



Contents lists available at ScienceDirect

Research in Economics

journal homepage: www.elsevier.com/locate/rie

Skilled–unskilled wage inequality: A general equilibrium analysis

Manash Ranjan Gupta, Priya Brata Dutta*

Economic Research Unit, Indian Statistical Institute, 203, B. T. Road, Kolkata–700108, India

ARTICLE INFO

Article history:

Received 20 October 2009

Accepted 2 July 2010

Keywords:

Wage inequality
Skilled labour
Unskilled labour
Non-traded good
General equilibrium
Capital
Globalization
Emigration

ABSTRACT

The paper develops a static three sector competitive general equilibrium model of a small open economy in which skilled labour is mobile between a traded good sector and a non-traded good sector and unskilled labour is specific to another traded good sector. The capital is perfectly mobile among all these three sectors. We examine the effects of change in different factor endowments and of globalization on skilled–unskilled wage inequality. We find that the effect of a change of a factor endowment on wage inequality depends on the factor intensity ranking between two skilled labours using sectors and on the relative strength of the marginal effects on demand for and supply of non-tradable good. We also find that a decrease in the price of the product produced by skilled (unskilled) labour using traded good sector lowers (raises) the skilled–unskilled wage inequality.

© 2010 Published by Elsevier Ltd on behalf of University of Venice.

1. Introduction

Globalization, which means establishing connection with the rest of the world mainly through an increase in the volume of foreign trade and foreign investment, is a widely discussed international policy issue in the present era. The conventional theory states that globalization improves welfare both from the aggregative and distributive perspectives. However, various empirical studies present evidences of a growing income inequality that takes the form of a decline in income and employment of unskilled labour compared to those of skilled labour in different countries. This growing income inequality was experienced in the US between the 1960s and 1970s¹ (it improved during the first half of the 1970s, but since then deteriorated steadily) and in European countries between 1978 and 1988.² The wage inequality has also grown in many Latin American and South Asian countries in the mid-1980s.³ However, the experience of East Asian countries between 1960s and 1970s is consistent with the view of the conventional theory that a greater openness to international trade tends to reduce the skilled–unskilled wage gap in developing countries.⁴ Different studies provide different explanations for this increase in wage inequality. Trade liberalization and technological development are the main two controversial reasons of this phenomenon. According to Wood (1998), Beyrer et al. (1999), Green et al. (2001), Behrman et al. (2000) and Isgut (2001), etc. trade liberalization causes wage inequality; but Wood (1997, 1998), Dev (2000) and Görg and Strobl (2002) show that technological change increases demand for skilled labour and thus worsens wage inequality. Esquivel and López (2003) shows that technological change worsens but trade liberalization improves wage inequality in Mexico. Many other empirical

* Corresponding author. Tel.: +91 9830465178.

E-mail address: priyabratadutta@gmail.com (P.B. Dutta).

¹ See, for example, Bound and Johnson (1992), Leamer (2000), Marjit and Acharyya (2003), etc. Table 2.1 in page no. 10 in Marjit and Acharyya (2003) is important in this context.

² See, for example, Lawrence (1994), Katz et al. (1992), etc.

³ See, for example, Wood (1997), Dev (2000), Borjas and Ramey (1993), Banga (2005), Beyrer et al. (1999), etc.

⁴ See, for example, Wood (1997).

Nomenclature

We use the following notations.

