



Institut for Economic
Promotion,
Austrian Economic
Chamber,
Vienna, Austria



T.E.I. Thessaloniki
Greece



Department of Tourism
Management

UDC 331.101.6:338.48

Review

Received: 30.03.2009

REAL WAGES AS DETERMINANT OF LABOUR PRODUCTIVITY IN TOURISM

Dritsaki Chaido

University of Macedonia, Thessaloniki Greece¹

Abstract: This paper examines the effect of real wages on labour productivity for the case of tourist sector. Since, tourist sector is widely a service-oriented sector based on personal employment characteristics, we propose a theoretical model of Cobb – Douglas productivity equation which accounts only for labor. The paper aims at calculating the productivity-income elasticity of tourist sector based on the aforementioned model.

Key words: Labor Productivity, Real Wages, Tourist Sector.

INTRODUCTION

Productivity is the index reflecting the upward or downward trend of a country's economy. An increase of productivity coincides with an upward trend which also improves life standard. Therefore, productivity measures the economic return of the productivity factors involved. The most well-known and essential expression of economic productivity is labour productivity, which is defined as the value-added per employee. Moreover, "returns per employee", is usually used as a productivity measure because of its calculation simplicity, given that data (total returns and labour) are directly available and could be linked with improving total returns. Apart from that, productivity drives competition to some extent. It also determines economy's market share based on the quality, price and consumer satisfaction, comparing with others who produce or provide similar products.

¹ **Dritsaki Chaido**, University of Macedonia, Thessaloniki Greece.

Literature shades light on basic parameters which determine productivity and competition. The methodology of logistics development explains that productivity growth is due to increases in physical capital, employee qualifications and production factors (Porter and Ketels,2003). This factor is the part of productivity which is not assigned directly to capital and labour force, even if it reflects high innovation levels, efficient technology use and high enterprise level (Crafts and O' Mahony ,2001).

Oulton (2000) found out that human capital including education, qualifications and training inside and outside workplace, consists 60% of enterprise productivity in the UK.

Gordon (1987) investigates the impact of productivity and wage changes and prices in the case of USA, Japan and Europe, proves that the shift from high to low real wages is responsible for the substantial reduction of industrial productivity in respective countries.

Hibbs and Locking (2000), study the dispersion of wages and productivity in Sweden, proving that the decrease of wage gap contributes positively towards efficiency and productivity in general.

As on other economic sectors so in tourism, productivity refers to the efficiency in which resources are being allocated, linking the quality of productivity factors (mainly labour force and capital) to outflows.

Many studies have recently been focused on the productivity of tourist sector. Blake et al. (2006) identifies three measures of productivity in tourism; productivity per employee, productivity per working hour, and productivity per outflow unit known as absolute factor of productivity. The latest has the advantage of considering more outflows rather than labour and capital. Productivity per employee is widely used as the main measure since it can easily be quantified, because productivity and labour data are available and could easily be linked to total GDP growth.

Blake et al. also highlighted that wage and profit growth could be achieved by increasing competition which is due to incremental productivity. In the case of tourism, productivity refers to efficiency and optimal resource allocation, by linking labour quantity and capital to efficiency.

There are many inequalities within tourist destinations, in which developed countries experience major labour productivity. Based on growth levels, labour productivity in terms of tourism could be either bigger or lower comparing to economic productivity overall. In most tourist-developed countries, the value-added per employee is lower than the general productivity level.

Tourism tends to be regarded as a low-earning industry. Seeing that every successful tourist industry should train people with the appropriate qualifications, who in turns if are high-qualified should be highly-paid, then returns and profit deriving from tourist sector are being improved.

The basic part of tourist expenditure is related to hotels and restaurants, both consisting of major labour services. For this reason, the current paper will focus on a production function of tourism, which depends only on labour. A theoretical model is being proposed in order to investigate the relationship between real wages and labour productivity in the case of tourist industry.

THEORETICAL MODEL

Since tourist sector is essentially a service sector with intense personal labor features, we assume that productivity function of tourism depends only on labor and we propose the following model:

$$Y = f(L) = AL^\alpha \quad (1)$$

If we divide equation (1) with L we get the following equation:

$$\frac{Y}{L} = AL^{-(1-\alpha)} \quad (2)$$

Assuming an unbalanced labour market and the labour level being determined by labour supply and demand, the following equation (3) represents the labour demand to be negatively related to real wages W.

$$L = L^d(W) = kW^{-\beta} \quad (3)$$

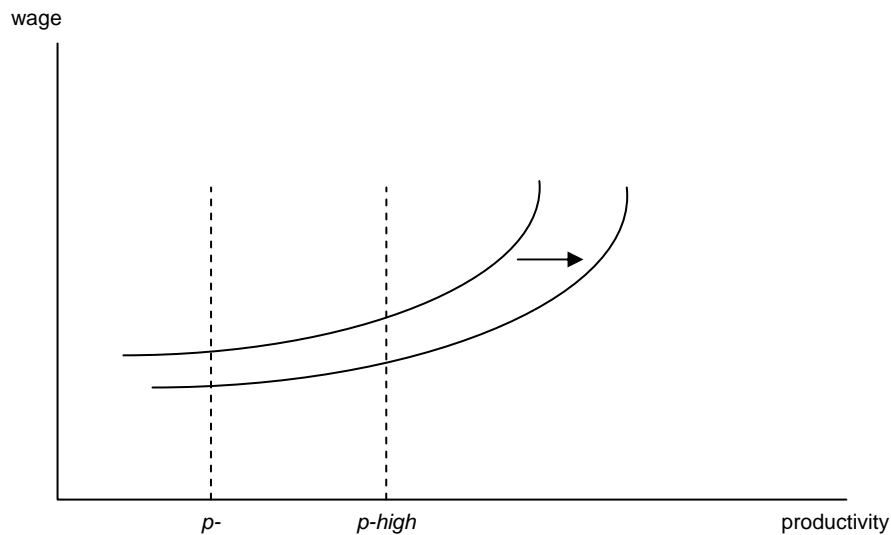
Taking the logarithmic transformation of equations (2) and (3) and by replacing labor function in the productivity function, we get the relationship between labor productivity and real wages.

$$\frac{y}{l} = \alpha_0 + \alpha_1 w \quad (4)$$

Where α_0 is the constant and $\alpha_1 = (1 - \alpha)\beta$ is a positive term and defines the elasticity of labour productivity in terms of real wages. One should clarify at this point that labour productivity is positively determined by real wages. This is explained by the fact that since labour is determined by demand, an increment of real wages results to a decline in labour demand. Hence, the decrease in labour demand results in an increase of productivity due to marginally decreased earnings in the productivity function.

Figure 1 presents graphically the theoretical relationship between productivity and wages. Assuming that the curve is convex, then for high levels of productivity, the productivity-wages elasticity is very high and then decreases as the productivity level falls down. In low productivity levels, wages seem to be quite stiff, not responding to any changes in productivity.

Figure 1: Relationship between productivity and wages



From the above figure we notice that an increase of labour cost results in a move to the right of the production curve. That implies that individual productivity should increase in order to achieve the same wage level or alternatively the wage should decrease if the productivity is not adjusted. In other words the value of employee from the employer point of view, should be increased as long as his external labour cost increases. If the productivity-wage curve is convex (as shown in Fig. 1), then substantial wage reductions are possible only in case of highly productive employees. But when productivity is increased real wages should be increased as well.

RESULTS

Labour productivity is defined as the returns per employee. In the long run, labour productivity is one of the major factors of employee quality of life and its contribution to total productivity is deterministic. More specifically, labour productivity holds an important role in tourist productivity since this sector is greatly labour-oriented. The current paper investigates the relationship between real wages and labour productivity in the case of tourist sector, by proposing a theoretical model where labour quantity is determined by demand due to unbalance in labour market. Moreover, we assume that they are reduced earnings in productivity function and that is the reason why the proposed model generates a positive relationship between the underlying variables. A decrease in real wages causes a decrease in labour demand, which in turns increases labour productivity due to reduced wages.

REFERENCES

- Blake, A., Sinclair, T. and S. Campos (2006). Tourism Productivity: Evidence from the United Kingdom, *Annals of Tourism Research*, Vol. 33, No. 4, pp. 1099 – 1120.
- Crafts, N. and M. O' Mahony (2001). A perspective on U.K productivity performance, *Fiscal Studies*, Vol. 22, pp. 271 – 306.
- Gordon, R., (1987). Productivity, wages and prices inside and outside of manufacturing in the U.S, Japan and Europe, *European Economic Review*, Vol. 31, pp. 685 – 739.
- Hibbs, D. A and H. Locking (2000). Wage dispersion and productivity efficiency: Evidence for Sweden, *Journal of Labor Economics*, Vol. 18, No. 4, pp. 755 – 782.
- Oulton, N. (2000). Why do foreign – owned firm in the U.K have higher labour productivity? In inward investment, technological change and growth, N. Pain, ed, pp. 122 – 161, London: Macmillan.
- Porter, M. E. and C. H. M. Ketels, (2003). *UK Competitiveness: moving to the next stage*. London: Department of Trade and Industry.