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# DEVTECH Sphere

DEVTECH SYSTEMS, INC.  
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## HIGH TECHNOLOGY AND EDUCATION: MYTH VS. REALITY

Computer technology, complemented by the progress of communications most spectacularly embodied by the Internet, provides astonishing opportunities to revolutionize many activities, whether professional or related to everyday life. Education is one of these activities. As new computer applications are being developed to benefit all levels of education, ranging from the most basic to the most advanced, new opportunities have emerged for improving educational practice by means of new technology. Aside from serving as powerful tools in the process of learning and teaching, computers also call for the development of a wide array of new skills and specific knowledge required if their potential is to be fully exploited. Without computer technology and concomitant developments in the field of telecommunications, and without adequate training, the evolution process that has been impacting the entire world throughout the

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## LET'S EXAMINE FOREIGN AID AN INVITATION TO THE EXPERTS

### *THE SOLICITATION*

The foreign aid debate is familiar territory. The purpose of this brief column is not to argue for a particular resolution of the debate, but rather to warm up the audience and invite the responses of specialists in various fields of aid, from macroeconomics to agriculture to health. The people who know the most about effectiveness of aid are the practitioners, and we seldom hear from them on this question.

Therefore, in subsequent issues of *Sphere* we will be soliciting and printing brief guest columns by people in the development business on their perceptions and evidence as to the utility of aid in a substantive sense, and attempting to answer the question "Is the world better off with 40 years of aid?" What's good about aid in your sector? What's bad about it? What are lessons learned, and what are best practices? We also invite our readers to join in the debate.

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CAREFULLY.*

### *THE DEBATE*

Each year as government budgets are prepared in the OECD countries, a debate simmers over expenditures on foreign aid. Although some of the smaller countries, such as the Scandinavians, appear to be decisive in their consensus about the utility of such aid, other countries are ambivalent in their attitudes, and the simmering debate boils over into a shouting match. In the United States, a rousing tug of war emerges about every four years about the level of foreign aid, as well as its direction and goals.

On the one hand, many proponents of aid say that we are doing too little. Recently, U.N. Secretary General Kofi Annan criticized the United States' small foreign aid contributions relative to the size of its economy. The *Washington Post* quoted Annan as saying: "It is shameful that the United States, the most prosperous and successful country in the history of the world, should be one of the least generous in terms of the share of its gross national product it devotes to helping the world's poor. I am sure many of you share my feeling that this is unworthy of the traditions of this great

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country.” The *Post* added that the United States devotes only 0.1 percent of its GNP to foreign aid—in last place of all OECD nations.

On the other side, of course, the detractors are trying to drastically limit and earmark foreign aid. So far, the influential voices in the United States have not suggested publicly that aid be abolished altogether. Some say that aid to international agencies such as the World Bank and United Nations should be limited. Others say that less aid should be spent on Russia. Still others say less aid should be directed to countries that seem to waste it, such as certain countries of Africa and elsewhere. Some, such as Carnegie-Mellon University professor Allen Meltzer, whose team recently completed a review of World Bank lending, say that more aid should be directed to the “poorest of the poor.”

With so many conflicting voices, what is one to make of the debate? Even the critics don’t agree among themselves. After 40 years of foreign assistance, and following the end of the Cold War, we seem to be more in the mood to re-examine the issue carefully.

### A CRITIQUE

Although foreign aid has been criticized from every quarter at every opportunity, in order to shorten the argument let us take the extreme case that might be propounded by the Libertarians: Is the world better off after more than 40 years and billions of dollars’ worth of foreign aid efforts? Aid in the form of money or projects can be completely ineffective. And even when it is not, perhaps the interventions that governments succeeded in implementing at great cost would eventually (or perhaps sooner) have been carried out anyway by the private sector. Further, aid itself carries a kind of “moral hazard” in which foreign aid resources allocated to health, population, agricul-

ture, financial markets, and all the rest could often have been funded by the countries’ own governments, and the aid allowed these governments to fritter away resources on military expenditures, private bank accounts, improvements to the décor of the capital, and monuments to dictators.

*IN THE ABSENCE OF AID, WOULD GOVERNMENTS NOT HAVE BEEN PRESSURED TO REFORM FINANCIAL SYSTEMS BY THEIR OWN NEED TO INCREASE ECONOMIC GROWTH?*

In the absence of aid, for instance, would governments not have been pressured to reform banking and financial systems by their own need to increase economic growth? Every year, countries the world over add to their stock of well-educated young professionals who come home knowing the principles of neoclassical economics, banking, agriculture, and every other field. Knowing what to do *per se* is much less of a problem than it once was.

