

CHALLENGES FACING THE KNOWLEDGE SOCIETY

by Enric I. Canela*

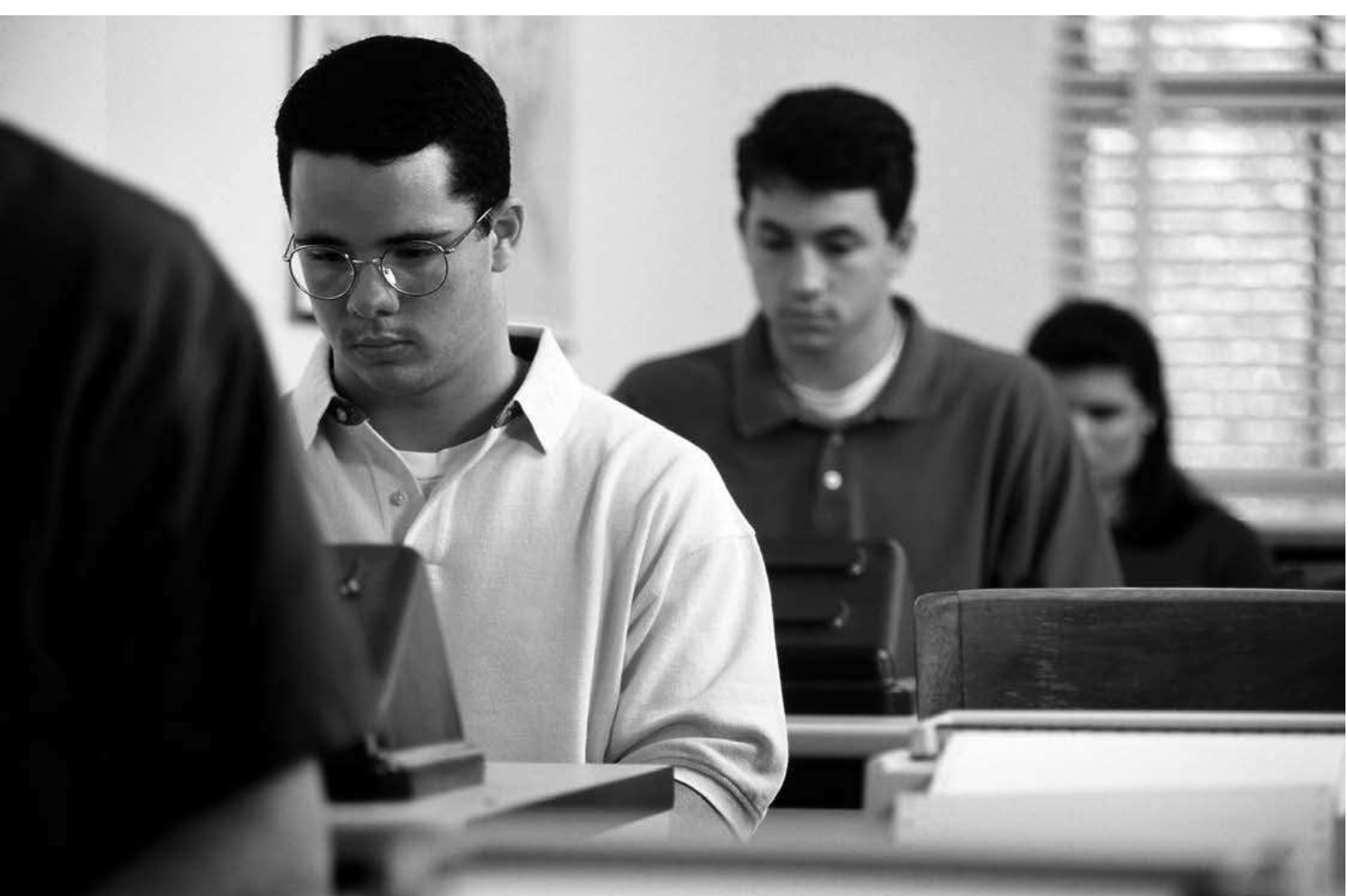
In 2000 the European Union undertook the task of becoming more competitive on the global stage and striving for full employment. These goals were set as part of the so-called Lisbon Strategy¹, to be achieved by the end of the current decade. The rationale behind setting such objectives was neither purely theoretical nor due to acting solely on a whim. Fortunately, the European Union enjoys an enviable welfare system. While there are some differences between member states it is better than some of its main competitors, such as the United States or Japan. Nevertheless, we are in a globalised world full of social inequalities, where we compete against countries that base their economies on a weak welfare system, with few rights and with cheap labour.

