Bogotá, February 23, 2016

Professor Dr. Peter Strohschneider, President of the German Research Foundation; Professor Enrique Forero President of the Colombian Academy of Exact, Physical and Natural Sciences;Doctor Juan Mayr, Ambassador of Colombia in Germany; Doctor Oscar Gualdrón, Colciencias;Doctor Rosario Cordoba,President Private Competitiveness Council;Doctor Jaime Bueno, Presidential Advisor; ladies and gentlemen:

We Colombians are heirs of the Spanish culture. A culture supported more in words than in numbers, and words that are not always anchored in reality. They are very rich and imaginative: a very pleasurable feature for the daily affairs, but sometimes inconvenient when designing public policies.

I am always grateful for an opportunity of learning a lesson, particularly if it is taught from the experienced and the successful. To comment professor Strohschneider's talk, I will only underline some of his statements that impressed me as particularly relevant for us. This will compel me to eventual nasty comparisons for which I apologize beforehand.

My first comment is precisely about the relationship between words and numbers: it will be enough with a very brief and self-explanatory comment. The year 2014 the DFG financed almost 30.000 research projects with a cost of €3.000 million, and this is only a 4% of the total German investment in research. Colciencias financed 431 projects investing around €50 million. Priority is a word written with numbers.

A very interesting second point in the talk is the distinction between the old New and the new New scholarly knowledge. In a way the old New is what we call "incremental innovation"; an innovation that will not cause surprise. Since it is expected, surely somebody will do it if you don't do it before. It is not a minor achievement, it may be the result of very difficult research and development,

simply it won't surprise. But the new New is something that does not exist and that we scarcely imagine. This will be a "radical innovation", a thru breakthrough that may change the way things are done. This kind of innovation can be attained only by a very profound and fundamental research.

DFG and professor Strohschneider call it "curiosity-driven research". I must say that among us, to speak of curiosity-driven research is a blasphemy. Among us the established truth, the politically correct truth is that research must have a clear goal, attainable in a short time, and immediately translated into a commercial product. Otherwise you are, as it is frequently said, "playing with electrons in the void" (which is obviously thought a selfish and wrong thing to do). Today I have heard with pleasure that a successful innovative society must know how to equilibrate the mission-driven with the curiosity-driven research.

A third claim was that success might be derived, at least in part, from a unique and functional division of labor. The DFG promotes independent fundamental research and BMF supports the demand-driven research. Universities and the Max Planck Institutes conduct mainly fundamental research, other societies, institutions and enterprises conduct mission driven research. This vision is particularly interesting for us, since in the last years we had a tendency to unify the efforts blurring their limits. Innovation joined science and technology, and recently the three(in our National Development Plant Law)were put under the dominant roof of competitiveness.

And here is the fourth issue I wanted to point out. And this is a striking absence: I didn't hear the word competitiveness in professor Strohschneider's conference. It is understood that the research effort contributes to build a strong national economy, but competitiveness is the final result whenever things are done right. I understand that the functional division of labor has much to do with the fact that the approaches, the tempos, the ways of action, the disciplines involved, and many more factors are diverse. Unification of all the functions is artificial. It does not add

forces, it is not necessary for a productive coordination of efforts, but on the contrary hinders capabilities and limits the horizons.

Competitiveness depends on labor productivity, education, currency strength, macroeconomic stability, access to markets, transport infrastructure, and many other factors, but not exclusively on science. In a similar manner, not all the science is intended to increase competitiveness.

Professor Strohschneider described the framework conditions that made the German research system so successful. We indeed have many possibilities to do joint research, and we have many areas of common interest, but an additional important cooperation issue between Germany and Colombia could be a support to understand which practices favor the building of a productive community of scientists.

Again, professor Strohschneider, I want to thank you very much for sharing with us your knowledge and vast experience. I hope very much that it will be helpful to clarify our thoughts and to inspire our decisions.

Moisés Wasserman

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