Also, the objects of assistance are often highly debatable. Does Uganda really need a stock market at this time, for example?

All this came before the current disputes concerning the World Bank and International Monetary Fund, whose policies, among other things, are said to harm the poor through heartless structural adjustment, damage the environment, and protect Wall Street investors by bailing out countries at risk of defaulting on debt. The morality of aid decisions also bothers many critics, particularly when they prop up tyrants and self-interested governments that do not work in the best interests of their citizens. In addition, many governments are

## GTN PROJECT HONORED

The U.S. Agency for International Development has been honored for its extraordinary work on the Global Technology Network (GTN) project.

The Public Employees Roundtable has selected GTN to receive the 1999 Public Service Excellence International Award, which recognizes outstanding programs that have made significant contributions and achievements in the public sector. GTN was chosen for the international award from among 14 other nominees; there are six other award winners, all in the domestic area. The primary objective of GTN is to facilitate trade between developing countries and the United States and to engage the private sector in furthering the development process. GTN accomplishes this by identifying, matching, and disseminating business opportunities from 41 developing countries to small and medium-size firms throughout the United States and developing countries. By engaging the private sector, GTN moves development assistance towards its sustainability objective.

DevTech Systems is proud to support USAID’s work on this project.

known for “playing” aid—flirting with reforms but never actually carrying them out.

Aid agencies themselves receive some of the criticism. The World Bank, IMF, and United Nations have been criticized as bloated, self-absorbed, rich persons’ clubs consumed with perpetuating prestigious travel and conference opportunities, while leaving development to the NGOs. Bilateral aid among other things is criticized for pursuing state diplomatic priorities at the expense of real development.

Perhaps the most serious criticism of all focuses on “how effective is it once delivered?” We have all heard the stories of projects that either never accomplished their aims after spending big money, or whose objectives unraveled following the departure of the technical assistance teams. Structurally, a management consultant would observe that aid projects suffer from the flaw of being “input-driven” rather than “output-driven.” In other words, projects are defined in terms of person-months rather than results generated. Although it is set up that way for a reason—namely the difficulty of achieving a worthy but often fuzzy goal—the impact on results is evident.

As a USAID mission director once remarked, “Well, we shoot an arrow into the air, and where it lands, we paint a bull’s-eye around it.”

### **THE DEFENSE**

So why then does aid survive? Aid lives on for a combination of moral, substantive, and practical reasons. To pick up the aforementioned Kofi Annan theme, the most obvious reason is the moral need for wealthy countries to help out their less fortunate fellows in material terms. Every OECD country

has seen fit to do this. To withhold assistance would be indefensible in the eyes of the world. And such programs as foreign disaster assistance really need no explanation.

Substantively, the general argument is the “public good” position that government, or international agencies, should step in where the private sector cannot or will not. The recent World Bank report entitled *Assessment of Aid* provides numerous examples of effective aid and outlines evidence for success or failure of particular forms of aid. As to the “fuzzy goals” problem, policy initiatives are often indistinct, and implementing them is a craft unto itself. Once you get away

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from concrete objectives such as building a dam or a road, or immunizing children, you’re in the territory of imprecise objectives.

Practical reasons are important as well. To continue aid in general is to promote stability in the world, while at the same time amassing good will and building up future customers for the goods and services of aid-giving countries. Bilateral aid serves as an effective tool of foreign policy—it’s always good to have something other than tanks with which to reward your friends and punish your enemies. Every administration wants to have tools of influence, and aid is perhaps the best tool after trade, and it is also more controllable. And in terms of domestic politics, the benefits of aid are conveniently distributed to constituents, especially with bilateral aid, which is most of-

ten “tied” to domestic procurements of goods and services.

Forty years of aid have not gone for nothing. Countries on every continent have strengthened and expanded their economies with foreign assistance, beginning with the Marshall Plan. The poor have been helped, infrastructure has been built, world stability has been promoted, friends have been made, and markets have been created for the exports of industrial countries. Through peaceful rather than military means, the values and culture of the industrialized world have been transmitted to nearly every corner of the globe, making the world safe for prosperity. The philosophy of democracy and the market economy have finished first under the competition of the Cold War, and have persuaded most of the world to follow suit. In short, a triumph.

