



World Bank Employment Policy Primer

September 2007 ■ No. 8

IF ON-THE-JOB TRAINING IS SO IMPORTANT TO COMPETITIVENESS, WHY ISN'T THERE A BETTER MARKET FOR IT?*

There is no question that up-to-date job skills are critical to economic performance in today's rapidly changing and fiercely competitive global marketplace. Paradoxically, while the economic efficiency and innovation capacity offered by the upgrading of human capital is widely recognized, market forces have proven inadequate for stimulating and linking the demand and supply for this on-the-job training. In theory, employers, who seek a qualified workforce, would create a demand for training providers, who would compete with one another to offer relevant training. However, the demand for training suffers when there is lack of competitive pressure, low profitability, or market imperfections, which contribute to increased likelihood of mismatches between demand and supply. To remedy low levels of skills upgrading and market imperfections, partnerships between the public and private sectors in many industrial and developing countries alike have been formed to boost both competitiveness and employment. Yet these partnerships have often failed to adjust supply and demand of training.

This note offers lessons from both the failures and successes of these partnerships in the interest of boosting economic growth through raising the training levels in the workplace.

Why Workers Skills Upgrading is Important for Growth

While there is convincing evidence that training workers has positive effects on raising individual wages and increasing labor productivity, there is little awareness of its critical role for economic progress. In a global economy where market shares and profit margins are becoming increasingly vulnerable, the capacity for rapid change and innovation are crucial to a firm's survival. To cope with change and avoid the risk of a downward spiral of low revenues and consequently low wages, firms—often with a helping hand from governments—try to raise labor productivity and competitiveness through balancing investments in technology and human capital. This was the strategy followed by the Asian tigers, Malaysia, Mauritius, and Ireland, and it has proven worthwhile.

Empirical data on the relationships among technological change, innovation, and human capital highlight the complementary nature of workforce education, job-specific skill upgrading, technological advancement, and trade openness. The newly assembled firm-level data of the Enterprise Investment Climate Surveys (EICS) with 54,325 firms in 82 countries corroborate earlier findings

*This note was prepared by Reyes Aterido based on references and own estimations. The author would like to thank Carmen Pagés, Rita Almeida, Mary Hallward-Driemeier and Hong Tan for helpful comments. The World Bank Employment Policy Primer aims to provide a comprehensive, up-to-date resource on labor market policy issues. The series includes two products: short notes, such as this one, with concise summaries of best practice on various topics; and longer papers with new research results or assessments of the literature and recent experience. Primer papers and notes are available on the labor markets Website at <www.worldbank.org/labormarkets>, by contacting the Social Protection Advisory Service at (202) 458-5267, or by email at <socialprotection@worldbank.org>.

of various studies on the dynamics of these relationships. The surveys show that, all things equal, the greater the foreign capital participation, innovation, workforce education, and exports, the greater the likelihood that a firm provides training for its workers. Availability of educated and skilled workers has proven critical for adopting new technologies and for attracting foreign direct investment (FDI). An oft-cited example is Intel's investment of US\$600 million in Costa Rica. Intel and sixty-one other investors ranked "political stability" and "a well-educated labor force" as the top strengths of Costa Rica's business environment.

Upgrading workers' skills is not only essential for competitiveness and innovation, but empirical evidence shows that it also boosts firms' productivity levels. This finding has been widely reported in industrialized countries but also in several developing countries. Tan and Batra (95) and Batra (1999, 2000) analyze 6 developing countries¹ and report that firms training their employees experience productivity gains between 26 and 71 percent with respect to those not training; likewise, EICS data from 39 developing countries in 5 different regions show that, all things equal, training is responsible for 20 to 70 percent increase on productivity².

Who are the Players in the Skills Upgrading Market?

