Upstream

Is the University-Enterprise-State triumvirate working for the hydrocarbons sector?

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At HCC we devote most of our attention to analyzing both the oil firms operating in Colombia and the institutions that set the rules for this sector, and we will indeed keep doing so. However, since some economic theorists claim these two components within a given sector would be incomplete without a third key one: academia, we intend to come to it once in a while ... and this is our first shot.

The commonplace issue in every analysis of academia is about two topics sometimes opposed: quality versus quantity. But then the more pragmatic business managers add a spin to it: the specific knowledge required by the economy at a certain point in time. That is, the quality and quantity of, say, marine biologists graduating from the universities of a certain country may be satisfactory, but if said country is landlocked it may be argued that there is a lack of focus in such educational system (there are exceptions to it, of course, like the Bolivian Navy operating in Lake Titicaca.)

Nevertheless, the topic is way too broad to attempt to cover it all in just these few lines, hence we will start by describing a single fact: the available academic supply regarding the oil and gas within the country. And we will split it into two areas: Petroleum Engineering (i.e. PE), and Geology (sometimes referred to as: Earth Sciences) and Geologic Engineering (Ingeniería Geológica)

Of the PE colleges, only UIS has a Master program in Petroleum Engineering and none has a PhD. And of the Geology colleges; UNal, UIS, and EAFIT have Master programs, EAFIT being the only one in the country with a PhD in Geology (approved just six months ago in December 2012.)

In the particular case of the PE's, the number of students has grown at a healthy 7.8% per annum between 2000 and 2010 from about 1.600 to above 3.000 (incidentally, crude oil production for the same period has grown at 1,3% per annum from 687 to 785mb/d).

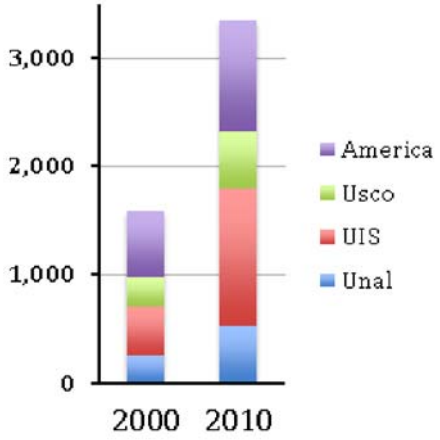
But what is definitely astonishing in the PE's case is the number of staff professors: an average of nine per college and just 35 in the whole country! But this is not the whole story: the worst part is about their salaries since most of these colleges are public, their salary structure and levels have to follow suit with the whole public sector, and within a sector of the economy that is booming and where there is a general feeling of scarcity, who wants to be a professor?

PE's and Geology Colleges in Colombia

	University	City	Title
1	UNal – Universidad Nacional	Medellín	Petroleum Engineers (PE's)
2	UIS- Universidad Industrial de Santander	Bucaramanga	
3	USCO - Universidad Surcolombiana	Neiva	
4	Universidad América*	Bogotá	
1	UNal	Bogotá	Geologist
2	UIS	Bucaramanga	
3	Universidad de Caldas	Manizales	
4	Universidad de Pamplona	Cúcuta	
5	Eafit*	Medellín	
6	UNal	Medellín	Geology Engineer
7	Univ. Pedagógica y Tecnológica Colombia	Tunja	

* Private

Number of PE Students



Bottom-Line: We hear complaints that companies cannot find trained resources in Colombia and so must import them at high cost (sometimes Colombians educated during the previous oil boom 20 years ago but they now command expat salaries). This could simply reflect the length of time it takes to train an engineer. Someone available for hire today should have entered one of these institutions 4 or 5 years ago that is, in roughly 2008 when the growth of the petroleum industry was still below the radar screen. One suspects that the current cohort of students have only entered in the past two or perhaps three years as the general public became aware of names like Pacific Rubiales. No wonder there are few on the market today.

Still the question of supply -- and more importantly quality -- bears investigation and we plan to make it the topic of a subsequent report.