Unfortunately, foreign aid occupies only an obscure corner of the public attention. Perhaps this is by design: U.S. government regulations prohibit USAID from publicizing itself, and showcasing its successes is left to others. At the end of the day, the failures seem to make the news more often.

Nonetheless, the cumulative effect of 40 years’ worth of projects and financial aid have among other things built up the infrastructure of many countries, improved health and education, helped in resolving market constraints, and instituted basic government systems to enable these countries to run a modern government on their own. Aid has put emerging-market countries (“LDCs” is for the ’80s) in a position to utilize their increasing human capital base and, for some, foreign investment resources, to muscle their societies into a higher eco-

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conomic plane than they occupied before. This could not have been done so quickly in the absence of international aid. Also, even if Uganda doesn't really need a stock market today, St. Petersburg does, and it was foreign aid that built it.

A final observation is that during these last 40 years, donor agencies have learned how to deliver aid. By now, international donor agencies are canny buyers and implementers of technical assistance. They know how to structure and package aid, have seen all the tricks that can be perpetrated by recipients to evade reforms, and usually can deal with it. And frankly, ongoing criticism has helped to sharpen the goals and performance of aid, if painfully.

## CONCLUSION

You've heard from us, now let us hear from you. As mentioned at the beginning of this article, we invite brief and well-argued synopses of how foreign aid has or has not been effective, from the point of view of a particular field or discipline such as macroeconomics, the financial sector, education, population, health, agriculture, microenterprise, etc. DevTech will select the most interesting of these for subsequent issues of *Sphere*. Don't be shy!

—Dan Lounberg  
Director, Business Development

Send your opinion on the effectiveness of foreign aid to:

Sphere – Editor  
DevTech Systems, Inc.  
1629 K Street, NW, Suite 1000  
Washington, DC 20006 USA

## HIGH TECHNOLOGY AND EDUCATION: MYTH VS. REALITY

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last decade will condemn individuals, organizations, and, indeed, entire countries to be left by the roadside.

The wave of new opportunities based on cutting-edge technology in computers and global communications has yielded a growing flock of apologists who can't cease lauding this revolution. These enthusiastic supporters have attributed powers to the computer that go far beyond the realistic, economically feasible, or even advisable. Nowadays one hears statements to the effect that "the computer blurs the distinction between individuals from different social-economic backgrounds," or "the computer will be the great leveler of economic and educational opportunities," and even that the computer "does not discriminate between races and sexes." Even though these exact same acclamations could have been uttered back in the days when the humble graphite #2 pencil was first introduced, it is interesting to note that many observers seem to hail the computer as the new panacea that shall solve all problems. In the area of education, showing new technology under this light can be especially misleading.

The educational problems affecting the vast majority of less-developed countries derive from mentalities, behavioral patterns, and interest groups that are, for all intents and purposes, yet in a covert manner, opposed to the educational progress of their countries. The mere application of high technology in the sector of education, even if carried out on a massive scale, can by no means diminish the reluctance of some sinister elements to improve quality standards, nor will it eliminate the exploitation of the educational sector as a basis for political power, nor

will it block the might of interest groups opposed to structural changes. Generally, these interest groups can be found in the public administration responsible for the educational sector, as well as, in many countries, in trade unions of teachers.

Aside from the previous considerations, there exist other powerful vested interests that, taking advantage of these new myths, have identified in computers and Internet technology the opportunity to engage in business dealings on a large scale. It is not illegitimate that the sale to schools and other teaching institutions of new equipment and technol-

### DOES IT MAKE SENSE TO INTRODUCE COMPUTERS IN SCHOOLS WHERE TRADITIONAL TECHNOLOGY HAS NOT EVEN PENETRATED?

ogy should result in profits and competitive business practices. What is, however, unethical and problematic is the likelihood that such contracts will be carried out with unrealistic expectations regarding the final impact of high technology on the educational process.

On the other hand, many governments are tempted to flood their schools with computers before even supplying them with traditional (and less costly) text books and other pedagogical material, or with better-prepared and motivated teachers to provide better-quality education in a school environment that will foster excellence and success. Does it make sense to introduce computers in schools where traditional technology has not even penetrated and where simple measuring instruments like the vernier, the micrometer, the voltmeter, and the analytical balance still lack? What about schools that have never enjoyed

even a small library? Can computers replace physics, chemistry, and biology laboratories in schools?

