

CHURN: Research Universities' Responsibilities in the Entrepreneurial Landscape
A Speech at the "Spirit" of Entrepreneurship Symposium
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Senator Hutchison, Distinguished guests from the entrepreneurial and philanthropic communities in the Metroplex:

I am deeply honored to stand here this evening for two reasons.

First, it is a great honor to speak immediately after Senator Hutchison. Senator Hutchison is an obvious leader of this great State. Indeed, as a senior member of the Senate, she is also a national leader. The downside of having this honor is of course that it should be, and is, a little daunting to speak immediately after a "giant" has spoken. In homeland security, there is a term called "asymmetry warfare". Well, this is as asymmetrical as it is going to get!

Second, I am honored because as an academician, although I have had three intensive years as the Vice President of one of the most bottom-line driven Fortune 500 companies in the nation, Science Applications International Corporation (SAIC), I am still rather hesitant to refer to myself as either an entrepreneur or a philanthropist, unless you consider my meager contributions to charity at most STOP signs philanthropy!

As I mentioned in a recent Nortel Symposium, I am NOT an entrepreneur. While I have worked for one, I have never started a for-profit business, and I have NEVER written a business plan. Also, let me say that, unlike a university, the sole aim of a corporation, startup or mega-size, is to make money, ethically and honestly. Period. The product (or products) it produces is a means to make money. A better product can usually make more money than a less adequate product (sorry for this understatement!). This is usually a very foreign concept for an academician. So this is an extraordinary honor for me to speak to such a great group of entrepreneurs. I hope what I have to say in these eight minutes may add a little to your knowledge repertoire.

In the 21st century, it is taken to be self evident that a world class region is measured by the intensity and ubiquity of its economic and intellectual activities. This is as true for the Silicon Valley, Atlanta, Greater Boston area, San Diego, as it is for our Metroplex. To this end, having a profound pan-entrepreneurial spirit in the Metroplex is, in my mind,

fundamental to having a powerful and sustainable economy and a robust intellectual landscape.

I believe the keyword to that long-winded sentence is “sustainable”.

In the decade before 2001, the Metroplex enjoyed enormous prosperity through its Global leading position in the telecom industries. Surrounding but uncorrelated with the telecom industries, were defense industries, medical device industry, a fledgling biotechnology industry and others. For these industries to prosper, not only should there be significant funding resources (i.e. “vision without funding is hallucination!”) and business skills, but also there must be abundant and available scientific, technological and relevant entrepreneurial talents. It is critical that these talents are not only good in what they are trained for, but can innovative, or “think out of the box”

With the wisdom of a Monday morning quarterback, and the fact that there is some sort of economic implosion since 2001 for the telecom industry, I think there is at least one important lesson one can learn from. The lesson has a simple name called “CHURN”!

Let me explain what I mean by CHURN. I first learn this term from a UTD faculty member named Don Hicks and a colleague in Washington D.C., Richard Seline of New Economy Corporation. Of course any confusion of the meaning of CHURN is mine and not theirs.

From the outset, “CHURN” is intimately related to research universities. I think no one will argue with me that for the Metroplex, there must be world class comprehensive higher education research institutions as the region’s intellectual pride and economic focal points. These institutions must be engines for producing in the 21st century regionally, nationally and globally competitive and ethnically diverse workforce. This is NOT A LUXURY, but a MUST! The first lesson from the past decade is that the region has to mix, or “churn”, the economy. For sure, when the downturn, or implosion, came around, it was probably not wise to suggest to a laid-off employee of telecom company A to send his/her resume to telecom company B.

Usually that is “dead on arrival”.

It would have been much more productive if the region had an existing platform where a laid off wireless expert from telecom company could discuss with a business manager, or technologist, or both, of a medical device company, and come up with a novel way of combining the wireless technology with the medical device to create a new and better product. In general, new and better product can produce better business plan, and better business plan usually has a higher probability of making MONEY.

Now, how do research universities come into the churning equation? Well, the desired platform which I mentioned earlier is what an outstanding research university, or a group of outstanding research universities, can do, does well, and should and must do continuously. After all, such universities are always hunting for new ideas, hunting for

new sciences, hunting for new technologies, hunting for other new innovations, nowadays, hunting for ways to technology transfer and spin-off such technologies, and last but not least, hunting for new ways to connect dots, these dots being new science, technology and entrepreneurial ideas, that are seemingly unconnected. To be truly successful, outstanding research universities must and should embrace the regions surrounding industries to make sure that different industries can interact in a highly mixing manner, and value add, intellectually and economically, to the business. With this, it can contribute to economic sustainability. This is what scientists refer to as “non-linear mixing”! This is the fundamental principle of churning!

