

## ENTREPRENEURSHIP: NEW CHALLENGES FOR HIGHER EDUCATION INSTITUTIONS

*Josep Lladós*  
*Universitat Oberta de Catalunya*

*We will either find a way, or make one*  
Hannibal Barca  
(Before crossing the Pyrenees on the way to Rome, 3<sup>rd</sup> Century BC)

Many recent economic analyses show that the digital revolution and global competition have speeded up technological progress and appreciably reduced the lifecycle of numerous products and technologies. In the world's leading economies, the close links between creativity, entrepreneurship and innovation are evident. A substantial part of the changes in the recent economic growth of these economies has been the result of the direct contribution of new businesses created by entrepreneurs.

It is becoming more widespread the conviction that **entrepreneurs play a crucial role as agents of social and economic change**, identifying and making the most of the existing opportunities in the market, opening up or creating new markets and capitalising on these opportunities through the construction of a new business that generates employment. So, by finding new ways of doing things, they stimulate changes that improve the efficiency or productivity of an economy.

**Many people have a biased image of what an entrepreneur is.** If we asked people for an entrepreneur, the majority would probably speak of the founder of a successful technology company who has built up a huge business empire. In the popular mindset, an entrepreneur is still seen as a visionary, one who risks everything and overcomes great difficulties in the quest for wealth. For some, they become an almost heroic figure, while for others they are a kind of lone and predatory wolf.

The truth, though, is rather different and the appearance of a new business is often the result of **a lot of talent, experience and systematic hard work by energetic people**

**who invest a lot of time and hopes** in transforming an idea or an invention into something that can be commercialised.

We need to ask, then, the determining causes of the entrepreneurial spirit in a society, and in particular the main reasons that drive the decision to create a new business. Insofar as we are all aware that **innovation and entrepreneurship are not simply the result of having a brilliant idea** but the fruit of complex processes of invention, development and commercialisation of products, we ought to think that talent should become the most determining factor of the entrepreneurial drive of a society.

However, in asking the reasons for the creation of businesses, we get less obvious answers than would appear. Initially, we might think that entrepreneurs are basically motivated by economic need, by the desire to make money, by social recognition or by the independence that comes with setting up your own business. In fact, some authors differentiate entrepreneurs according to their motivations as they feel that creativity and the ability to innovate are different in each case.

A person chooses to set up a business as a consequence of a variety of reasons, and it is right to say that new businesses are usually the reflection of what their founders expected. If the desire for independence outstrips the desire for wealth, we should not be surprised when the financial yield is different. **The type of motivation, therefore, is not irrelevant.**

If we consider that people decide to set up businesses for very different reasons, it would probably be necessary to understand these reasons in order to understand better the mechanisms determining entrepreneurship. Different studies indicate, however, that the main reason why people start a business has nothing to do with earning a lot of money, being famous or recognised, looking for adventure or improving the world but primarily because, for a variety of reasons, they do not want to carry on working for someone else.

Evidently, this desire for personal independence is associated with what we could consider to be a higher social objective related to improved wellbeing that results from answering new or unsatisfied needs. **Many entrepreneurs are driven to act because their aspirations are not satisfied in their present job.** This drive will probably be more intense when the potential entrepreneur is aware that their ideas have a far

higher value than the remuneration they get in the company where they work and when the mechanisms for retaining talent in the company do not work properly.

An entrepreneur, therefore, is generally someone who is convinced that they will find a new way of doing something or a new product or service to offer. **Being an entrepreneur, therefore, means being alert to opportunities, wanting to take on risks and having a propensity to change.** All in all, it probably requires energy, optimism, a certain degree of vision and temerity and, evidently, ability.

Entrepreneurial behaviour is probably the result both of personal traits and of the influence of the environment. Both influences necessarily interact, as irrespective of what the entrepreneurial person is like, they will require a setting that affords them access to the appropriate resources. Similarly, many studies show how the availability of resources per se is never sufficient to foster the creation of new businesses.

Generally speaking, it is asserted that the personal factors that affect the probability of developing a business are related to the family background, psychological profile, level of education and previous work experience of the entrepreneur. A great deal of evidence confirms that the propensity to set up a new business is highly related to family background: **most entrepreneurs have a family member (or friend) who is an entrepreneur or self-employed.** The most frequent explanation is that these people act as a role model and, besides being a reference point, can also provide the new entrepreneur with financial support.

