Human Assets: The Most Precious Capital

Diran Apelian

In the last few months we have witnessed a global economic downturn and concerns about the fiscal health of corporations. There is much talk about assets—both financial and capital. Yet, we hear very little about our most precious asset, our human assets.

The intellectual capital of the planet is the most critical asset that can address the serious issues we face. Yet, the \$700 billion Wall Street bailout was crafted in about two weeks, with Washington working around the clock to get things done. It is not only the size of the bailout that is of concern, but also the kinetics of the reaction on the Hill! The concern and the attention that we as a nation placed on our financial assets say much about our values.

Where is the urgency regarding our human asset? Why aren't we outraged about the education deficit and why do we value financial assets over human assets? To paraphrase and embellish an observation by Thomas Friedman, what we need is not just a bailout of our economy, but a buildup of our people.

One would think that education of our children would be the highest priority, in America and across the globe. Unfortunately, a close look at schools across the United States points out that we do not place a value on the most precious capital we have: our children. The resources we have channeled for educating the next generation is pitiful when we compare it to the resources we have allocated for defense, etc.

We need to invest in, nurture, and cultivate our human assets. The place to start is with our schools—primary

and secondary (K–12), as well as with higher education and research funding at our graduate schools. The 2007 National Academies Press publication *Rising Above the Gathering Storm* clearly pointed out that our economic security was in question because of the decline in investments in R&D budgets, as well as investments for the development of the intellectual capital of the nation. It is not surprising that economic security is directly coupled with human assets as well as the intellectual capital that we cherish and want.

Yet, in our major cities, and particularly the inner-city schools, we are wasting the opportunity to impact our future. Comparing K–12 teacher salaries to salaries in other sectors of society is not a good testament of our values. Imagine what would happen if starting annual salaries for mathematics, science, and English teachers were \$70,000. We need to ensure that our educational system is first rate, that we have the best facilities, the best-prepared teachers, and we need to be diligent in the outcomes we expect.

Muhammad Yunus and the Grameen Bank (a bank he founded) won the Nobel Peace Prize in 2006 for investing in people and reversing poverty in Bangladesh. It is a universal theme; investing in education is the most crucial investment we can make to fight poverty, to fight crime, and in brief to fight so many ills that have their roots in ignorance of the populace. I am reminded of a bumper sticker I saw at our university parking lot that read: "If you think education is expensive, try ignorance"

At the Metal Processing Institute, we are in touch with close to 100 corporations that are partners and consortium members. The one constant message we hear from these corporations is the

graying of the workforce and the concern as to where the next generation of knowledge workers will come from. Take the aerospace industry as an example. It is a powerful force within the U.S. economy and one of the nation's most competitive sectors in the global marketplace. It contributes over 15 percent to the gross domestic product and supports over 15 million high quality U.S. jobs. Aerospace products provide the largest trade surplus of any manufacturing sector. Yet only a handful of universities and centers in America are working on superalloys, structural materials, titanium, etc. Moreover, the funding in structural materials does not reflect the importance of the industry to the economy. Funding is needed to support these industries, and in turn to enable a generation of students to be educated in our graduate schools who will be our future knowledge workers.

Last, we need to get the message out that science and engineering education opens doors to a variety of career paths where one can make a world of difference. We need to all work in unison with one message that materials science and engineering (MSE) is an enabler to address societal challenges and that careers in MSE are exciting, wide-open opportunities, and in demand.

In closing, this is my last column in *JOM* as I finish my term as TMS president. I want to thank you for your support this past year. We have accomplished much and we will continue to do so under the leadership of Ray Peterson, who will be installed as our next president in San Francisco at our Annual Meeting (February 2009). See you all in San Francisco.

Diran Apelian is a professor in the Mechanical Engineering Department of Worcester Polytechnic Institute and the 2008 TMS President.