Indeed, if the EU wishes to maintain the levels of welfare of its citizens it must change its model of production and generate goods and services with a high added value. The only means to achieve this is through a transformation of the economy to one intensive in terms of knowledge, which requires human capital that is highly trained; striving for excellence in basic and applied research; the transfer of knowledge to society, particularly to companies; development; and innovation in products and processes.

Since the EU is conscious of the need for such changes it has been taking a series of measures to promote activities based on knowledge, in order to strengthen a single market, raise mobility, increase education and the training of its citizens and in order that private investment in research and innovation grows.

Of the many initiatives that have been undertaken, two are noteworthy: the first is the creation of the European Research Area and the second is the creation of the European Higher Education Area (EHEA), or so-called Bologna Process, which goes beyond the EU's borders.

Achieving a potent European Research Area requires a guarantee that the whole of the EU has a sufficient number of researchers at its disposal. The EU has an efficient higher education system and currently produces a greater number of engineering and experimental science graduates and PhD holders than the United States or Japan. Nevertheless, this apparent advantage is subsequently wasted since the number of people employed in research and innovation is vastly inferior. The capacity of the US to attract talent is higher and many researchers from the EU and



other countries eventually migrate there. Meanwhile, far less people move to the EU as it is seen as much less attractive to researchers. The conclusion is that the EU states have a negative balance of talent, which is to say we export more researchers than we import.

THE UNIVERSITIES AND CENTRES OF RESEARCH MUST HAVE A HIGH LEVEL OF TOLERANCE IN ORDER TO BE ATTRACTIVE TO A RANGE OF PEOPLE, WITH DIVERSE IDEAS AND BACKGROUNDS

One of the reasons that explain this negative balance is that employment law in the EU countries is rigid, especially where it concerns universities and public research centres. These organisms lack autonomy in being able to set salaries and working conditions. If to such a lack of autonomy we add the lack of publicity given to job vacancies it is easy to see why few researchers apply from other countries or regions. Such factors work against excellence in research since

it is not always easy to find the best researchers in a particular field in the same region. In terms of the business world, although European mobility is not particularly high, the problem is not as serious. Nevertheless, we must keep in mind that mobility in the EU is still not very easy and for this reason it is not sufficiently widespread.

One of the measures that was adopted early on to promote mobility was the Erasmus programme, which stimulates mobility among students of EU member states. It is a system that has shown itself to be efficient and has meant that many European university students have taken a small part of their course outside of their home country. The Erasmus programme will probably be more efficient once the EHEA is fully functioning and clear, transparent procedures are in place for recognising the qualifications and skills acquired during training.

The full implementation of the programme, however, is limited by the availability of economic resources of potential candidates for the pro-

gramme. If it is truly to be a European political option all member states must strongly support it and increase their budgets in order to avoid inequalities in the uptake of the programme due to the economic circumstances of the applicants.

Unfortunately the construction of the EHEA has not yet finished. Many states, of which Spain is one, face the transition with reluctance and still maintain excessive differences in terms of the length of courses and the heterogeneity of their education systems. The majority of states in the EU have adopted a model of three years for a degree course and two years for a master's. Some are flexible and allow for the existence of both three and four year degrees, according to the area of study. Albania, Ireland, Latvia and Luxembourg fall into the latter category in that they allow for a three-year degree with a two-year master's or a four-year degree and a one-year master's, depending on the subject. The states that have settled on what I see as the mistaken option of homogenous, four-year degrees are: Armenia, Bulgaria, Spain, Greece, Lithuania, Moldova, Russia, Turkey, Ukraine and Cyprus. They have opted for degrees of four years followed by either half a year, one year, or two years of further study to attain a master's. The main reason why I hold my opinion that this is a mistake is that, in countries with three-year degrees plus two-year master's, students that have finished their degree would have no interest in completing their studies in a country where it only takes one year. Such an option subsequently loses its attraction. It remains to be seen how these differences are overcome in order to construct a European Union with a labour-force and student population that has a high level of mobility.

Nevertheless, the public sector of certain EU countries is often unable to make attractive offers of work since realistic working conditions and salaries cannot be negotiated. This arises because the salary is not determined by the value and skills of the candidate, but rather by state legislation, which is applied across the board, regardless of specific qualifications or the sector and level of the position to be filled. What is more, salaries are

often not linked to the output of the activity, but rather they are mainly determined by how long the employee has held the post, regardless of the actual results.

The diagnosis appears even more serious when we observe that the EU invests less in creating and maintaining research centres than the US or Japan. The direct consequence is, naturally, fewer positions for highly qualified researchers. As a result, researchers are led to search for work abroad and their return is practically impossible if they are to maintain their working conditions.

