

nature medicine

Growing pains

Spain's backing of biomedical research has grown steadily over the past few years, but the direction of some of its key programs could turn this support into a wasted opportunity.

Over the past few years, Spanish scientific productivity has grown at a swift pace in quantitative and qualitative terms, owing to the country's substantial investment in science. This financial support has come in part from the central government, but a growing proportion has come from the governments of the different administrative regions of Spain—the so-called Autonomous Communities.

Broadly speaking, the available resources go to three priorities: the funding of research projects, the creation of academic positions for young scientists and the construction of new research institutes. Both the central and the autonomous governments have invested in these three fronts, but the fiercely competitive Autonomous Communities have favored the formation of new institutes from which to fly the autonomous flag. The central government, in turn, has devoted more of its funds to the development of human resources, setting up programs to support the return of the country's diaspora of up-and-coming scientists who populate labs in the US and elsewhere in Europe.

Although these efforts are certainly worthy of praise, Spanish science has not been free of problems that could derail the country's progress if they don't receive attention.

The creation of new research centers, for example, has been criticized for several reasons. Some of these institutes have been created around single scientists—the institutes' directors—who often get *carte blanche* to take them in any direction they want. This has led to cases in which there are just one or two chief investigators and an army of postdocs working under their supervision, or to instances in which a director singlehandedly chooses the researchers who will work at the institute on the basis of his or her own agenda.

Sometimes, the directors are established researchers who are either at the end of their careers or are managing to keep another lab abroad and simultaneously lead two research teams. Many Spanish researchers have questioned the need to look abroad for people capable of leading the nascent institutes, passing over local scientists who have enough merits to receive the opportunity.

The efforts to create academic positions at home for researchers abroad have also been criticized. An early attempt to bring Spanish scientists back to the country was the creation of 'reincorporation fellowships' in the 1990s. The fellowships, aimed at people at the

end of their postdoctoral training, were little more than two-year salaries to work in someone else's lab while the recipients looked for their own positions in Spain. The success of this program was very limited, as many fellows failed to secure a position. And even for those who managed to break through (often helped by the political influence of their new bosses), success was often limited: they would get a salary, but no independent lab space and no grants.

To fix this problem, the government created a new program in 2001—the Ramón y Cajal fellowships (see page 1106). This time, the awardees were supported for five years, and the research institution they joined was expected to integrate them as staff at the end of the fellowship. Five years later, the prospects of about half of the original Ramón y Cajal fellows are entirely unclear or are no better than hoping for yet another fellowship.

Some critics have rightly said that the Spanish government should have been more cautious before bringing hundreds of people back with these fellowships in the absence of realistic plans to absorb them. But a subtler point derives from the fact that academic positions in Spain, as in other parts of Europe, are for life. As a result, Spanish institutions are full of people who for decades have gotten good salaries and occupied space without producing results. Thus, the government's capability to create more positions is limited by the size of its current staff.

The other side of this coin is that many of those young scientists who currently return to Spain do so because of the undeniable appeal of a job for life, and many misconstrue a fellowship that enables them to go back as an opportunity to join the queue that will guarantee them an academic position.

Eliminating or reducing permanent positions in favor of a performance-based scheme would help address these features of the Spanish scientific system. It is encouraging to see that people in the higher echelons of the country's scientific policy, such as the President of the Consejo Superior de Investigaciones Científicas, are beginning to think along these lines, even though the initial reaction from the establishment has been overtly negative. At the same time, those Autonomous Communities that are filling up their brand new institutes should keep a closer eye on the way recruiting decisions are being made, as there is no shortage of talented young people ripe for the picking.