The stock market and science policy

A little over a year ago, some of my scientific colleagues became millionaires. They had the foresight to join a start-up company that blossomed and eventually went public to raise money on the stock market. A month after their initial public offering, the shares were trading at three times the initial price. Those who knew these entrepreneurs must have questioned their own career choices when they observed their former fellow footsoldiers of research deciding which type of car was appropriate for their newly acquired financial status.

Governments worldwide also noted these events. For them, it seemed that unemployment problems could finally be solved by the 'high-tech' sector. Some well-prepared economies profited enormously, and many regions around universities were transformed by the new high-tech economy. Politicians cutting ribbons at the premises of biotech and internet companies learned and announced that we were now moving towards a 'knowledge-driven economy'. Their advisors and civil servants were also quick to learn, and new schemes emerged based on the credo that 'the future of our country depends on the intellectual capital that we can generate'. Academics who were previously regarded as self-serving when they gave such advice were now at the vanguard of this economic revolution. Research programmes that placed the emphasis on applications and deliverable products seemed to be outdated, and much more emphasis was placed on long-term strategic, even fundamental, research. Knowledge as a product became respectable. Those scientists who had been involved in committees and relied on chance meetings with policy makers to promote the idea that future benefits would come from a better understanding of living systems felt vindicated. And we were all invigorated as we

thought that this new era would last for some time.

Then the stock market began to 'adjust', seeking a value based on reality. Many overrated or hyped stocks were scrutinised and it often became clear that the 'king had no clothes'. First, the daily increase in the technology indices stalled and then the value of shares started to fall, sometimes catastrophically. The company that I referred to above now has one-twentieth of the value it had a year ago. And we do not yet know how major the setback will finally be, nor what the future holds for the high-tech sector. This is not good news, because our societies need successful companies to drive the economy forward and thereby improve health care, education, energy supply, attention to the underprivileged, etc. The young scientists whom we train in our laboratories need to have productive positions to move to after their education. There is no place for any celebration at the sight of highfliers coming to ground.

Inevitably, there will be consequences for science policies too. Those who believe that politicians would be better occupied improving the quality of roads—the benefit of which can be immediately perceived by voters—than opening laboratories from which the voters feel alienated, will move closer to the relevant ministers again. Less funds for new developments in research will become available, and there will be delays in promised new initiatives as the economies adjust to the new uncertainty. Of course, such an outcome may be over-pessimistic; but it is an outcome that would be very short-sighted and would result in stagnation in the longer term.

It is very important that the roller coaster stock market of today should not be the basis for policy decisions that are fundamental to the future of research. Such decisions are the basis for economies

to expand in the future, and to provide new medications or other products for the benefit of society while ensuring that an adequately trained workforce is available when needed. Those who have gained access to decision makers in the recent 'research is good' period must work even harder to get the message through that the need for a knowledge-based society remains a reality. Research is not a luxury to be indulged in when times are good, it is a constant requirement in today's world. Citizens are enthralled by the developments and understanding that have flown like lava from the volcano of information, and that is increasingly successfully tapped by research teams all over the world. Attempts to slow, as opposed to stop, the pace of such productive work is complicated, as in any ecological niche a small action can have larger, unpredicted effects. The task of attracting the best young people into science will become more difficult if they perceive it as an area with limited prospects. Those who are in research will spend more time writing grant applications with less chance of success and lower benefits if and when they are successful. There can be a recession in research just as there lurks a recession in the economy. This has to be avoided. At the same time, it is essential that we keep telling an honest story and avoid the hype of cures inevitably coming from our research in the near future. This is not the time to promise anything more than we can provide, i.e. knowledge. Hopefully the seeds that were sown in the last few years will have taken root and the policy makers will continue to be convinced that the future will indeed be based on knowledge.

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