It is not only firms that reap the benefits of skills training; individuals and governments do as well. For the individual, having up-to-date knowledge and skills facilitates integration into the workforce as well as professional development and wage advancement. For governments, skills upgrading is not only associated with higher economic growth and income levels, but is also a tool for increasing social gains through raising employment, expanding the formal sector, and improving social equity.³ In recognition of the economic and social importance of training, most countries have created national training systems⁴ (VET) to meet these social and economic objectives by fostering human capital development tailored to the labor markets' needs. In many countries, public and private sectors—and, to a lesser extent, unions and NGOs—have formed partnerships in sharing the responsibility for the management, financing, and provision of these systems. The allocation of these responsibilities among these various players can

take a wide range of forms. The International Labor Organization (ILO) recommends that the government assume the primary responsibility for investing in pre-employment training, and enterprises and individuals the responsibility for on-the-job training. Worldwide trends have been moving from state-led, centralized, supply-driven systems towards more flexible, demand-driven public-private partnerships that are decentralized at the local and sectoral levels. Typically, governments focus on creating legal frameworks and financial incentives to advance private sector and individual investment in training. The most common include levy grant schemes (compulsory or voluntary taxes on payroll or outcome); levy-rebate schemes, in which employers are partially reimbursed for approved training as in Malaysia, Nigeria, the Netherlands, and many Latin American countries; levy exemption schemes where employers are exempt from levy payments if they spend a percentage (upper bounded) of their payroll in training as in France, Korea and Morocco; tax incentives for approved training as in Chile; and also training credits, training awards, and individual training accounts. Successful schemes in raising training investments by enterprises are Singapore and Chile. The Singapore's Skills Development Fund (SDF) collects a levy based on wages of low-skilled workers, which motivates employers to upgrade low-skilled workers although perhaps at the cost of hiring less low skilled labor.⁵ In addition, supports approved training programs linked to economic restructuring and knowledge-intensive industries. This provides flexibility to adjust to economic conditions. The scheme followed by Chile relies on a direct credit to firms, up to a certain limit, to be used on training, or

¹ The productivity effect of training is estimated using a production function and an instrumental variable approach to correct for selectivity bias due to the endogenous nature of firm's decision to train and the production function. Although the methodology allows establishing causality in the direction of training impacting productivity, endogeneity issues are difficult to resolve with certainty empirically.

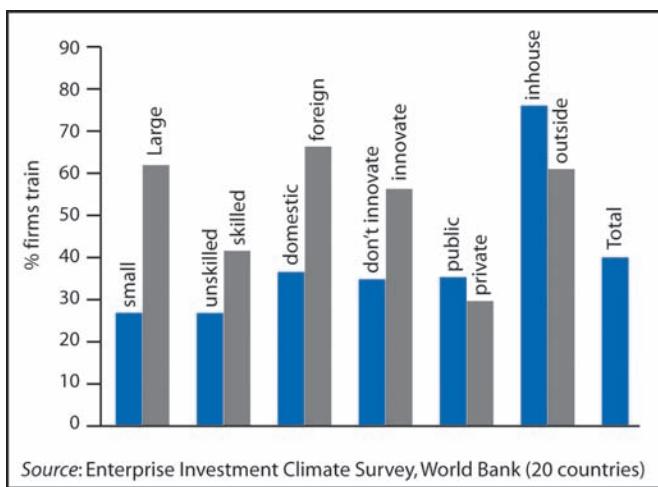
² Author calculations using an unrestricted production function and an instrumental variable approach

³ There is substantial support for this claim in academic literature. See Almeida and Carneiro 2006.

⁴ The training system is typically referred to as the Vocational Education and Training system (VET).

⁵ No evidence was found in this regard

firms would have to pay taxes otherwise. Chile's success was due to the decentralization of management—corporations were able to manage public vocational schools introducing flexible curriculums and matching labor markets needs; to the removing of entry barriers to new providers; and to the effective allocation of tax credits which covered not only the cost of training but also salaries of trainees and contributions to training schools. By contrast, the Brazilian and Nicaraguan tax rebates schemes have been less effective due mostly to lack of consistency, inefficiency, complicated procedures and information failures.



A Look at the Training Market Imperfections and Possible Solutions

The firm-level EICS data show that only 25 out of 82 developing countries have 50 percent or more firms providing training. Many of which are the result of government-subsidized programs to boost training. These government-led programs may or may-not induce a market-driven training. The training market is especially weak in small, domestically owned, non-innovating, and non-exporting firms, and for unskilled workers. The surveys reveal that firms that provide training to their employees rely more on sources that are internal or public rather than external or private, and that the likelihood of training is higher among the more technology-intensive sectors, such as electronics and metals.

