World Development Vol. 33, No. 5, pp. 805–822, 2005

Printed in Great Britain
0305-750X/$ - see front matter
www.elsevier.com/locate/worlddev
doi:10.1016/j.worlddev.2005.01.008

Bringing the Firm Back In: Local Decision Making and Human Capital Development in Mexico's Maquiladora Sector

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Summary. — The recent decline in Mexico's maquiladora sector provides an opportunity to reassess the sustainability of basing national economic competitiveness on low wages. [1] Focusing on human capital as an important component of equitable growth, the authors argue that models of its development which consider market factors alone are inadequate. Combining their own case study with a review of other studies over the past 20 years, the authors propose a "management-centered" (as opposed to a "market-centered") model of human capital development as a basis for discussing the relative merits of in-bond industrial programs and considering measures to improve levels of human capital.

Key words — human capital development, Latin America, maquiladoras, Mexico, sustainable development, worker training

1. INTRODUCTION

Since its start in 1965, Mexico's Border Industrialization Program—popularly known as the *maquiladora* program—has been a both a cause for hope and a magnet for criticism. A source of much needed employment growth and foreign exchange earnings throughout the 1980s and 1990s, this export manufacturing and assembly sector based on an in-bond tariff regime has at the same time often been condemned as dependent on low wages, substandard working conditions, weak or nonexistent unionization, and lax environmental standards. Maquiladoras, in fact, have come to illustrate the larger question of the extent to which development—particularly equitable, sustainable development—is really possible under an export-led growth model.

In order to further our understanding of this topic, this paper will refocus the question away from whether the sector as a whole is beneficial or not to Mexico, toward how and under what conditions it can better meet the goals of equitable growth. Rejecting more simplistic, market-driven models of the sector's development, we will argue the need for a more nuanced one that incorporates the role of decision making by local managers. Based on both field research by the authors and a review of a wide number of existing studies, we suggest that practices by successful maquilas are hardly uniform. Even among those facing similar market conditions, local managers often adopt different production models that have varying consequences for equitable development.

In this analysis, attention will be focused upon a single aspect of production we believe to be critical toward ensuring equitable growth:

*Final revision accepted: January 5, 2005.

the degree of human capital development within each firm's workforce. We choose this attribute—as opposed to wages, work conditions, or local linkages—for three primary reasons:

1. Human capital can be a strong contributor to long-term growth insofar as skills attained are lifelong and can have positive effects across generations.
2. It is an endogenous growth factor, providing opportunities for local growth strategies in virtually any geographic setting.
3. Investments in human capital development can be targeted directly to benefit the poor, potentially allowing for more equitable growth. [2]

Examining variations in human capital building across and within individual product sectors of varying levels of technological sophistication, it will be argued that both supporters and detractors of maquilas are often too narrowly oriented toward the effects of the market itself. An alternative, more comprehensive model needs to incorporate extra-market factors that are important for human capital development. The conclusion of this article will then concentrate on the implications of a management as opposed to market-centered model for Mexico's future prospects, even in light of a current downturn in the sector.

2. DEBATE OVER THE MAQUILADORAS' DEVELOPMENT CONTRIBUTIONS

Much of the discussion over the contribution of the maquila sector to Mexican development has been divided around two poles, described elsewhere as the integration and exploitation schools (Tiano, 1994). In this paper, they will be referred to as the market optimists and market pessimists to make clear their shared trait of viewing global and domestic markets as determinant in how maquiladora investment affects the local work environment, technology, the organization of production, as well as other factors related to development. [3]

Market optimists generally see the forces of capital as slowly but steadily ratcheting the sector upwards toward first-world levels of production and efficiency via improved economies of scale and the building of human capital through accumulated worker experience. These analysts tend to see the drawbacks identified by market pessimists as either the characteristics of an early stage of production (usually based on simple manual assembly) soon to be upgraded as the economy improves, or else the result of misguided government policies. In particular, they point toward the tremendous growth of the maquiladoras as evidence that the country is indeed on a track toward upscaling and greater global competitiveness. Although the sector grew markedly in the 1980s, it truly mushroomed in the 1990s after the passage of NAFTA. For most of the 1990s the maquiladoras posted an annual growth rate of around or over 10%, with total employment increasing from 446,436 to 1,291,232 during 1990–2000 (Buitelaar & Padilla Pérez, 2000; Gerber, 2001; INEGI, 2003). Moreover, as one of Mexico's largest sources of foreign currency, the maquiladoras are an essential component of its financial stability and gradual emergence as a world-class exporting country, accounting for a full \$78 billion of Mexico's \$161 billion in exports in 2002 (INEGI, 2003).

While market pessimists do not deny the increasing growth and sophistication of maquiladoras, they take issue with the conclusion that such trends actually bode well for Mexico and its people. Pessimists tend to view foreign investment as a zero-sum game by which production is moved offshore to less developed countries in order to escape institutional and market constraints on wages and working conditions in their own country, thereby creating opportunities for the exploitation of the labor force abroad. In support of this view, pessimists point toward the stagnant, far below living-wage levels in most maquiladora cities (Rosenbaum, 2000, p. 3; Tiano, 1994, pp. 149–150). They claim that by the 1990s, a bargain was sealed by which the Mexican state all but abandoned efforts to improve wages and working conditions in order to capture as much foreign direct investment as possible (Pozas, 1996). This view has only been further underscored by the documentation of widespread illegal union busting (Kamel & Hoffman, 1999; Katz & Rosene, 1999), as well as the high levels of workplace-instigated health problems in certain cities (Kourous, 1998; Takaro, 1999). As for the "upgrading" process that the optimists laud, market pessimists, following in the footsteps of Braverman (1975) and others, argue that the new production technology produces an increasingly flexible, hypersegmented, and deskilled workforce that has less leverage to bargain with the owners of the means of production.