

Remote Labor - the New Source of Increased Productivity

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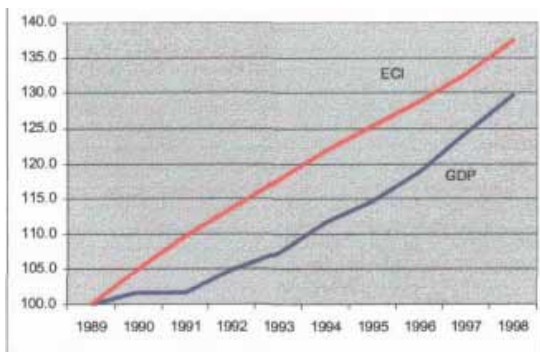
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Abstract

Productivity is one of the most important driving forces behind the economic growth and prosperity. Clearly, the labor shortages of the overheating US economy are making acceleration in productivity even more crucial for keeping the growth pace intact. As high technology industries are taking the lead among the economy overall, the productivity in software development, for example, is becoming a critically important factor of survival in this highly competitive world. In this article we attempt to demonstrate, how to increase productivity in "brain hungry" industries through the concept of "remote labor" and distribution of the jobs between geographically remote groups of intellectuals around the world. We also attempt to prove that this is, actually, the only way to dramatically increase the cost efficiency of the US economy in same way as it was done in consumer goods industries in the fifties, when production of the vast majority of consumer items was moved to the Third World countries.

Is there any reason to worry about productivity in a country where the stock market makes its highs year by year, where economy is growing at a pace, unseen in some developing nations and inflation still looks tame despite tight labor market and rising earnings? Yes, there is, and very serious one - it well may be that the United States economy is on verge of the productivity crisis and thus experience serious inflationary consequences.

There is a wide spread opinion that the progress we have made in high technology sphere of the economy gives us a sort of leeway in the indefinitely long expansion of productivity. It is true that in the modern industry the manual labor is almost completely replaced by highly computerized, sometimes even robotized one. But does it really create a growth in productivity high enough to compensate for the wage increase?



As we can clearly see on the Figure 1, the rise of the Employment Cost Index (ECI) is consistently outstripping the Gross Domestic Product growth. Even worse, ECI rises faster than the Output per Hour (OPH), which is one of the main measures of the labor productivity (see Figure 2).

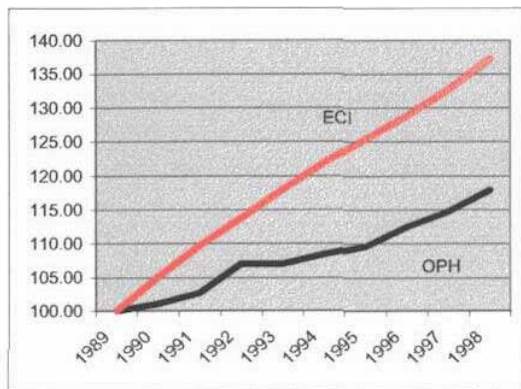


Figure 2

pressures vary from one industry to another. The high-tech industries are especially problematic in this respect. At the same time the percentage of GDP, contributed by high-

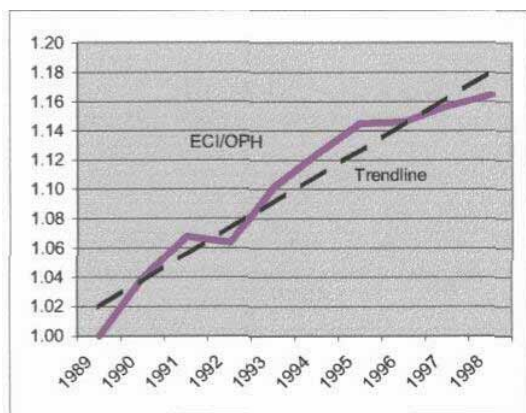


Figure 3

Let's turn to the facts. In accordance to what the Bureau of Labor Statistics says in 1996 the computer programmers held about 568,000 jobs. Employment of programmers is expected to grow faster than the average through the year 2006, meaning that the actual growth may be somewhere between 21 to 35 percent. At the same time, the total labor force is projected to increase only 11 percent during the same period. Looking at these numbers, it is becoming easy to explain, why the \$400,000 and up condos are usually sold within a day in the Silicon Valley area.

Are there any radical ways to withstand inflationary pressures created by the wage rise? The most apparent one is to produce more programmers. Here the problem is that educational system is not so flexible, so it could respond to the needs of economy immediately. Actually, the extreme need of such specialists was absolutely clear even at the beginning of the decade, but today, ten years later, we still are far, far short of enough of them. Second solution may come from abroad, and the current immigration patterns show that the proportion of people with programming skills among newcomers is steadily rising. But still, this is far from sufficient. Also there is a doubt that this can radically change the situation, because the newcomers, who are initially a bit "cheaper" than locals, within a very short

The most worrisome is that the ratio between ECI growth and OPH growth is following a very strong upward trend with no signs of any weakness (see Figure 3). Taking into account the present tightness of the labor market, almost full employment and obvious shortage of highly qualified employees it is easy to conclude that the slope of the ECI growth is going to be even steeper, creating potential inflationary pressures. Recent moves of the Federal Reserve Board confirm that the risk is there.

