerably lower than

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[11] Source: EUKLEMS – the period is 1995-2005.

[12] Two articles published by the ECB have dealt with various aspects of euro area country differentials, namely "Output growth differentials in the euro area: sources and implications" in the April 2007 issue of the Monthly Bulletin and "Monetary policy and inflation differentials in a heterogeneous currency area" in the May 2005 issue of the Monthly Bulletin.

[13] R. Christopoulou and P. Vermeulen, (2008) "Mark-ups in the euro area and the US over the period 1981-2004: a comparison of 50 sectors" ECB Working Paper No 856.

in the United States. Prices change infrequently in the euro area and with notable differences across sectors. In the services sector – which is my main focus tonight – less than 6% of all retail prices change every month, a fact which points to a frequency of price adjustments that is lower than in every other sector of our economy, and less than half of the comparable frequency in the United States. Of course, this lack of flexibility in euro area services prices is probably a faithful reflection of the relatively low degree of competition and integration, implying that the burden of adjustment in response to an unfavourable shock falls disproportionately on changes in output, income and employment.

Having pointed out these features of productivity, inflation and competitiveness developments, I'd now like to consider how long-term economic performance can be improved.

5. The policy responses: strengthening structural reforms for long-term growth

Structural rigidities are widely held to be the main reason for Europe's weaker productivity performance compared with the United States and with some other advanced industrialised economies. Let me point to three key policy areas where further reforms could help to spark medium to long-term productivity growth.

First of all, Europe needs more flexible labour markets. Indeed, in a context of rapid technological change, it is essential to ensure that human capital can be adjusted to labour market needs, so that the labour force remains employable and flexible. A high level of employment protection legislation may have a particularly strong negative impact on industries experiencing rapid technological change, since it may prevent the efficient matching of workers to jobs.

Second, increasing competition by establishing efficient and well-functioning product markets is also fundamental. Many studies point to the potential of competition to boost productivity trends by improving production efficiency and enhancing the incentive to invest and innovate. Nicoletti and others (2006)[14] find, for instance, that restrictive product market regulations slow the process of adjustment through which best practice production techniques spread across borders and new technologies are incorporated into production processes. This suggests that remaining cross-country differences in product market regulation can partially explain the recently observed divergence of productivity in OECD countries.

In this respect, the Single Market has already yielded major benefits for the European economy.[15] In telecommunications, for instance, now largely or fully open to competition, labour productivity growth has significantly accelerated, from 4.4% between 1980 and 1995 to 7.4% between 1995 and 2005 and telephone prices charged by the former monopolies for national and international calls were reduced by more than 40% on average in Europe between 2000 and 2006. The extension and deepening of the internal market remains however a priority as regards the pursuit of effective competition in the energy market, the implementation of the Services Directive and further financial market integration.

Third and finally, to fully exploit productivity potential, the labour and product market reforms I have mentioned need to be accompanied by policies which unlock business potential, by action to support innovation through higher investment in research and development, and by measures aimed at improving human capital.

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[14] P. Conway, D. de Rosa, G. Nicoletti and F. Steiner, 2006, "Product market regulation and productivity convergence", OECD Economic Studies No 43.

[15] The European Commission recently estimated that the Single Market has created 2.75 million extra jobs and an additional increase in welfare of €518 per head in 2006, corresponding to a 2.15% increase in the EU's GDP over the period 1992-2006 (see European Commission, "The single market: review of achievements", November 2007).

Europe needs more new and dynamic firms willing to reap the benefits of opening markets and to pursue creative or innovative ventures with a view to large-scale commercial exploitation. Notably, it is new and smaller firms, rather than large ones, that are the job creators. An entrepreneur-friendly economic environment would imply less red tape for small and medium-sized enterprises, and help them to develop at home and abroad, as well as easier access to the finance they need. Europe is significantly lagging behind in this field; its venture capital financing, for instance, remains only a fraction of that in the US, relative to the size of its economy.