a_{Ki}	Capital–output ratio in i th sector for $i = 1, 2$.
a_{Si}	Skilled–labour–output ratio in i th sector for $i = 1, 2$.
a_{KU}	Capital–output ratio in sector U .
a_{LU}	Labour–output ratio in sector U .
P_i	Effective producer's price of i th commodity for $i = 1, 2, U$.
W_S	Wage rate of skilled labour.
W_U	Wage rate of unskilled labour.
r	Common rate of return to capital in all the sectors.
D_2	Demand function for commodity 2.
Y	Total factor Income.
X_i	Level of output of i th sector for $i = 1, 2, U$.
S	Exogenously given endowment of skilled labour.
L	Exogenously given total labour endowment.
K	Exogenously given capital endowment.
θ_{ji}	Distributive share of j th input in i th sector for $j = S, K, L$ and $i = 1, 2, U$.
λ_{ji}	Proportion of j th input employed in i th sector for $j = S, K, L$ and $i = 1, 2, U$.
S_{ji}^h	Elasticity of factor output coefficient of j th factor in h th sector with respect to price of i th factor, for $j, i = S, K, L$ and $h = 1, 2, U$. For example, $S_{SK}^1 = \left(\frac{r}{a_{S1}}\right) \left(\frac{\partial a_{S1}}{\partial r}\right)$, $S_{SS}^1 = \left(\frac{W_S}{a_{S1}}\right) \left(\frac{\partial a_{S1}}{\partial W_S}\right)$ etc. $S_{ji}^h > 0$ for $j \neq i$; and $S_{ji}^h < 0$.
\hat{x}	$\frac{dx}{x}$ Relative change in x .

studies show other causes of this increasing inequality. These are international outsourcing,⁵ increase in the relative price of skill intensive goods,⁶ entry of overpopulated less developed countries like Bangladesh, China, India, Indonesia, and Pakistan in the international market⁷ etc.

Several recent theoretical works deal with the issue of this growing wage inequality in the developing world. They adopt the framework of static competitive equilibrium models⁸ of small open economies in which there are two different types of labours—skilled and unskilled. These models take the ratio of wage rate of the skilled worker to that of the unskilled worker as a measure of wage inequality. We can divide the existing theoretical literature into two groups. One group of models assumes sector specific skilled labour; and this group includes works of Beladi et al. (2008), Chaudhuri and Yabuuchi (2007, 2008), Chaudhuri (2004, 2008), Marjit and Kar (2005), Marjit and Acharyya (2003), Yabuuchi and Chaudhuri (2007) and Marjit (2003) etc. They analyze how different international phenomena like emigration of skilled or labour, capital inflow, liberalization policies like reduction in import tariff rate etc. affect wage inequality. However, only Chaudhuri and Yabuuchi (2008), Marjit and Acharyya (2003) and Marjit (2003) consider the existence of non-traded goods in their models. Marjit (2003) considers non-traded intermediate good but Marjit and Acharyya (2003) and Chaudhuri and Yabuuchi (2008) consider both the non-traded intermediate good as well as non-traded final good. However, all of them assume that the non-traded good is produced by unskilled labour. Hence these group of models cannot analyze the role played by inter-sectoral mobility of skilled labour and by the change in demand for skilled labour from the non-traded good sector on the skilled–unskilled wage inequality.

In this paper, we develop a static competitive general equilibrium model of a small open economy in which skilled labour is mobile between a traded good sector and a non-traded good sector. This non-traded good is a non-inferior final good but not an intermediate one. The demand for non-traded good is assumed to vary positively with the national income of the country; and thus increases in factor prices and/or factor endowments produce positive effects on the demand for non-traded good and consequently on its price. The skilled–unskilled wage ratio is changed due to this change in the equilibrium price of the non-traded good. The demand for a non-traded intermediate good depends only on the level of production of the sector using it but not on the level of disposable income of consumers.

⁵ See Feenstra and Hanson (1997) in this context.

⁶ See Harrison and Hanson (1999), Hanson and Harrison (1999) and Beyrer et al. (1999) in this context.

⁷ See Wood (1997) in this context.

⁸ A few works like of Acemoglu (1998, 1999, 2002a,b), Kiley (1999), Sener (2001), Ranjan (2001), Fang et al. (2008) and Wang et al. (2009) etc. analyze skilled–unskilled wage inequality in dynamic models. Some other works like Anwar and Rice (2009), and Anwar (2009, 2006) etc. deal with these problems using static product variety models of imperfect competition.

متن کامل مقاله

دریافت فوری ←

ISIArticles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات