

The importance of technical and vocational education in a global economy: a brief Canadian perspective.

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The topic of this international conference hosted by Bioterra University is very fitting. The theme “Global Strategies in Agriculture, Agritourism, Nutrition and Environmental Protection” emphasizes the fact that development works as an interconnected system and that it is necessary to take the broad view of things if we are to successfully develop these economic sectors. In that broad examination of the dynamics of development, I will share some of my thoughts about the importance of one fundamental aspect of this interconnected system, namely the role of technical education as a key determinant of a successful approach that promotes not only sectoral growth but also regional and community development.

The world as we know it is rapidly changing, and no where is it as true in 2009 than in the economic sector where all our fundamental precepts are affected to their core. In the past three months alone, we have seen countries where growth and development were taken for granted become demanders of aid from the international community; we have seen the all powerful G-8 countries become completely destabilized by the weakness and shortsightedness of their economic policies; we have seen relatively stable middle states fall victims of factors over which they have clearly no influence; we have seen the giant corporate entities of our world become rudderless ships in an ocean of debts and unfundable liabilities; we have seen largely ineffective economic measures proposed by states which seem to only feed the black holes created by the greed and mismanagement of the corporate elite. And it is unlikely that the overall international monetary and financial systems will recover from that crisis anytime soon.

Despite affirmations to the contrary by corporate economists and public relations spin doctors, many experts believe that the changes are so profound and so far reaching that it will take years to rebuild not only the confidence of investors, but the capacity of states to rely on the private sector to regain the momentum necessary to drive the creation of wealth. The corporate

giants of yesterday have become the corporate welfare recipients of today. And the governments of the world, and particularly the most industrialized countries, have to retake their place as leaders in the process of re-establishing balance and order in our societies and in our economies.

In the middle of this gloom and doom, what positive images can possibly emerge that will lead ordinary people and responsible public decision-makers to regain some measure of optimism and some control over the future? Will we seize the opportunity to bring back a more sensitive approach that takes into account not only the legitimate desire of investors and developers to find their reward for the risk they take but also the failure of recent years to put accountability as a central value in our system of governance? Difficult questions, are they not?

In my view, the reality is that not much in the way of economic good news will emerge over the next couple of years, until the fall-outs from all these reorganizations, closures, mergers and bankruptcies have run their course. Furthermore, even with the economic system on the mend, it will be years for governments to bring back stability in its public policies as it deals with the significant debt load that will have been generated by the lack of revenues from collapsing economies and the massive bail-out packages given to the private sector. And we do not know either what the impact on consumer confidence, or even on their capacity to spend given the employment experience through the crisis, will be.

At a recent public gathering in Toronto, the recent former president of the Bank of Canada David Dodge declared that anyone that thinks that this crisis will end in a matter of months and that we would go back to the previous state of affairs is clearly “dreaming in technicolor”. According to him, the changes will be profound and far reaching and will result in new economic paradigms. His view is that Canada and the world are facing a long and deep recession that will alter the nature of capitalism. As a society, and as individuals living within it, ‘business as usual’ will no longer be sufficient, if it is even possible. Our behavior and our values will have to adjust to a new reality, a reality that dictates that new rules will have to be created. The blind leadership of our governments which in many cases were more than happy to take the back seat and leave the driving to the corporate elite will need to come to an end. Where will it start first?

So where is the good news in this? Well, without that being necessarily a good news, crises often have a tendency to create their opposite, i.e. the emergence of solutions which either bring us back to basics where the individual regains some control over his or her own destiny by reverting to a more disciplined behavior or solutions which will call upon our capacity to be creative and to think outside of the proverbial box. Either ways can benefit us in the long run.

And this is what I will focus on in the next few minutes.

The fact of the matter is that with the recent massive public bail-outs underwritten by governments, and therefore by the public itself, and with the views held by serious sources like Mr. Dodge, there may be an opportunity for the states to reassert ownership of a pro-active public policy agenda that ensures that future government actions clearly benefit the public and the communities they live in.

There are obviously many strategies that will have to come into play for countries and regions to regain their momentum. Many actors will have to intervene in very many different sectors to create favorable conditions for the emergence of a new, more sensible economy.

But I will propose that in our own sector, that of the post-secondary education, two measures among the many available could play a significant and long lasting role if they receive the right level of attention from public decision-makers.

The first is to expand significantly the level of government supported research in post-secondary institutions so that we improve our level of knowledge and expertise through applied research where the gap between research activities and their implementation is much shorter. Bioterra University right here in Bucharest is a good example of the capacity of institutions, if properly equipped, to translate academic research into concrete actions. Look at the record in the area of food processing and nutrition. Many innovations can be attributed to this type of applied research which makes the institution a leader in its field. And the gap between discovery and production can often be a very short cycle.

An important paper on that topic entitled “*Technical Colleges, Technology Deployment, and Regional Development*” authored by Stuart Resenfeld for

the Organization for Economic Co-operation and Development (OECD) and presented at a conference in Modena, Italy in May 1998, examines in detail that relationship between technical education, innovation and economic development. Among other things, the paper contends that “*technical colleges are emerging as critical factors and key institutions in technology based development to fill industry’s requirements for more highly skilled and technically proficient workers.*”

But the paper also speaks to the significant role small and medium enterprises play not only in developing local economies but in bringing about a significant level of innovation in production and processing. The paper states that “*the need for technology and innovation among small and mid-sized enterprises was more apparent to regional technical colleges, which in many places are closer to local industry, more apt to be called upon to fill the increasing numbers of jobs that require upper secondary or tertiary but less than a baccalaureate education, more flexible, and generally better positioned to help SME’s innovate and modernize.*”

It has been well documented that the relationship between technical skills, small and medium enterprises and innovation is more developed than we think. A recent study conducted in the United States shows for instance that there are 13% more patents per worker in small and medium regional companies than in larger more urbanized corporations. The innovative strength of the regions must therefore be clearly recognized by public leaders.

Developing expertise and increasing the local know-how to better deal with the challenges associated with economic downturns is an idea which is rapidly gaining support. In a time of world-wide economic upheaval, it is thus all the more important to adopt a public strategy of increasing self-reliance by solidifying and encouraging regional entrepreneurship and a stronger reliance on building autonomy through a set of decisive actions.

It follows that the adoption of an approach that increases regional self-reliance based, at least in part, on a development strategy of investing in education and training, and more specifically in technical and vocational programs, is one of the keys.

Canada has had a long experience of emphasizing in its educational system the importance of competency-based learning and transfer of skills as

elements that promote the availability of a competent, innovative and responsive workforce. This is not to say that this type of technical or vocational programs should replace the role university education has to play in any society. Universities are obviously needed and address a wide range of societal needs. When we look at the state of affairs in many parts of the world, and it is also partly true in Canada, there is no doubt that many societies continue to view much more favorably university education than college level education. This was well described in a recent paper authored by Dr. Law Song Seng of the Singapore Institute of Technical Education in which he links technical and vocational education and economic development. Among other things, he states that “*this intense desire to pursue a university degree generates unrealistic expectations amongst parents and adds pressure in school. The consequence is a prejudice against the less than positive image of VTE and all its negative associations with those who are less academically inclined.*” He goes on to say that “*the greatest gaps in human resource development are in vocational education and technical skills.*”

Canada’s experience clearly supports that view and highlights the need for a more applied type of education as a central tool to promote efficient and dynamic regional economies.

Of course, Canada is not the only nation to have recognized the importance of vocational and technical training. Many countries, including the United States, Scandinavian countries and some Asian states have adopted the model of an intermediate level of training to address specific needs in the workplace. Often shaped by the needs of the changing or emerging economies and local communities, the challenges and opportunities known to colleges are unique with services being provided to a broader range of learners.

The relationship that must exist between the capacity of a state or of a region to provide the necessary conditions for the harmonious development of complementary training opportunities and the realities of the marketplace is crucial. In an essay in *Culture, Society, Education and Vocational Training*, author John Cully writes that “*while national governments clearly need to rationalize and readapt their educational systems in many critical areas, it is crucial that they pay particular attention to that of skills training as it is now more than ever coming to the forefront as an essential requirement for any progress in addressing the impacts of economic globalization*”.

What this says is that university education which tends to be more academic in nature and of a higher level, while being necessary, will not be the appropriate short term strategy to help make the citizens or industries of a specific region competitive in a global economy. Research intensive universities operate at a level which tends to promote national objectives or reputations, or the unique specialized interests of departments or researchers themselves. The focus is more on the development of knowledge than on the development of know-how, which relates more to technical programs.

This is exactly in line with much of the educational vision in Canada and, more specifically, in Québec where Vanier College is located. A major societal and public policy exercise conducted by the provincial government in the early sixties led to a comprehensive report from which came out a proposal to create a hybrid form of intermediate education level that would facilitate the transition from high school to either universities or to the job market. It led, during the second half of the sixties, to the creation of a network of *Collèges d'enseignement général et professionnel (Cégeps)* which still exist today as a key component of the Québec educational system. There are currently 48 such colleges disseminated throughout the province. They play both an educational and a social function by providing a focal point to assist regions and communities access the tools to support their development. These colleges are made up of two streams. One focuses on a two year transition between high schools and universities for those individuals keen on pursuing university education. It acts as a preparatory level to equip students with the tools to succeed in university. The other stream is a job oriented three year career program aimed at graduating trained technical and professional workers who will go on to fill jobs in industry.

In other parts of Canada (education being an area of provincial jurisdiction), similar initiatives have been taken at approximately the same time. Called community colleges or institutes, the over 100 institutions serving many hundreds of communities are mandated to be closely tied to their milieu and to respond quickly to the changing knowledge and skills needs of their regions. As local and regional institutions, they are the primary post-secondary institutions directly advancing technology transfer and dissemination of know-how. They invest in people, ideas and enabling technologies. Their focus is in putting good ideas into good practice which means not only conceiving and developing but implementing solutions to

environmental, health, agricultural, energy, manufacturing and technology challenges of importance to Canadian well-being, quality of life and the country's competitive advantage.

The Canadian model is based on the belief that ideas and solutions need place to grow and develop. By bringing under one roof the skills, the incubating environment and the knowledge base, the colleges help bring ideas of a human scale to fruition. The Association of Canadian Community Colleges in one of its presentation documents summarizes the key role played by those institutions working closely with their milieu as follows: 'the research, development and commercialization process in colleges and institutes ...is inherently applied (...) focussing on market needs or market pull, technology transfer, new processes and prototypes – all with sound applications to economic development. (...) The "outputs" of development are new and improved products or processes, documentation, the adoption of new technologies, the discovery of new uses for existing technologies or knowledge, the discovery of technical solutions to problems, or new policy development. Commercialization itself occurs in business and industry and includes new product launch, new business start-up, business development and expansion, or trade exploration.' Ultimately, one of the key goals is to position those institutions as part of what underpins the path of the economy in a future which will require Canada to become more trade-independent, more commercially innovative and more renowned for niche knowledge and skills in an increasingly competitive world.

While our educational and training systems are often shaped by our history, social circumstances and needs and the economic character of the local community, the recent emergence of the global agenda has made a broader understanding of the challenges facing particular regions or states necessary.

Today, more than at any other time before in our history, our economies have to be innovative, efficient, creative and mobile. But they also have to incorporate within them objectives of self-reliance and control over one's own future, the necessity of our scale of intervention, the fact that individuals, despite their increasing mobility, generally look for stability if they can make a useful contribution and get an adequate reward for it, and protects the legitimate needs and aspirations of upcoming generations. They have to be trained to think that they hold some control over their well-being.

So how does this all apply to Romania? For a country so renowned for the quality of its educational system and for its long history of educating and graduating people that have brought their skills and knowledge to the whole world, is there anything to learn from focusing on a very applied, regionalized, business minded form of programs that will help it increase its self-sufficiency at this particular juncture in time?

I submit that the answer is yes. And I submit that the best 'global strategy' for this country is to put in the hands of its industrious people the tools to encourage innovation, creation and entrepreneurship through very determined efforts to promote local and regional know-how. And this can be best achieved by directing a sufficient portion of the educational budget to training initiatives that will nurture the commitment to a practical and applied range of technical programs. Only when this is done can Romania expect to regain the role it once played as an economic leader in the world because it will have first strengthened its own people and the regions they live in.

Thank you.