We have to admit, however, that the wage pressures vary from one industry to another. The high-tech industries are especially problematic in this respect. At the same time the percentage of GDP, contributed by high-tech industries, is rising fast. Today, we can find no area of human activity, where computers, for example, are not used at all. Department of Commerce found out that 8% of the GDP may be attributed to computers and telecom industries, and that's for starters, because the same study shows that 35% of the GDP since 1994 came one way or another from IT.

Those high-tech industries create thousands and thousands of new highly paid jobs. The problem is, that those jobs are to be filled by qualified, educated people with a minimum of a Bachelor degree. Where all these folks are supposed to be coming from? That's a really tough question.

period of time, become accustomed to the rules of game and accept the "discounted" paycheques no longer.

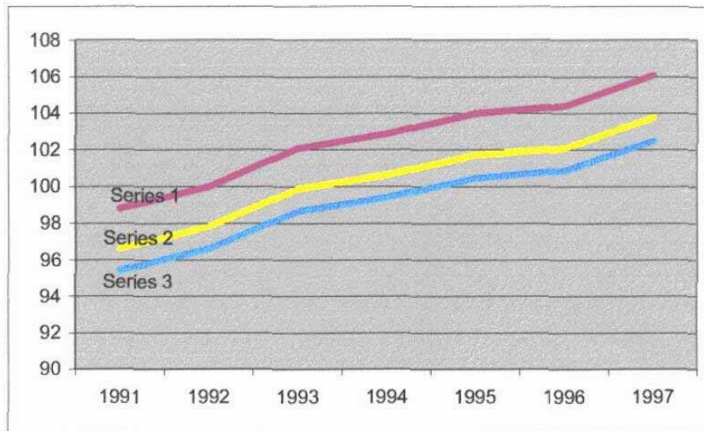
Luckily, due to the recent revolutionary globalization of the world economy and information exchange patterns, there is a way to use foreign, or "remote" labor with no immigration procedures at all: letting them stay and work where they live. As Internet is spreading all over the world, there is a possibility to hire any kind of skilled programmer in Russia, India or China at a fraction of cost of the same specialist in the United States.

We will try to analyze, what the consequences of the use of remote labor may be.

As we found earlier, the most problematic area of the modern economy is productivity, or the growth of the productivity, to be more precise. There are two major measures of productivity, as defined by the Bureau of Labor Statistics:

1. Labor productivity or output per hour.
2. Multifactor productivity measures.

As the labor productivity improvement is not a subject of this study, we move directly to the multifactor productivity analysis.



In our opinion, in the modern global environment, this measure of the productivity is much more important for understanding the picture as a whole, than just an output per hour measure. The multifactor productivity indexes for major sectors measure output per combined unit of labor and capital input in private business and private nonfarm business.

Figure 4

The Series 1 on the Figure 4 shows, according to the Bureau of Labor Statistics, the changes in the Unit Labor Cost Index over time. Using the "remote" employees over the same period could have reduced this index dramatically. We assume, that comparable programmer in India or in Russia "costs" at least four times less than in the United States, and use two scenarios: replacement of 5% and 10% of total labor force by the remote one during the same time period. The results are shown on the Figure 4 in Series 2 and 3.

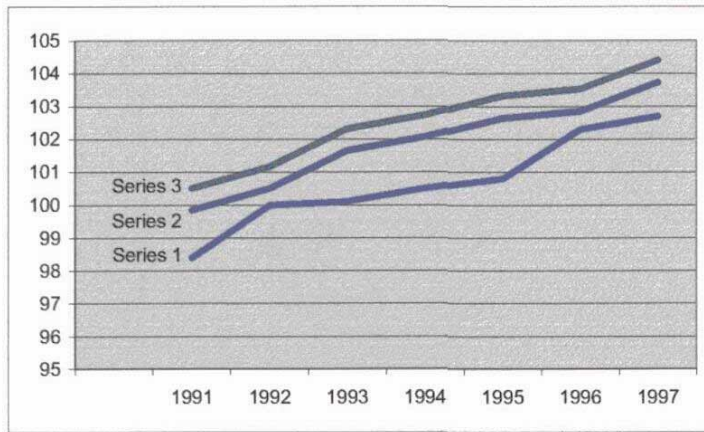


Figure 5

is clearly improving strongly.

Of course, we do not attempt to analyze precisely, how this will change the face of the US economy overall, as the scarcity of data and resources does not give us a chance to do so. But general trends are absolutely clear: as world economy globalize, so is the world labor force, and not necessarily by moving from one country to another. There may be excellent results to be achieved through the "remote labor" concept. The productivity growth may improve further, and inflationary pressures originated from the tight labor market may soften considerably.

In our opinion, this concept could be realized in modern business environment, using the power of the latest information technologies, combined with the strength of traditional educational systems and infrastructures.

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