Studies also show that both in Europe and in the United States **middle-aged people, with a high level of education and previous work and technical experience are the most active entrepreneurial group,** with the greatest probabilities of success and who set up businesses demanding qualified and well-paid work. It is evident that some of the skills that an entrepreneur requires can also be acquired working for others, especially when they have team management and supervision experience, expertise in consumer analysis and knowledge of the technological and market characteristics of the sector in which they want to set up their business. Significantly, a large proportion of successful entrepreneurs come from small- and medium-sized companies, as in these cases their previous professional experience was broader and less specialised.

As regards the psychological aspects, part of the research into the psychology of the entrepreneur indicates that certain personality traits could lead to a more

entrepreneurial behaviour, although other studies feel that these traits are the result of the influence of other factors on behaviour. From this point of view, **entrepreneurship would not simply be an inherent trait but essentially a skill that can be acquired and developed**. Therefore, personality would naturally play a specific role but it would necessarily be interacting with development, context and opportunity. It appears to be difficult, therefore, to identify a standard entrepreneurial personality type, although studies of technology-based entrepreneurs indicate that this behaviour is more closely associated with a behaviour far removed from speculation and irrational risk-taking. Making the most of talent would, therefore, be accompanied by the willingness to undertake responsibilities when finding solutions to problems, to establish realistic challenges and to adopt calculated risks and in the requirement of a high degree of personal satisfaction.

But does the level of education and talent management impact on a society? The relationship between education and entrepreneurship is apparently more complex than it appears. The high public profile of certain very successful entrepreneurs who did not go to university has given rise to the image that going to university does not make people more entrepreneurial. In fact, one does not need to be a PhD to be a successful entrepreneur but the analyses made in different environments show us that once other socioeconomic variables (such as gender, age, race, previous level of income or business sector) have been taken into account and isolated, **the higher the level of education, the higher the predisposition of the person to set up their own business**.

We might think that if higher education, which is costly in terms of time and money, did not translate into obvious advantages when setting up a new business, it would be difficult to understand how the current boom in specific courses on offer at numerous universities can survive. Sometimes, we might even think that in our society as a whole there are more training opportunities than the number of entrepreneurs!

It is not easy to assess the results and significance of entrepreneurial promotion programmes. All over the world, the range of training programmes that aim to foster the entrepreneurial spirit has grown spectacularly, both in terms of numbers and of heterogeneity. This expansion has been stimulated by the conviction of the role of entrepreneurs as a driving force of economic progress and by a perception that a university education in business science alone does not favour the development of entrepreneurial attitudes in students.

In fact, does increasing the group of students who have theoretical knowledge lead to a greater number of entrepreneurs? Much empirical research shows how the spectacular growth in courses run by universities has not been accompanied by a boom in entrepreneurial activity. On the one hand, entrepreneur support programmes can scarcely be outside the socioeconomic, educational and cultural context of the country where they are promoted and their position in the global economy. On the other, in many cases, a biased focus of these programmes is identified, with a probably excessive emphasis on the starting phase and on rapid-growth, high-yield businesses.

Some research highlights how, in some local environments inclined to the creation of knowledge-intensive businesses, **it is the entrepreneurs with a high level of education, committed to ongoing education and with labour experience, who set up the businesses that display a better development in the market and that generate well-paid jobs.** In many of these cases, the new business is not born in a university incubator or is the result of ideas that came out of a laboratory. Neither is it the extensive range of training courses that has fostered entrepreneurship but essentially the inability of the company where they work to remunerate their innovative ideas adequately.

However, entrepreneurship depends unfailingly on a context, on a predisposition and on skills. In fact, the need and requirements of quality education appear to be highly evident. Very significantly, research shows us how people who set up a business not only concern themselves with learning the information in the specific entrepreneurship programmes but that they also tend to study on training programmes related to the type of work in which they are setting up their business. The study of the education basis of successful new entrepreneurs shows a wise combination between the general mastery of business skills and the specific knowledge of those aspects that favour the feasibility of their business ideas. Certainly, in our societies, the level of technological complexity is growing and new advances increasingly call for a broader knowledge base and training. It is essential, therefore, that the university system is able to respond to this challenge by developing well-designed educational programmes for entrepreneurs.

