



Health sector employment growth calls for improvements in labor productivity



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ARTICLE INFO

Article history:

Received 10 January 2015

Received in revised form 30 May 2016

Accepted 1 June 2016

Keywords:

Health workforce

Productivity

Delivery models

ABSTRACT

While rising costs of healthcare have put increased fiscal pressure on public finance, job growth in the health sector has had a stabilizing force on overall employment levels – not least in times of economic crises.

In 2014 EU-15 countries employed 21 million people in the health and social care sector. Between 2000 and 2014 the share of employed persons in this sector rose from 9.5% to 12.5% of the total labor force in EU-15 countries. Over time labor input growth has shifted towards residential care activities and social work while labor in human health activities including hospitals and ambulatory care still comprises the major share. About half of the human health labor force works in hospital. Variation of health and social care employment is large even in countries with generally comparable institutional structures. While standard measures of productivity in health and social care are not yet comparable across countries, we argue that labor productivity of a growing health work force needs more attention. The long-term stability of the health system will require care delivery models that better utilize a growing health work force in concert with smart investments in digital infrastructure to support this transition. In light of this, more research is needed to explain variations in health and social care labor endowments, to identify effective policy measures of labor productivity enhancement including enhanced efforts to develop comparable productivity indicators in these areas.

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1. Introduction

Health policy is increasingly a concern of economic policy. The labor force is the most important resource in any health care system. In recent decades job growth in

the health and social care sector has over-compensated for job reductions in industry and manufacturing in many EU countries [1]. Yet employment growth in health and social care sectors is likely to accelerate further. We infer from these trends that the importance of labor productivity enhancing policy measures should be addressed and differences across countries should be better understood through focused research. First, on-going technological progress including digitalization will attract high-skilled labor into this sector. Second, emerging chronic care needs require more and diverse labor inputs to meet a broad range of care demands. Social and health care sectors may provide employment opportunities in times where unemployment

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levels resulting from recessions remain high and where, in advanced economies, an overall shift in the labor force from manufacturing to service sectors is taking place. Even though there is some evidence that the health sector suffers from “Baumol cost disease” [2–4] recent analysis shows that this effect on health expenditure growth is rather moderate if existing at all [5,6]. Rather, health care expenditure was found to be largely quantity driven, suggesting that Baumol’s cost disease effect diminishes with adequate specifications of variables commonly used to show the Baumol effect [5]. In turn this implies that policy measures are likely effective when they target the rapid expansion of technology, e.g. digitalization of care processes, assessing additional benefits of health technology and importantly by enhancing health labor productivity. We define labor productivity as output per hour. By convention the volume measure of output is measured either by gross domestic product or by gross value added; labor input is measured either by the total number of hours worked of all persons employed or total employment, often head counts. In health care labor productivity is calculated as the growth in medical services over growth in labor input [7]. As in all industries labor inputs and capital inputs are needed in health and social care to produce outputs and ultimately outcomes. For example, the labor share in the health and social care value added was 90% in 2010 in Austria while the corresponding share in manufacturing was 64%. Over time the labor share in health and social care value added decreased from 96% in 2000 to 90% in 2010 while the labor share in total value added in manufacturing increased slightly in the same period from 62% to 64%. As a consequence, the capital share in total value added in manufacturing declined while the capital share in total health and social care value added increased six percentage points from 4% to 10% in 2010 [9]. This reflects relative strong technical progress in this sector. At the same time currently available measures of labor productivity at industry level (EU-KLEMS) do not yet permit meaningful comparison of the performance of health and social care across industries and across countries [8]. But these data may well be useful looking at the use of ICT. For example, between 2000 and 2010 the penetration of ICT services in the German health care sector appears much higher compared to other countries. Equally, the contribution of ICT services to value added growth was visibly higher compared to the contribution to value added growth of non-ICT capital, e.g. buildings, beds, equipment to value added growth. But variations in the ICT component of capital services across countries is pronounced and overall the labor share in total value added remains high everywhere compared to other industries. The focus of the paper is on the supply of health and social care that is the “engine room” of health economics [10]. This includes hospital production, input substitutions, labor markets, delivery models and the responses of institutions and the health care workers to changes in their environments and modes of payment. The health care “industry” with the medical supplies sector (pharmaceuticals, equipment, etc.) plays a crucial role as part of the supply side. But for the purpose of this paper, we discuss key issues of health and social care supply which includes long-term care and care for other groups

like the mentally ill and the disabled. The objective of this paper is to outline the nexus of the impact of health sector employment growth on (economic) performance. We argue that (labor) productivity in health and social care needs enhancement through improved delivery models and that accelerated penetration of ICT in this sector should support this transition. With this paper we aim to bring to the attention several important issues related to employment growth in health and social care sectors, both for the health sector itself and for the economy as a whole. It is suggested that structural reforms in care delivery should address labor productivity enhancing policy measures to improve health system and economic performance.

2. Methods

First, we look at employment trends in Austria, Belgium, Denmark, Germany, France, The Netherlands, Sweden and Switzerland between 2000 and 2014 using Eurostat data [1] Eurostat data report head counts of employment per economic activity. The Labor Force Survey of the European Union uses the Eurostat Statistical classification of economic activities in the European Community (NACE) to code the economic activity. Over time, the LFS used NACE 1970 until 1992, NACE Rev. 1 from 1993 to 2004, NACE Rev. 1.1 from 2005 to 2007, NACE Rev. 2 from 2008. While in NACE rev 1.1 Section N reports employment in “Health and social work”, the corresponding section NACE rev 2 is Q reporting employment in “Human Health and social work activities”. The revision excludes veterinary services and as previously also excluded, public administration including employees of compulsory social security [11]. We utilize both sources to show trends over time while the differentiation of the workforce in health and social care sectors is only possible since 2008. Even though labor market statistics are subject to quite comprehensive international definitions, principles and guidelines, which make it one of the most harmonized statistical domains not only in Europe but worldwide, there is still room for further improvement of cross-country comparability. A Task Force coordinated by Eurostat is currently working to identify shortcomings and propose possible improvements for the cross-country comparability of the national Labor Force Surveys in the EU [12]. While the data available serves our purpose in showing the development of employment over time, sectors and countries, improvements in the data are necessary to allow for an in-depth comparative analysis of the health care sector only. The selection of countries was made to ensure a mix of high-income European countries with high levels of social and health protection. We do not classify health care models as traditional boundaries between tax-financed versus social health insurance approaches have become increasingly blurred [13]. Descriptive statistics is employed to compare growth patterns of health social care employment for our set of countries between 2000 and 2014 to those in the service sector and those in all sectors of economic activities. Also output, input and productivity measures at the industry level (EU KLEMS data) [9] were analyzed and the performance of the health care sector was compared with other economic activities. Second, we present a conceptual model to sketch the impact of

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