VOX
Research-based policy analysis and commentary from leading economists

Europe's employment growth revived after 1995 while productivity growth slowed: Is it a coincidence?

Ian Dew-Becker Robert J. Gordon
15 April 2008

Europe's jobs outlook has brightened over the past decade. Recent research suggests that about half the rise in job creation is due to labour market reforms, but much of the rest is due to changing social norms concerning female and immigrant labour force participation. But what's good for European job creation seems to be bad for labour productivity growth – a trade-off that European policymakers must be willing to acknowledge and address.

As of 1995, Europe (the EU-15) had almost caught up to the PPP-adjusted level of US labour productivity, while its per-capita income ratio to the US stagnated at only 70 percent. This discrepancy is explained by a decline over 1960-1995 in hours worked per capita in Europe compared to the US. Edward Prescott (2004) has blamed low hours exclusively on high labour taxes, while Prescott's critics, although accepting a role for taxes, have broadened the list of culprits to employment protection legislation, product market regulation, a high average replacement rate of unemployment insurance, high union density, and high "corporatism" (cooperative bargaining between unions, management and the government). We label this group of potential explanatory factors as the "policy/institutional variables".

The previous literature and many policy debates, especially in the US, have missed three important points.

- First, EU-15 hours per capita stopped declining and began to rise after 1995. This was particularly evident for employment per capita, less so for hours per employee. Most of the policy/institutional variables have also turned around. Data on the 25 years from 1978 to 2003 and for 15 countries provide a fertile field for investigating the response of growth in employment per capita to changes in the policy/institutional variables.
- Second, growth performance within the EU-15 became much more heterogeneous after 1995. The standard deviation of growth rates across the 15 countries roughly doubled for labour productivity, hours, and income per capita. Spain and Italy

experienced particularly sharp reversals, exhibiting marked post-1995 declines in productivity growth and increases in growth of employment per capita. Remarkably, despite its negative growth of labour productivity during the period 1995-2006, Spain ranked third in the EU-15 for its growth of income per capita, due to its startling acceleration of growth in employment per capita.

- The third and most novel – and also most controversial – finding is that there may have been a substantial trade-off between labour productivity and employment growth over the past two decades. Before 1995, European policy made labour more expensive through higher taxes, tighter regulations, and strong unions. This reduced labour demand, lowering employment but raising the real wage and the average product of labour. Slow employment growth and relatively high productivity growth were negatively correlated. After 1995, this process was reversed, with lower taxes and looser regulations reducing the cost of labour, which helps explain the simultaneous increase of growth in employment per capita and slower growth in labour productivity.

The textbook labour demand curve holds constant capital input and the level of technology. The initial effect of policy-driven employment growth is to reduce capital intensity. But intuition and standard models both imply that when employment and income increase, so should investment. This may eventually happen, but it does not seem to have happened in the EU-15 as of 2005. Thus the static negative employment-productivity trade-off appears to describe the first part of the current decade without as yet any evident movement toward faster capital growth and a corresponding revival of productivity growth. In the medium-run, if current trends continue, we should expect to see European investment pick up (and US investment to lag). The most recent data for Europe suggest that this process may have already begun.

Empirical results: employment growth and productivity growth

In recent research, using the best available data collected by the OECD, Groningen Growth and Development Center, and others, we estimate the relationship between the policy/institutional variables and employment per capita growth in the EU-15 (Dew-Becker and Gordon 2008). We find that while the policy/institutional variables can explain a significant amount of the variation in employment, they provide only a partial explanation of the post-1995 increase in European employment per capita. At best, they explain about half the rise, leaving another 1 percent per year in employment growth unexplained. Moreover, this unexplained 1 percent acceleration holds across the EU, not just in Spain and Italy.

We interpret this change largely, with reference to the work of Tito Boeri and Christopher Pissarides (2005), as the result of a change in social norms regarding female labour force participation in southern Europe. As recently as 1985, the female

labour force per capita in Spain and Italy was barely one half of that in Scandinavia. Since 1985, that ratio has begun a long process of convergence, and much of the strong growth in employment per capita in the EU-15 after 1995 can be traced to female labour-force participation. Also evident is an increase of immigration, particularly in Spain, which has expanded employment and participation at the cost of lower productivity of the marginal new workers. However, the change in the growth rate of employment is not restricted exclusively to women. Up until 1995, male employment had been falling dramatically across Europe. After 1995 though, this decline stops. Growth in male employment went from substantially negative to zero, which makes just as important a contribution to the EU employment turnaround as the increase in female participation.