Where does the strategic role of universities lie? There is a broad political consensus that training in entrepreneurial skills has to improve the quality and quantity of university-based entrepreneurs in order to improve the basic knowledge and abilities needed to start up a new business and make it viable. This way, most of university

systems have developed a broad and extensive range of support initiatives and have promoted strategic links with the respective local and national industries. Certainly, the entrepreneurial motivation and business skills of new graduates have been improved, yet rates of entrepreneurs are still at modest levels in the world's main economies insofar as many graduates still prefer the conventional career path with a large multinational or even in the public administration.

However, the pressure on the university system is growing. Added to the classic mission of creating and disseminating knowledge is the need to improve the competitive advantages of the local and regional productive sector by means of a sort of academic capitalism. The well-known model of the triple helix highlights the fundamental role of universities in the system of innovation of an economy supported on knowledge, at the same level as industry and the public administration, in a setting of strategic interaction, reciprocity and co-responsibility. The incubation of new entrepreneurial initiatives, the provision of material resources and the fostering of the skills of these new entrepreneurs becomes a common function of many universities. Today, in different university environments, **incubation is becoming a central and prestigious academic activity** of the emerging paradigm of entrepreneurial universities.

This institutional mission cannot adequately be met without **taking into account the context characterised by the digital revolution and the global economy**. Unfailingly, both university incubators and entrepreneurs will be increasingly part of regional or global networks. Universities have to think strategically and take on board that the resources that we offer our entrepreneurial graduates have to transcend those available in the geographical area of influence and be able to get the most out of the positive and synergic interaction with international stakeholders – including other incubator organisations – in order to obtain gains in economic efficiency, open up the range of opportunities and construct more intangible assets.

In turn, the digital revolution offers us the challenge and opportunity of providing a response to a new innovative student profile: the digital entrepreneur. The economic application of internet technologies breaks down some obstacles to innovation, brings forth new business opportunities and concepts, opens up access to electronic markets, favours internationalisation, improves the availability of new means and resources and facilitates interaction with strategic allies.

The action of many digital entrepreneurs is not only opening up new markets but is also having an appreciable effect on existing markets. Some local and regional markets of traditional services are becoming emerging global digital markets as a result of the disruptive process caused by the arrival of these entrepreneurs. There appears to be a clear future growth potential for these new technology-based businesses.

Digital entrepreneurs require the ability to process adequately the continuous information flows and technological advances that surround them in order to transform this knowledge into the creation of value. Many of them interact strategically using ICT, in the form of virtual networks and teams of entrepreneurs, in order to explore and exploit new business opportunities, search for complementary resources and overcome market obstacles.

This new profile of entrepreneur, who requires highly specialised support, uses up little physical space and seeks opportunities to enter global networks, **represents a challenge for university institutions scarcely accustomed to working in virtual environments, also in the field of incubation.**

Furthermore, a growing number of graduates are becoming involved in entrepreneurial activities aimed at achieving social objectives. These entrepreneurs, who often have a different perception and valuation of opportunities, **become new driving forces of systemic transformation and social change.** Their role in meeting social needs is growing in such fields as the environment, health, education and the consequences of poverty.

In achieving their mission, the construction of social capital often becomes a critical factor as the problems they face can rarely be solved independently. The diversity required of stakeholders and knowledge that are necessary for the success and sustainability of these initiatives **opens up the opportunity to the university to expand its ability to create social value.**

In fact, **the education system can not only help in the acquisition and development of people's entrepreneurial skill but it can also contribute significantly to reducing the obstacles to entrepreneurial initiative from different aspects,** as entrepreneurial activities can be restricted by different elements. Besides bureaucratic, administrative and, evidently, financial obstacles, one of the most restrictive elements to entrepreneurship is the presence of an unfavourable institutional

framework, understanding as such the aspects linked to attitudes, values, rules and social habits. In our society, this represents one of the most important barriers to entrepreneurial activity insofar as until very recently the figure of the entrepreneur and the entrepreneurial function has not been sufficiently valued socially.

Creating a general awareness more favourable to entrepreneurial activity means **redefining the attitudes of the members of society and increasing their opportunities to start a business**, this requires continuous effort and the collaboration of the education sector, the financial system and the media, while also involving the introduction of changes to knowledge, attitudes and social behaviour.

In the education field, we should highlight, on the one hand, the increasingly present and widespread programmes in universities that aim to favour the entrepreneurial behaviour and business creation, through the deployment of courses and the organisation of specific activities in the curriculum. It should be hoped that in the European countries this offer grows with the implementation of the European Higher Education Area, whose objectives of improving professional skills and the employment options of the student strengthen the learning of these skills. Within pre-university education, there are also various initiatives to construct a reference framework open to entrepreneurial situations and to arouse curiosity, creativity and the innovative performance among students, such as visits to companies and business creation and administration simulation exercises.