Examples of such universities which have made true, enormous and fundamental economic differences to the regional intellectual and economic landscape that come to mind are the eight powerful research universities in the greater Boston area, UC Berkeley, Stanford and San Jose State University in the Bay area, UC San Diego and San Diego State University in the San Diego area and last but not least, Georgia Tech and Emory University in the greater Atlanta area.

It is a curious result of history that within the Metroplex, research universities in the region are still striving to become comprehensive research powerhouses. As long as we are still in the striving stage, our ability to be an effective churner is to be suspected.

Recently, I gave a talk at a conference at the University of Texas at Arlington, where I mentioned that while there is no doubt that both UT Arlington, UT Dallas and other universities have numerous truly remarkable world class efforts, such as the joint R&D nanotechnology program which Senator Hutchison has championed, even by combining our two campuses, we are still below the national threshold. This is an economic and intellectual shortcoming for the Metroplex that needs to be addressed. I firmly believe that all the comprehensive research universities in the Metroplex must address it in a collective manner.

With greater stability and cooperation between UTA and UTD, and working closely with the University of Texas Southwestern Medical Center, I believe that in the coming months and years, the intertwined research scaffoldings of these three components of the University of Texas system in northern Texas can truly be the Metroplex’s economic and intellectual engines.

Finally, I cannot end this short comment without commenting on the concept of “coopetition”, and that is collaborate while competing. To this end, please bear with me to tell you one of the most recent anecdotes about “together means strengths”.

One of the feelings I have accumulated in the 26 months I have been with the University of Texas at Dallas is that there is a perception that UTD is an independent university, even though it is part of a fifteen campuses enterprise called the University of Texas System. I learned a long time ago from a political friend of mine that “perception is reality”!

Well, the recent pandemic SARS changed my personal perception totally.

In response to the SARS pandemic, for the past two months I have collaborated closely with Dr. Palmer Beasley, Dr. Lu Yu Hwang and Dr. Scott Lillibridge (all from the University of Texas Houston Health Sciences Center), Dr. C. J. Peters of the University of Texas Medical Branch at Galveston (Peters is also world renowned for his work in developing a Level-4 Bio-containment laboratory for extremely infectious diseases such as Ebola), Professor Alan MacDiarmid, UTD's James Von Ehr Distinguished Chair in Science and Technology, and the very powerful Association of Chinese Professionals here in the Metroplex, we developed an "Ad Hoc Southern United States Action Committee to Assist Chinese People to Fight SARS" (I apologize for this cumbersome name, but we want to launch it quickly!). This group worked so well together and are now all over the globe to combat this terrible disease. Also, I should add that I am NOT AWARE that there is another University in the United States who is as visible as we are globally in this business.

Let me briefly give you the reason for the change of my perception. By now, throughout North America and Asia Media (including the New York Times and China's People's Daily, which has the biggest circulation in the world), the following activities are all mentioned as efforts to battle SARS from the University of Texas.

Dr. Beasley in Taipei (early May)

Dr. Lillibridge in Taipei (mid May)

Dr. Beasley and Dr. Hwang in Geneva for the WHO Congress (mid May)

Dr. C J Peters in Taipei (now)

Dr. Beasley and Dr. Hwang in Beijing (now)

Dr. Lillibridge (in Beijing next week)

The media also reported of the activities at UTD is from the "University of Texas", with the "subtitle" Dallas dropped off.

This is really not surprising because for the outside world, we are known as the University of Texas. Indeed, at least in the global fight against SARS, the outside world knows it only as the University of Texas effort!

21st century will post serious challenges for the world, for Texas, and for the Metroplex. We are at an economic and intellectual crossroad. The responsibilities and necessity have never been greater of having embedded in the region powerful research universities to become the regional economic and intellectual engines, as churners. I am pleased to say that in the 26 months I have been in the Metroplex, I have seen this urgency crescendo to

a high pitch. I have not met anyone who will vehemently argue that this is not an immediate and imminent necessity.

I think the future is bright for our region.