European Journal of Business and Management
ISSN 2222-1905 (Paper) ISSN 2222-2839 (Online)
Vol.8, No.24, 2016

Managerial Analysis in Labor Productivity and Utilization: New Methods in Modern Labour Relations

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Abstract
Labour productivity is a key measure of economic growth and stability of business environment in an economy. Firm-level labour productivity indicators reflect the effectiveness of labour utilization, labour cost and revenue accumulation, and serve as a central tool for business analysis. Global economic developments, globalization and economic integration affect labour productivity measures and methods in different ways. Number of factors of labour productivity and replacement is rising in line with advances in business relations and technologies. This article studies the emerging methods, factors and other external effects influencing on labour productivity and labour market conditions, studies the recent shifts in labour productivity on cross-country basis and proposed recommendations to keep pace with labour analytics in business.
Keywords: Labour productivity, labour input, labour productivity.

1.Introduction

Labour force is an important factor in determining the productive potential of the economy at all (Pettinger, 2015). Considering the strengthening interconnectedness of business sector and economy in global scale, labour force plays the central role as the most valuable and core capital. Historical evidences prove that importance of labor has been promoted in each phase of development in world economy. Implications of global financial crisis supported the evidences further although it was recession phase before taking a new impetus. Long term effects and shocks of the crisis revealed that number one problem of the global economy was still unemployment. Though financial market, fiscal and monetary policies were key focus areas of global community in contemporary economic relations, global financial crisis revisited to labour market policy as a driver of economic activity, social stability and income circulation. Appropriate allocation, adequate qualification and favourable market of labour ensure a smooth and productive functioning of economy.

Labour productivity is a fundamental concept in business analysis (Hara and Ichiue, 2010). Firm-level analysis of labour relations is often conducted through measuring performance of labour force in an enterprise. Workforce performance is measured by an entire set of indicators which determine diverse impact areas and parameters. Labour productivity and labour utilization are main indicators to assess the quality and quantity of tasks implemented. Shifts in labour productivity level serve as official yardsticks of business performance. However, labour productivity and utilization are calculated in different methods and principles depending on the scale. Country-level labour productivity reflects the stance and efficiency of labour market in the economy, while firm-level labour productivity highlights the structure, composition and quality of labour within an enterprise. Country-level labour productivity is a revealing indicator of several economic indicators as it offers a dynamic measure of economic growth, competitiveness, and living standards within an economy.

Labour productivity is a sensitive indicator with several high-impact factors that may have significant influence if they have any downward or upward. In a dynamic economic condition, their unchanged trend may have also considerable effects in productivity. Innovation, economic liberalization, foreign direct investment, foreign trade and technological advances are new factors which should be taken into account in measuring labour productivity. Methods of labour productivity measurement and analyses must be adopted with these factor-led changes in a proper manner. This article has a wide scope of labour productivity study ranging from methodological aspects to comparative analysis of cross – country labour productivity growth performance. It traces the roots of changes in labour productivity and provides new insights into global labour productivity indicators.

2. Literature Review

Labour productivity is topic of high research interest. There are many literatures claiming the appropriateness of different approaches and models, hypotheses and formulas. Some researchers found that labour productivity is not a solid, but a dynamic indicator due to rapid changes in global economic structural transformations. Many literatures proposed different assessment methods and data sources deriving from the directions of global economic changes and consequent new factors. Schnabel (1997) suggested that competitiveness has a greater impact on labour productivity and proved it in the example of country-level and sector-level comparison. Bauer (2003) linked the labour productivity growth with innovative human capital and flexible workplace. He suggested that these two factors are key drivers for improving labour productivity in modern business. Ugur and Ruane (2004) examined

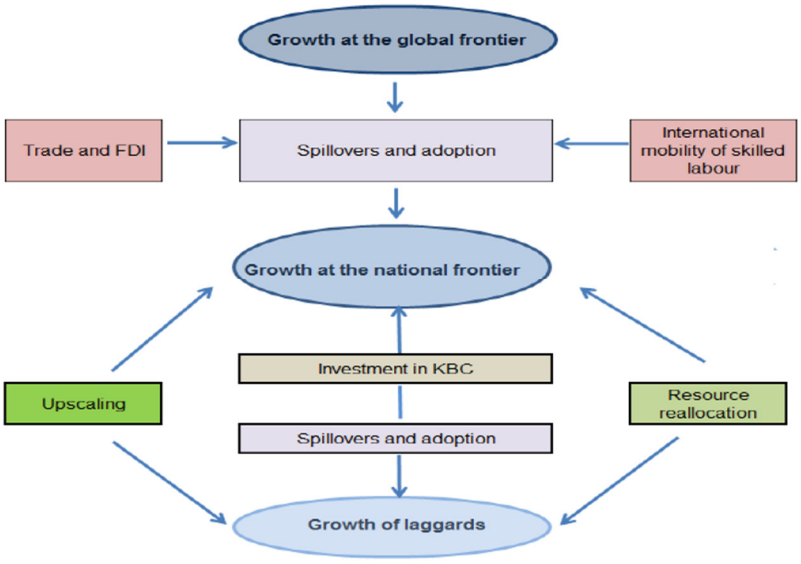
the components of labour productivity growth using a decomposition analysis based on firm-level data separately for foreign and domestic enterprises, and found that although the main drivers of average labour productivity growth in all groups arise within plant and from plant entry, there are marked differences in the relative sizes of these effects across the ownership/sector/time-period. Silkonnen (2005) studied labour productivity growth and its impacts, and concluded that industry structure that leads to fast productivity growth is connected to falling export prices. Studies of Gielen, Kerkhofs and van Ours in 2006 shown performance related pay increases labour productivity at the firm level with about 9 per cent and employment with about 5 per cent. Recent changes in labour productivity factors derived from global financial crisis were analysed by Mulligan (2011). His studies resulted that labour productivity has a strong interconnectedness with changing quality of the workforce, to increases in production inputs and drop in consumer expenditure.

