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The wage transition in developed countries and its implications for China

Belal Ehsan Baaquie [a], Bertrand M. Roehner [b,*], Qing-hai Wang [c]

[a] INCEIF (International Centre for Education in Islamic Finance), The Global University of Islamic Finance, Lorong Universiti A, 59100 Kuala Lumpur, Malaysia

[b] Institute for Theoretical and High Energy Physics (LPTHE), University Pierre and Marie Curie (UPMC), Paris, France

[c] Physics Department, National University of Singapore, Singapore

HIGHLIGHTS

- Explanation of the stagnation of wages in developed countries.
- Prediction of the productivity progress in China (2015–2030).
- Global productivity decreases with tertiarisation.

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ABSTRACT

The expression "wage transition" refers to the fact that over the past three decades in almost all developed economies wage increases have leveled off. There has been a widening divergence and decoupling between wages on the one hand and GDP per capita on the other hand. Yet, in China wages and GDP per capita climbed in sync (at least up to now).

In the first part of the paper we present comparative statistical evidence which measures the extent of the wage transition effect.

In a second part we consider the reasons of this phenomenon, in particular we explain how the transfers of labor from low productivity sectors (such as agriculture) to high productivity sectors (such as manufacturing) are the driver of productivity growth, particularly through their synergetic effects. Although rural flight represents only one of these effects, it is certainly the most visible because of the geographical relocation that it implies; it is also the most well-defined statistically. Moreover, it will be seen that it is a good indicator of the overall productivity and attractiveness of the non-agricultural sector.

Because this model accounts fairly well for the observed evolution in industrialized countries, we use it to predict the rate of Chinese economic growth in coming decades. Our forecast for the average annual growth of real wages ranges from 4% to 6% depending on how well China will control offshoring and the development of its healthcare sector.

* Corresponding author.
E-mail addresses: belalbaaquie@gmail.com (B.E. Baaquie), roehner@lpthe.jussieu.fr (B.M. Roehner), qhwang@nus.edu.sg (Q.-h. Wang).

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1. Introduction

Among economic variables wages are somewhat neglected items.[1] In comparison gross domestic product (GDP) and stock market indexes draw much more attention both in the news and in the economic literature. One reason for that may be the fact that (as explained in Appendix A) wages can be defined and measured in several different ways. Therefore it may be of interest to start by explaining briefly why wages captured our attention.

1.1. The stunning wage stagnation effect

In our societies the idea of a steady, uninterrupted economic development permeates our conception and thoughts.

Some data may indeed support this view. As an illustration, let us consider the case of GDP in the United States. In the 40 years from 1976 to 2016 real GDP (that is to say adjusted for inflation) was multiplied by 3 (from 5488 to 16,651 billion dollars) while in the same time interval the population was multiplied by 1.47 (from 217 to 320 millions). This corresponds to an average annual growth rate of 2.79% for the GDP and 0.96% for the population. Thus, the GDP per capita increased at an average rate of 1.83% resulting in a doubling during this 40-year period.

With this kind of evidence in mind, the discovery that during the same time interval in the United States the real wage at best stagnated (see Fig. 2) came as a great surprise.[2] While we noticed this fact some ten years ago, for may years we have been assuming that this effect was special to the United States. Then, little by little, evidence emerged which showed that it was in fact common to all developed countries (see Fig. 3).

In the meanwhile another observation (described below) provided a possible clue.

1.2. The emergence of low productivity jobs

In the period immediately following World War II many European countries had to be rebuilt and modernized. As labor was in short supply it was regarded as a rare and costly resource that had to be economized. At that time the dominant idea was that thanks to rationalization and modernization low productivity jobs would progressively disappear.

Then, in the 1980s, something happened which showed that this was no longer the mainstream view. Following in the footsteps of New York and other American cities, home-delivery of pizzas started to become popular in many west European cities. This was a low productivity business, however, which could be profitable only if done by poorly paid employees. It was the harbinger of the creation of a whole range of jobs similarly characterized by poor pay and low productivity. A common feature of most of these jobs was that they belonged to the service sector. As emphasized by economists such as Jean Fourastié, the fact that the price of hair cuts or opera tickets remained unchanged over a broad historical time span shows that tertiary sector jobs hold little promises for productivity improvement. At the end of the paper we will propose an explanation which relies on the fact that most service activities have little potential for synergetic interactions with other activities.

1.3. Inflow of cheap labor

As any economic factor, labor is subject to the rule of supply and demand. The widespread multiplication of low paid service jobs was only possible because of a major increase in the supply of labor. Indeed, bridges were established between developed countries and developing countries which had an excess supply of cheap labor. Taking again the case of the United States, the Mexican born population in the US increased by 190% between 1970 and 1980 to reach 2.2 millions and then 4.5 millions in 1990 (Pew Research Center).

At the same time production activities were sent offshore to take advantage of the same reservoirs of cheap labor. One of the first massive case was the establishment by US companies of the so-called *maquiladora*[3] zone on the Mexican side of the border with the United States.

While undoubtedly increasing the short-term profit margin, in the long-run such a policy is a sure disincentive for investing in labor saving technology and organization. Why should a company invest in robots if manpower is so cheap?

In the mainstream view the establishment of so-called post-industrialized societies is seen as a desirable and almost ineluctable objective.

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1 Let us mention that an extended version of the present paper is available on the "arXiv" data base of preprints. For instance, it comprises a discussion of a number of data sources which may be useful in the perspective of future work.

2 As a matter of fact, around 1975 there was a sudden change in the trend of many other economic (e.g. income inequality) and social indicators (e.g. proportion of inmate population). Such changes are documented more fully in [1, chapters 9–11].

3 This Spanish word refers to a medieval economic organization in which the farmer would pay the miller's fee through a part of the flour produced. A more general expression is "Export processing zone" because the production of such zones is destined to be exported back to the country of the plant owners.