Given the wide-range benefits of on-the-job training, it is necessary to explore the underlying reasons for

a generally low incidence and weak market. The factors that determine the demand for training are:

- 1) labor market dynamics: employment and labor force growth determine levels of unemployment, which spurs individuals and governments to enhance employability;
- 2) the dynamics of the economy: private sector competitiveness, technological change, and openness to external markets increase the need for upgrading skills;
- 3) the level of education: education and skills upgrading are complementary;
- 4) the cost-effectiveness of training: benefits of training should outweigh costs.

In theory, employers in a competitive environment would seek a qualified workforce to adapt to the change in technology and would create a demand for training providers. If the demand is sufficient, training providers compete with one another to offer relevant training and would raise the confidence of employers in the training supply. In this way they would stimulate private sector technological advancement that would require more and more upgrading skills in a virtuous circle. Simultaneously, comprehensive and widely disseminated information on content, cost, and accredited quality of courses play an important role in enhancing suppliers' competitiveness and enterprises' inclination to train.

However, the demand for training suffers when there is lack of competitive pressure, low profitability, or market imperfections. In developing countries where educational attainment is generally low and the industry is labor-intensive with the use of mature technologies, the demand for training is typically weak. In addition, market failures contribute to increase likelihood of mismatches between demand and supply. Market imperfections include weak supply (irrelevant or/and poor quality), financial market malfunctions, and poor information as to what is being offered and its benefits. In addition, worker training suffers from externalities because the risk of workers' turnover increases with skills upgrading and employers are reluctant to invest in a volatile asset. Data from EICS in 8 developing countries illustrate the different degree of relevance of these market weaknesses and imperfections. The most popu-

lar reason why firms do not train is because workers learn by doing—this reason points towards too possibly little innovation and extensive use of mature technologies; second, training courses lack relevance—this indicates little competitiveness and failures on the supply side; third, training is not affordable—this could be caused by low profitability and possibly failures in the financial markets; and lastly, labor turnover (as externalities generated by the training market). The fact that firms list irrelevance of training as a reason for not offering training shows the tendency of the market to be supply-driven. When government intervention includes a mandatory enterprise fee such as a levy to promote demand for training, firms are inclined to train for the sake of recovering the fee. If the quality of the training offered is poor, it is likely that returns are low, and the demand for training will be weakened as a result. The data in the figure above showing that there is greater incidence of training for larger firms, in-house versus outside providers, and from public versus private sources, suggest that government incentives maybe failing to stimulate a sustainable training market and to motivate small firms or sectors with higher training costs. There is also a potential that incentives maybe favoring opportunistic behavior on the part of suppliers and powerful firms. A piece of evidence supporting this is the case of Nicaragua. In Nicaragua the government collects 2% of levy on payroll, which is controlled by a public provider of training. The overall results of the management of the funds appear disappointing to companies which complaint that they receive little benefits from the public training system (only 27 percent of firms provide training.) In fact, large firms that only represent 16 percent of urban employment and 0.02 percent of firms in urban areas, receive 60 percent of government training resources for the private sector, while small firms receive only 11 percent of the resources.

A sample of 13 developing countries from EICS data illustrates an aspect of the distortions of a supply-driven market. Comparing the percentage of public and private training provided, and their impact on labor productivity, the data shows that, on the one hand, 8 of these countries rely more on public training schools than on private providers as source of external training. On the other hand, while the larger the percentage of private training the larger the positive impact on labor produc-

tivity, the public training does not have any impact at all on labor productivity.⁶ If public training does not provide productivity gains to the employer, why do firms rely on public providers for training? This result suggests that firms using public training may have been motivated by government schemes and by the recovery of a forgone fee rather than by seeking economic gains.