ACHIEVING A POTENT EUROPEAN RESEARCH AREA REQUIRES A GUARANTEE THAT THE WHOLE OF THE EU HAS A SUFFICIENT NUMBER OF RESEARCHERS AT ITS DISPOSAL

It is not only a question of resources and mobility, however. Richard Florida² argues for the importance of universities and research centres forming part of an ecosystem in which companies can absorb the fruits of research in order to convert them into commercial applications and ultimately into industrial development and long-term growth. For this to happen, Florida argues, a particular region must generate what he calls a 'creative economy' resulting from research and thus take advantage of knowledge held by society. Such a system would form a self-sustaining system whereby the universities play an important role in generating, attracting and retaining talent. They will be able to generate talent given the necessary staff and resources, but in order to successfully attract and retain talent other factors are required. The universities and centres of research, as well as the environment in which they are found, must have a high level of tolerance in order to be attractive to a range of people, with diverse ideas, backgrounds and so on. They must be ready to accept new ideas, diversity, differences and certain eccentricities. In short, Florida high-



lights the need for ‘the three Ts: talent, technology and tolerance’.

We need to question whether the universities and regions of the EU zone supply these conditions to a sufficient degree. Do they have, or are they capable of having, clusters that are rich in technology, full of talent and with a tolerance for diversity in order to generate, attract and retain innovation? They need to create sustainable prosperity and living standards that are constantly improving for their inhabitants. Unfortunately, the answer is in general, ‘no’, although there are some ‘megaregions’ which contain technological clusters that are capable of absorbing the results of research and creating spin-off companies. Nevertheless, the economic potential of such regions does not match the United States’ capacity to attract foreign talent and to retain its intellectual capital.

Let us examine the situation in Catalunya, a country with an area which exceeds some EU

states, such as Belgium, Slovenia, Cyprus, Luxembourg and Malta. It has an Autonomous Statute, which in some aspects allows for great freedom in decision-making. However, when it comes to the field of higher education, Catalunya is bound by the rigid bureaucratic norms of the Spanish state. An example of this is that universities are obliged to offer four-year degrees, with one-year master’s programmes, with the ensuing disadvantages outlined above. This is against the will of the universities themselves and the Catalan government. Catalan public universities are autonomous when it comes to choosing and recruiting their staff, but they are unable to negotiate their salaries or offer performance-based incentives. Nor are they free to choose their own students. Such a situation complicates the universities’ ability to attract and retain talent.

A desire to partially solve this problem led the Catalan government to create the Catalan Institution for Research and Advanced Studies (ICREA in Catalan). It is a body which recruits

researchers from anywhere in the world, purely on merit, without any bureaucratic preconditions. In this way Catalan universities and research centres are better placed to attract researchers. The resources dedicated to the Institute are currently insufficient to make the necessary transformation, but it is a step in the right direction. It will also be necessary to create more research centres linked to universities.

Some months ago, the Bruegel Group³ published a report that highlighted the fact that the quality of research undertaken by universities depends upon the investment in higher education and research. The experts argued that there is an economic and an organisational difference between universities in the EU and the United States. While money is a significant factor, so too is poor management, a lack of autonomy and the perverse incentive scheme for lecturers which the majority of European universities appear to operate. The report outlines a series of actions aimed at improving the current situation. It highlights the need to increase investment in universities by 1% of GDP over ten years, although it does not specify whether said funding should be public or pri-

vate. In addition, the experts suggest that university autonomy should be strengthened in terms of the setting of budgets, employment of personnel, salaries, design of courses and the selection of students, particularly in terms of master's courses. All these steps are necessary if investment in higher education and research is to be truly profitable.

Catalunya leads the way in business schools, being home to the renowned IESE and ESADE institutes as well as the newly formed Barcelona Graduate School of Economics. However, in spite of having a dynamic economy, Catalunya is prone to deficiencies that are typical of a Latin nation with a Catholic tradition: lack of success in a business venture is seen as a failure, rather than an opportunity to learn in order to do better. The stigma of failure typically accompanies those that fail to triumph. We must keep in mind that intelligence is not associated with any one country, differences stem from cultural, religious, political and other factors that mean that there are differences in priorities. The differences between one country and another are in organisation and investment. Undoubtedly everyone is aware of the latter, but often the former is forgotten.

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1 http://europa.eu/lisbon_treaty/index_en.htm

2 The University and the Creative Economy. Richard Florida, Gary Gates and Kevin Stolarick (2006) http://creativeclass.com/rfcgdb/articles/University_andthe_Creative_Economy.pdf

3 http://www.bruegel.org/Public/Publication_detail.php?ID=1169&publicationID=4618