Research and development as well as human capital make also valuable contributions to total factor productivity growth. Moreover, meeting the challenges of innovation and its dissemination as well as ensuring the labour force's employability and flexibility requires improved education and training, as well as lifelong learning. However, investment in human capital in Europe is still clearly inadequate for a "knowledge-intensive" economy. Europe still needs to enhance the quality and efficiency of its schools and universities as well as to increase incentives for all relevant parties, including firms, to invest in human capital.

In this connection, let me now focus more specifically on the financial services sector which is, within the services sector, probably the most important and, in some sense, problematic component. For the ECB, financial integration is essential, given its relevance to the conduct of the single monetary policy. And it is gradually taking place across Europe, with considerable progress having already been made. The degree of integration, however, varies across market segments, and integration is generally more advanced in those market segments which are closer to the single monetary policy. While the euro area banking markets for wholesale and capital market-related activities have shown clear signs of increasing integration since the introduction of the euro, the retail banking segment has remained more fragmented, leaving European firms and consumers unable to take full advantage of Economic and Monetary Union (EMU) and the Single Market. The current extraordinary conditions in financial markets should provide a unique opportunity for overhauling the architecture of financial markets not only worldwide, but also within the EU and EMU.

Many would argue that embarking on such reforms is probably easier said than done. And European policy-makers, notably in the euro area, seem to take for granted that the electorate will punish them for bold reform in product and labour markets. This may explain why progress in the euro area has been comparatively limited. However, a recent paper from the Commission (Buti et al. 2008)[16] suggests that fear of electoral backlashes may be unfounded. Moreover, as I argued earlier, without reforms the economic costs in terms of output and job losses will be increased, and monetary policy will be forced, sooner or later, to react more forcefully to continued upward price pressures. Renewed efforts to raise productivity – also in the services sector – can reduce inflationary pressures, raise real income and strengthen the resilience of our economies to the global shocks in the financial system and commodity prices which we are experiencing.

5. Concluding remarks

Ludwig Erhard was prized for his courageous policies, which were based on the principles of free competition, flexible prices and open markets. On many occasions he stressed the importance of price stability. In my view, these principles still act as guideposts, helping Europe to cope with the shocks facing the global economy by maintaining sound and stable macro-economic policies, to support flexibility and innovation, and to continue with structural reforms. In this respect, the thoughts I have shared with you here today confirm that his

[16] M. Buti, A. Turrini, P. Van den Noord and P. Biroli, 2008, "Defying the "Juncker Curse": can reformist governments be re-elected?", European Commission Economic Papers No 324.

ideas remain valid for our times. Europe must strive to deliver growth, jobs and low inflation consistently over time under the Lisbon Strategy for Growth and Jobs, which aims to make Europe fit for the future.

One might be tempted to think that this long term agenda may not fit quite well with the shorter term challenges that we are currently facing, which is to get out of the current crisis. It would be a mistake. We have seen that some of the causes of the current crisis lie in the inappropriate functioning of certain markets, notably the financial sector. We also noted that the rigidities in the labour and product markets weigh on the ability of economic policies to effectively address some of the shocks that we are currently experiencing. In particular, monetary policy in the euro area is constrained by the rigidities in the labour markets that risk dis-anchoring expectations of price and wage setters. This is the reason why, even in the current deteriorating economic conditions, monetary policy has to continue to be framed within the established ECB strategy in which the primary objective of monetary policy is price stability. If this was not the case, monetary easing could be perceived to be the result of a change in priorities by the ECB, in favour of economic growth or financial stability rather than price stability. Economic agents could expect that monetary policy would now be ready to accommodate higher inflation expectations, under the form of higher nominal rates of return or higher wages. This would lead to much worse macroeconomic results over the short and medium term.

Going forward, the stance of monetary policy will continue to be adapted on the basis of the primary objective of price stability – a rate of inflation close but less than 2%. The stronger is the underlying growth of productivity, especially in the services sector, the higher are the prospects to achieve such a target, the greater the room for manoeuvre for monetary policy to adapt to the weakening of economic conditions. The current economic difficulties do not justify any stop, or reversal of reforms. On the contrary, it’s time to accelerate them.

Thank you very much for your attention.