We also find a strongly robust negative correlation between growth in labour productivity and growth in employment per capita across all of Europe, not just in Italy and Spain. We identify this effect using the following strategy. While it is obviously the case that there is two-way causation between productivity and the employment rate (since productivity drives wages), changes in labour taxes should have no direct effect on productivity. Rather, the tax effects should be mediated through employment. Using labour taxes as an instrument, we find a strong and robust negative relationship between productivity and employment. This same relationship has also been noted by Beaudry and Collard (2002), as well as Pichelmann and Roeger (2008). We go beyond their work by relating this trade-off to the post-1995 productivity slowdown.

The elementary theory of the production function suggests that an autonomous increase in employment that reduces the capital-labour ratio, without any response of investment, would reduce labour productivity growth by about 0.33, roughly the share of capital in national income. However, our results indicate that the response of productivity growth to employment growth is substantially higher than -0.33, at least -0.5 if not -0.7. We attribute this discrepancy to the fact that labour is not homogeneous. The new immigrants and the new female entrants in Spain and Italy are unlikely to have the same set of skills as native workers. At least in the short run, these new workers are likely to have lowered productivity over and above the effect of a declining ratio of capital to labour.

Conclusions

The most important innovation of our approach is to change the current focus of European policy discussions. Our analysis suggests that some of the policy reforms that are at the top of the European reform agenda may raise employment per capita but may also reduce productivity. We find that some reforms, such as lowering labour taxes, may only have small short-run effects on output per capita after their effects on productivity are taken into account.

We find that the revival of European employment growth can help explain why European

productivity slowed. But we do not explain why European productivity growth did not accelerate as occurred in the US. US productivity took off after 1995, growing at 0.7 percent faster per year, but in Europe a literal reading of the productivity growth data leads to doubt that the internet revolution ever occurred in Europe. Some of Europe's poor recent performance can be explained by reforms that will enhance growth in the long run, but not all of it. Our findings should lead EU policymakers to think about the two-edged effects of policy reforms on employment and productivity, but they should also worry about how to encourage innovation and the adoption of new technologies.[1]

The work discussed here is only about the short-run effects of labour market policies. However, the dynamic effects are critical to the long-run prosperity of Europe. Increases in employment should be expected to spur investment not only in physical capital, but also in human capital. The simple act of working increases skills, especially for teenagers, adult women, or unskilled immigrants just entering the labour market. Moreover, when employment rates are high, the expected returns to education are also high. The findings we report here are not meant to discourage policies that increase employment – precisely the opposite. Our findings show that we should not be discouraged when labour market liberalisation leads to declines in productivity growth in the short run. This result is to be expected, and our paper quantifies this effect.

Policymakers who want a quick fix that will rapidly raise both employment and productivity should find a tool other than labour market liberalisation. Liberalisation should be expected to provide long-run benefits, but there will be noticeable short-run costs. We hope that politicians in Europe and elsewhere have the fortitude to propose these policies even if the benefits may take years to fully accrue.

References

Beaudry, P. and F. Collard (2002). "Why has the Employment-Productivity Tradeoff among Industrialized Countries been so strong?" NBER WP 8754.

Boeri, T., D. Del Boca, and C. Pissarides (2005). *Women at Work: An Economic Perspective*. Oxford University Press: Oxford and New York.

Dew-Becker, Ian and Robert J. Gordon (2008). "The Role of Labour Market Changes in the Slowdown of European Productivity Growth," CEPR Discussion Paper 6722.

Pichelmann, K, and W. Roeger (2008). "Employment and Labour Productivity in the EU: Reconsidering a Potential Trade-off in the Lisbon Strategy," in Eichengreen, Landesmann, and Stiefel (eds) *The European Economy in an American Mirror*, 128-42.

Prescott, Edward C. (2004). "Why Do Americans Work So Much More than Europeans?" *Federal Reserve Bank of Minneapolis Quarterly Review*, 28(1): 2-13.

Footnote

1 An example of this sort of work is the EU Commission's 2007 document, "Moving Europe's Productivity Frontier."

This article may be reproduced with appropriate attribution. See Copyright (below).

Topics: Labour markets, Productivity and Innovation

Tags: productivity growth, labour productivity, employment growth

---

Comments

VoxEU.org

Copyright Contact