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Economic Liberalization and Wage Inequality in India

RUBIANA CHAMARBAGWALA *
Indiana University, Bloomington, IN, USA

Summary. — We investigate India's widening skill wage gap and narrowing gender wage differential during the two decades that coincide with the economic liberalization in the country. Using the nonparametric methodology developed by Katz and Murphy [Katz, L. F., & Murphy, K. M. (1992). Changes in relative wages, 1963–87: supply and demand factors. *Quarterly Journal of Economics, 107*(1), 35–78], we find that relative demand shifts contributed to relative wage shifts and that increases in the demand for skilled labor were mostly due to skill upgrading *within* industries. In assessing the contribution of external sector reforms to demand for skilled labor, we find that international trade-in manufactures benefited skilled men but hurt skilled women, whereas outsourcing of services generated a demand for both female and male college graduates.

JEL classification — F16, J24, J31
Key words — trade and labor market interactions, education, wages, Asia, India

1. INTRODUCTION

During the 1980s and 1990s, India experienced two dramatic changes in its wage structure. First, there was a considerable widening of the skill wage gap, accompanied by large increases in both the supply of and demand for high school and college graduates. Second, as Figure 1 shows, the gender wage differential narrowed considerably among high school and college graduates. In examining alternative explanations for these changes, we find that an increased demand for skilled workers and especially for skilled women contributed significantly to these wage shifts. The skill-upgrading *within* industries was primarily responsible for these demand shifts. Since these two decades mark a period of widespread economic liberalization in India, we measure the contribution of external sector reforms to an overall demand and find that international trade-in manufactures benefited skilled men but hurt skilled women, whereas trade-in services (outsourcing) benefited both male and female college graduates.

There is a vast literature that documents wage shifts and its determinants in the United States during the past few decades. [1] The liberalization of trade and investment in several developing economies and increasing globalization during this period suggests that a skill-abundant rich country, such as the United States, would experience a widening skill wage gap. The literature confirms this and finds that the relative demand shifted toward "skilled" or "educated" workers and away from "unskilled" or "uneducated" workers. The changes in technology and product demand that shifted employment away from manufacturing and toward sectors that are education and female intensive are offered as explanations for wage shifts in the United States.

In this paper, we focus on how economic liberalization and globalization affects the wage structure in a poor but rapidly developing economy that is abundant in unskilled labor. India serves as a particularly interesting case study since beginning in the mid-1980s, the Indian government implemented a range of far-reaching economic policy reforms in the domestic and external sectors. [2] These reforms marked a clear break from the country's socialist strategy of state-directed, heavy-industry based, and import substitution industrialization, which beginning in the early 1950s, was implemented through a series of five-year plans. During the first three decades after India's

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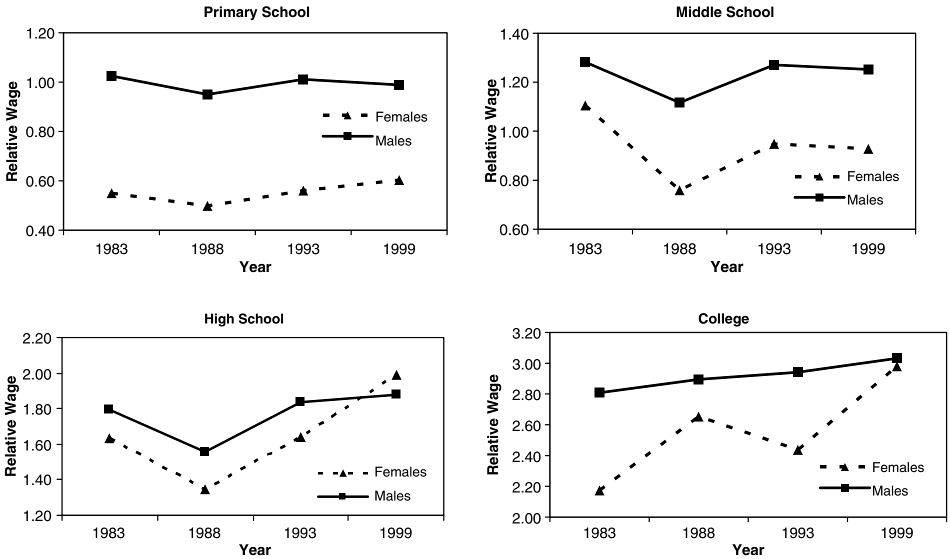

Figure 1. *Relative wages for males and females: 1983–2000.*

independence in 1947, high levels of protection were provided to import-competing industries, which were mostly capital-, technology-, and skilled-labor intensive. This was complemented by a system of industrial regulation, complex licensing, and financial repression.

Domestic sector reforms consisted of a significant relaxation of industrial controls. Industrial licensing was abolished except in the case of industries of strategic or environmental importance. Antitrust legislation was amended to facilitate expansion and diversification of capacity by large firms. Via privatization, the number of industries reserved for the public sector was drastically reduced. The taxation system was rationalized, while the tax rates were slashed to ASEAN levels. Finally, major reforms were introduced in the banking sector to put the banking system on a sounder footing. External sector reforms consisted of trade and investment liberalization. The trade policy reforms aimed at liberalizing and promoting both exports and imports. As a result of lower tariffs, the elimination of quotas and import license requirements, and liberalization of technology imports, total exports and imports increased dramatically during the 1990s. Exports were liberalized via the abolition of export subsidies and controls, while the liberalization of imports was implemented via a rapid reduction in the tariff rates and the abolition of licensing and quantitative restrictions on most imports except consumer goods. The average ad valorem tariff rate fell from 125% in 1990 to 40% in 1999. Besides lower tariffs, nontariff barriers were reduced by eliminating quantitative restrictions—quotas and import licensing requirements—particularly on capital and intermediate goods. In addition, technology imports were liberalized by eliminating technology license requirements. Foreign direct investment (FDI) was liberalized to a limited extent, resulting in an increase of FDI from $233 million to $3.3 billion during the 1990s.

Several hypotheses have been put forth and tested to explain the rising skill premium and demand for skilled workers in less developed countries (LDCs). [3] Hypotheses II, III, IV, and V together constitute what is commonly referred to as the Skill Enhancing Trade (SET) Hypothesis. [4]

The first hypothesis (Hypothesis I) is based on the Stolper–Samuelson (SS) theorem in the Heckscher–Ohlin–Samuelson model of trade. The SS theorem predicts that trade liberalization will raise the demand for and returns to the abundant factor of production—that is, unskilled labor in most LDCs. Even though at first glance this theorem predicts a decrease in the wage gap between skilled and unskilled labor in LDCs, on closer inspection it shows that as protective import tariffs, quotas, and licenses are removed, the price of formerly protected goods will fall. By the SS Theorem, a decrease