3. Emerging Labour Relations and Methods for Labour Productivity

All development phases of global economy brought an ultimate shift in economic relations and all markets. Sophistication and economic integration enables the transfer of novice steps across individual economies and sectors. Coinage of new terms and introduction of methods are also a typical parallel change with that of world economy. As a factor and an engine of economic growth - a fundamental measure of economic development - labour productivity is prone to transformations under system-wide economic shifts. Emergence of both negative and positive changes brings direct and collateral effects in labour market and productivity. Impact of global labour productivity in economic growth and business structures since 1990s, as expansion of international business frontiers and new technology penetration modified the existed labour relations, market structure and firm-capacity. Fluctuations in economic stability provisions created a wider room for reshaping the labour relations and productivity matters faster. Knowledge capacity, innovations and technological advances made labour productivity too fragile and inaccessible for physical labour skills.

In recent years, labour productivity became a hot topic for research among academia and experts. New parameters and indicators, methods and principles were introduced deriving from core adjustments in global economic environment and driving factors. Evergrowing involvement of modern technologies in economic activity created a risk for equilibrium in global markets, as it increases the unit labour cost and transfers across borders without any structural barriers. If technology and knowledge flows freely across borders, aggregate productivity growth in less advanced economies and firms will be a positive function of growth in those that operate at the global technological frontier as well as of the gap between the level of productivity at this frontier and the productivity of the less advanced (Aghion and Howitt, 2006). Raising productivity is therefore a fundamental challenge for countries going forward (Gurria, 2015).

Figure 1. Reshaping factors of labour productivity



Source: Author's stylized illustrations

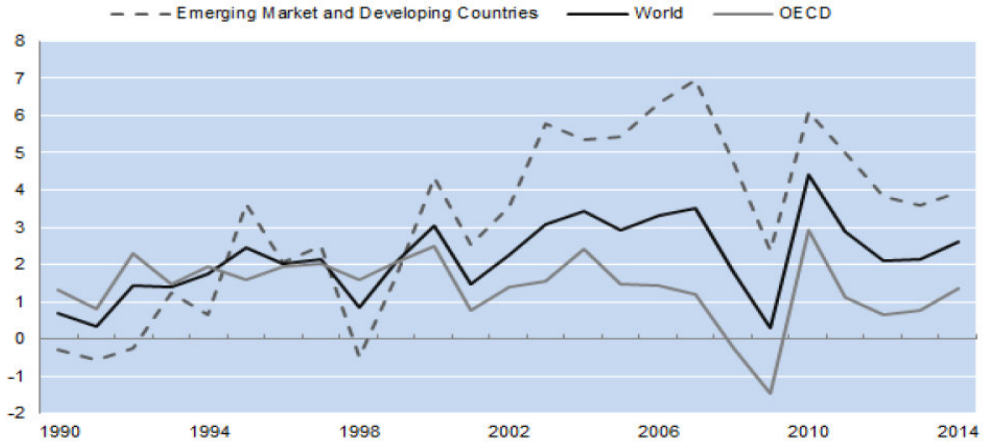
There are several factors driving the labour productivity in modern economic conditions. Many countries often admit that "number one" problem in their economies is unemployment, decreasing labour productivity, unskilled workforce and low level of human capital development. Many international organizations such as International Labour Organization, World Bank Group and OECD stress that economic development in many developing economies are due to the lack of knowledge based capital, labour mobility and business sector

activeness. Double-edged feature of integration and globalized economic linkages, in particular circumstances, enables a hole to cope with labour productivity problem. Diffusion of business practices facilitates the capital and labour movement, technology and skills development transferred from developed to developing economies. Foreign direct investment, trade and countries' openness to business promotes labour productivity with external impact channels e.g. trade openness, upscaling, competition, firm heterogeneity, reallocation and knowledge-based capital formation. Therefore, analysis of labour productivity and utilization shave to include abovementioned factors in both firm- and country-level investigations.

4. Labour Productivity and Labour Market Condition: Case for International Comparison

Following very large falls in output during and after the recent financial crisis, labour productivity - measured both as output per person and output per hour worked has been recovering slowly (Hughes and Saleheen, 2012). It has been persistently weak since breakout of the global financial crisis and its long-term implications. Despite a large spare capacity for productivity in global business environment, companies around the world are taking slower pace in post-crisis recovery period. Some developed economies who recovered from the crisis are lagging behind the severely crisis-hit countries. It suggests that some sectors, mainly energy and service sectors, are on the top in concentration of slow-growth labour productivity. Historically, labour productivity decreases in the early phases of crisis, but in today's scenario, it is still weak due to the slow capacity growth in firms.

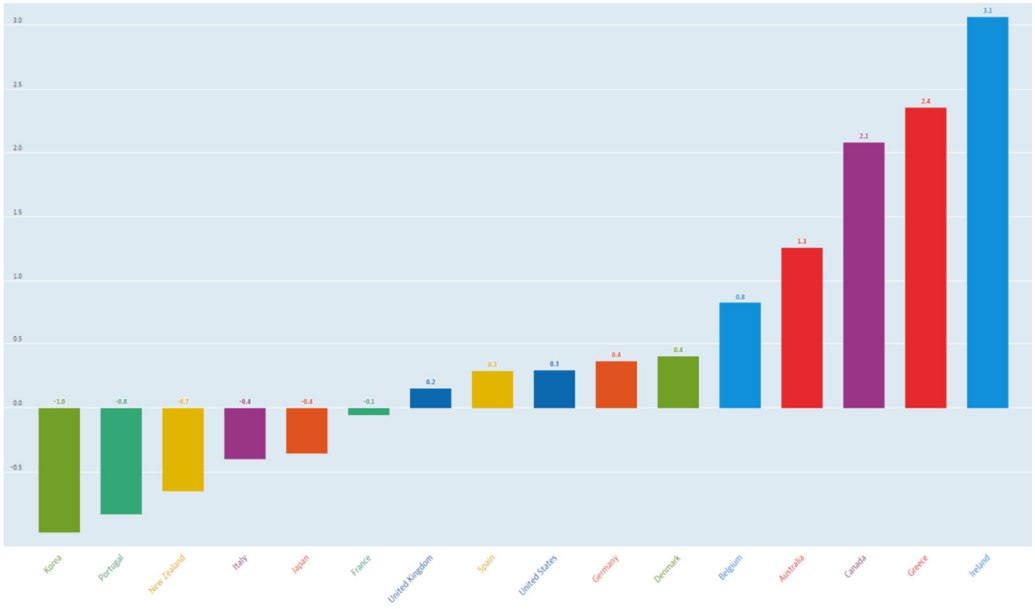
Figure 2. Labour productivity growth in 1990-2014, %



Source: OECD, 2015.

Observations by several experts and international organizations proved that slow growth of labour productivity and existing gap among countries are influenced by financial market condition, liberalization, innovations and new technologies. Moreover, firms' efforts to establish a labour-intensive manufacturing double the burden for labour productivity growth. Unevenly developed technological capacity and slower economic recovery from crisis-led downturn lead to differences in gaps and significant differences in bringing back pre-crisis labour productivity levels in developed and emerging countries (Figure 3).

Figure 3. Labour productivity in selected developed economies in 2014



Source: OECD, 2016.

Post-crisis recovery period came hard for several developed and emerging economies. Some of them won in the game thanks to changes in destinations for foreign capital flows and mobility of investments to other less risky sectors. It facilitated more employment opportunities and smoothed the constraints in crisis-hit labour markets. It influenced on labour productivity indicators through economic growth channels. During seven years of recovery, Canada and Germany were the only countries who kept the labour productivity growth in upward position among G8 countries. In terms of GDP per hour worked, labour productivity was highest in Japan and US (6.3 per cent and 8.6 per cent respectively). Productivity growth in the UK and Italy was below zero despite employment growth. Developing economies are performing comparatively well in boosting labour productivity. China and India are showing miracle results in employment support scheme and dealing with middle-income trap. Workforce in India, China, Indonesia, Russia, Brazil, Mexico and Turkey is shrinking and moving from low-cost manufacturing into higher-skilled occupations. Labour productivity growth was around 60 per cent in China, 36 per cent in India, 25 per cent in Indonesia, 10 per cent in Russia, 6 per cent in Brazil and 3 per cent in Mexico after global financial crisis.

5. Conclusion

Although distinguishing, even contrasting approaches to labour productivity exist, most of studies gave common results in terms of its impact on business performance. From practical standpoint, labour productivity measures the efficiency of workforce and value added to production. Therefore, business analysis may lean on labour productivity indicators in evaluation of overall activity in production and market. As discussed in literature review, changes in global business environment and procyclicality of world economy have been influencing on measurement and data sources of labour productivity. It requires the firms to adapt to the changes and to introduce new measurement elements consistently. There are several visible and hidden effects excluded in traditional productivity measurement practices. Technology, innovations, increasing requirements for quality, market competition, cross-border capital flows and labour mobility are seen as the key new factors in businesses operating in all sectors and economies. They should be taken into account and be assessed in qualitative or quantitative manner.

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