But, is the market capable of a sustainable on-the-job training system? A joint study of the World Bank and the International Labor Organization (Gill et al. 2000), on worldwide VET systems, supports the capability of a sustainable market for training and illustrates VET systems and solutions to effective public-private partnerships. The study examines nineteen countries belonging to transition, high-growth, low-growth, and industrial economies that have implemented reforms of their VET systems. It argues, against conventional belief, that with the appropriate legal framework, the market is capable to provide training for sectors with higher training costs. It illustrates this point with the experience of the Czech Republic where private suppliers of technical training rose as a consequence of the industrial growth. They examine the case of Australia, which provides inspiration of a successful public-private sustainable system, capable of cost-effective responses to the labor market conditions. Australia's main components of success and potential guidelines to implement in other countries are:

- Linking education and labor markets: they (1) established a single agency (ANTA) for education, training and employment; (2) included a tripartite authority with private sector and unions in the VET management system; and (3) introduced financial mechanisms that supported the central role of employers, who determined work-specific training acquired in the workplace while costs were redistributed towards federal and state governments and users.
- ANTA introduced new accreditation procedures for training courses with competency standards on an industry-by-industry basis. Training standards allowed participants enhance their marketability and to move from traditional education

⁶ Author calculations using an instrumental variable approach

- to VET system and vice versa. The industry was the main force behind setting standards, assessment of procedures, and accreditation.
- States only financed the called “core” activities in the VET. A training wage was calculated by an agency based on productive work with a topping by the government if it resulted too low (it shifted a large part of the cost of training away from employers). Costs were allocated to foster judgment on the part of the buyer.
 - Market System: a shift from VET benefiting suppliers to buyers. Funds for retraining the unemployed included private providers subject to a bidding process.

Conclusions

This Note on training is based on firm-level analyses from a large cross-country sample and on case studies. It shows evidence on the complementarities between on-the-job training and education, openness, and foreign investment. It also shows how training plays a substantial role in the enhancement of productivity and competition. It argues that partnerships between governments and the private sector have not been all that successful in providing necessary conditions for a sustainable training market, which would improve individuals' employability and wages, private sector ability to compete, and country's economic growth. Following reviewed case studies, recommended basic principles for government intervention to raise the incidence of training are:

- 1) incentives and subsidies should respond to a well targeted strategy where results can be measured and adjustable;
- 2) private sector should have a strong role in shaping the strategies of the training system and in ensuring pivotal links to the labor markets;
- 3) competition in the delivery and participation of private suppliers should be favored;
- 4) the resulting system should include in its governing body all the main parties, ensuring that they have an effective voice, and that the system provides a unified front capable of building trust;

- 5) the management organism within the system should be free of any conflicting interest; for this it is advisable to separate the strategy or political body, the accreditation system, and the public provision;
- 6) to ensure a sustainable market, it is important allowing for cost-sharing between all benefiting parties—including workers;
- 7) there should be a good information system, capable of raising the awareness about the benefits of skills-upgrading and evaluation of the impact of training.

References

- Almeida, Rita and Pedro Carneiro. 2006. “The Return to Firm Investment in Human Capital” World Bank Policy Research Working Paper 3851, February 2006.
- Batra, Geeta. 1999. “Skills Upgrading and Competitiveness in Guatemala.” World Bank, Private Sector Advisory Services, Washington, D.C.
- . 2000. “Private Sector Training and Competitiveness in Nicaragua.” World Bank, Private Sector Advisory Services, Washington, D.C.
- Gill, Indermit S., Fred Fluitman, and Amit Dar. 2000. Matching Skills to Markets and Budgets.
- International Labor Organization. World Employment Report 1998–1999.
- International Labor Organization. 2003. “Learning and Training for Work in the Knowledge Society.”
- Larraín B., Felipe, Luis F. Lopez-Calva, and Andres Rodriguez-Clare. 2000. “Intel: A Case Study of Foreign Direct Investment in Central America.” Center for International Development: Harvard University.
- Tan, Hong, and Geeta Batra. 1995. “Enterprise Training in Developing Countries.” Washington, D.C.: World Bank.
- World Bank, Private Sector Advisory Services. 2004. “Reform of Labor Skills Training to Strengthen Competitiveness of the Nicaraguan Private Sector.” Washington, D.C.