The majority of less-developed countries, because they lack sufficient funds to purchase PCs (not to mention peripheral equipment such as printers and modems), software, supplies, etc., turn to international financial institutions to obtain the funding they seek. It is not necessarily wrong that the development of education be financed by these means, or that this development comprise computers and Internet connections. What is regrettable, though, is that these computers amount to new pretexts for loans, so that unscrupulous governments, favoring the complicity of international financial institutions, give the false impression of promoting rational educational development in accordance with the country's public interest and policy.

## DEVTECH

The acquisition of computers for schools is indispensable. However, which educational institutions are being considered and what condition are they in? If a state were to fund the acquisition of computers for schools that hardly enjoy any access to electrical power, lack the most basic supplies, possess inadequate maintenance, lack a basic security system to prevent the equipment from being stolen, and are unable to avail themselves of sufficient numbers of trained teachers to employ computers as a genuine instrument for improving the quality, scope, and internal efficiency of the educational system, then the resulting expenses would be but an additional burden on the state's external debt, while benefits resulting in return would be too few and fortuitous to justify the expense.

In fact, without implementing other improvements in the field of education, the inevitable advent of the computer could paradoxically increase the inequalities affecting the distribution of educational opportunities in the poorest countries. Such an imbalance would inevitably lead to disparities in individuals' ability to attain better-remunerated jobs and, concomitantly, to increased inequalities in the income and wealth distribution of the affected countries. Contrary to the affirmations of some computer apologists, the introduction of high technology alone won't suffice to diminish these inequalities. Therefore, it is now more urgent than ever to initiate pro-

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found reforms at all levels of the educational process so that less-developed countries can take full advantage of the genuine and vast opportunities heralded by a technological revolution that is already transforming many activities all over the world. International financial institutions, whose objective is development, should keep these considerations in mind when designing, formulating, and funding loan programs intended for the elaboration of an efficient and equitable educational system—an endeavor that requires, as we have shown, far more than the mere acquisition of high technology.

—*Jorge A. Sanguinetti*  
President & CEO

## VOCATIONAL EDUCATION IN HONDURAS

The devastation in Honduras in the wake of Hurricane Mitch intensified the need for post-primary education and training for low-income, out-of-school youths, who, with limited employment prospects, contribute to rising crime and other problems.

As a part of USAID's accelerated efforts to rebuild Honduras and strengthen its educational system, DevTech Systems is establishing and strengthening vocational training centers across the country. A total of 16 training centers will be fully operating by the completion of the contract: 11 will be built and five will be upgraded. Training offered at these centers will range from woodworking and furniture making to electronics. Instructional materials and certification norms will be developed for each program.

In addition to overseeing the construction of these centers, DevTech negotiates and oversees grants to NGOs that will eventually take over and operate the centers. DevTech will provide training for the new management and staff, existing staff, and technical instructors and strengthen the centers' financial viability. DevTech is also developing and implementing operational models designed to train graduates in small business management. With all 16 centers operating at the end of the contract, up to 7,500 students will complete the training program each year, over a third of them female. On average, graduates' annual income is expected to increase by \$1,000. As a result, Hondurans will be able to increase their productivity and contribute to self-sustaining economic growth.

—*Valerie Alvarez*  
Program Specialist

Established in 1984 by economist Jorge A. Sanguinetti, Ph.D., DevTech Systems, Inc. is a consulting firm that offers technical assistance in the following areas:

- Macro- and Microeconomics
- Public Finance
- Educational Development
- Labor Markets
- Social Sector Issues
- Modernization of the State
- Institutional Reform
- Statistical Systems

WE INVITE OUR READERS TO SEND THEIR LETTERS AND COMMENTS ON THE MATERIAL IN THIS ISSUE OF THE *SPHERE* TO DEVTECH SYSTEMS' WASHINGTON OFFICE.

DEVTECH SYSTEMS, INC.  
1629 K Street, NW, Suite 1000  
Washington, DC 20006 USA

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1629 K Street, NW, Suite 1000  
Washington, DC 20006  
Tel: 202/296-8849  
Fax: 202/296-4884

9350 S. Dixie Hwy., Suite PH-1  
Miami, FL 33156  
Tel: 305/666-5150  
Fax: 305/666-5165

<http://www.devtechsys.com>

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