These learning innovations become a fundamental mechanism in favouring a change of attitude towards the figure of the businessperson or entrepreneur, rejecting the more conservative image, accepting business failure and reinforcing it with a legitimate, feasible and positive option. Evidently, these actions for generating talent and disseminating the entrepreneurial culture will have to be reinforced by action in the media as instruments conveying **the predominant cultural values** and also by the public economic promotion agencies and the university business incubators, publicising the best practices and organising events for the social recognition and awarding of prizes to entrepreneurs, which also favours the creation of reference models for potential entrepreneurs.

As has been stated, motivation is one of the other elements extensively studied in the psychological approaches to the entrepreneurial initiative, which is commonly related to the spirit of risk and the search for alternative income. Probably, some of the elements

that play a part in its favour are **the desire for independence, for personal realisation and for the practical and autonomous application of one's own ideas; skills that need to be stimulated throughout people's training period.** Through the dissemination of reference models of this professional alternative, new aspirations and expectations may emerge, which may in addition contribute to enhancing creative thought.

The dissemination of values, know-how and ways of thinking linked to entrepreneurship very probably help show the legitimacy and attraction of the entrepreneurial option in the professional field, but **some critical aspects in the configuration of the entrepreneurial culture, such as avoiding an excessive aversion to risk, a disproportionate punishment for failures and being able to promote creativity, talent and personal initiative are also aspects of the education system** that have an impact on students' personality and that have to be well configured long before students enter university, even though it would be necessary for them to be reinforced also through ongoing learning actions throughout people's professional life.

It is often thought that people's lack of business experience and skills becomes the main factor limiting entrepreneurship. As has been commented, in the educational sphere it is also common for many schools and faculties to deploy courses and learning plans that are related to business economics and/or offer professional practical placements that enable students to come into contact with the business world. Besides this, many other institutions contribute to favouring the development of these skills by organising a range of activities, including numerous seminars, conferences or training courses.

With these initiatives, the aim is to inject confidence in the person in relation to their professional skills and their ability to set up a business and to contribute positively to the development of entrepreneurship initiatives. Even though recent studies show how previous professional experience, past experience in setting up businesses and the fact of having worked in the same sector in which the new business is to be created are the most determining factors in entrepreneurial success, many entrepreneurs recognise that these **external influences also become a determining core of motivation.**

It is revealing that one of the factors that limit the efficiency of these actions to improve the institutional framework that the education system carries out with great effort is the

fact that the tradition of pedagogy and education often still reflects current employment needs and places the emphasis on the contents and acquisition of knowledge rather than on skills and practice, which highlights **how inappropriate are the approaches to entrepreneurship that are made from a benevolent and protectionist academicism.**

Another of the important challenges facing the university system committed to support and entrepreneurship is being able **to construct more hybrid identities from among its faculty and research staff that foster new roles of academic entrepreneurs:** those that combine the utmost academic and scientific quality with the attention to entrepreneurial activities and with commercial content.

One of the main drivers of social transformation is nowadays the use of technology. The knowledge embedded in the digital technologies and their use in production, commercialisation, consumption and leisure activities are giving rise to the emergence of new economic, social and educational paradigms. Nowadays, innovations require a broader and more diverse knowledge base such that entrepreneurs face an ever more complex environment, which is why it is important that they are able to take advantage of the different types of knowledge at their disposal and share in those collective learning processes that expand their knowledge base. Therefore, it is outstanding the challenge of a conventional education system whose aim is to promote the entrepreneurial mind among its students. In fact, in this more complex environment, **it is probably the successful entrepreneurs who have based their businesses on the strategic use of innovative technologies who have to be the principal agents in the design and implementation of the training programmes** that seek to be effective when it comes to helping entrepreneurial people.

If, in the knowledge economy, the person is the most relevant factor because high-qualified and -skilled work is the principal driving agent and disseminator of new knowledge, entrepreneurship therefore becomes one of the essential mechanisms of the creation and transmission of knowledge of a country. Recent studies into entrepreneurial activity show how, **insofar as people want to benefit from the yields of their knowledge and become entrepreneurs, a business opportunity emerges and with it a new innovative company.** In these start-up cases, the process of innovation will develop on the basis of the knowledge provided by the entrepreneur and the diversity of organisational forms made possible by the application of digital technologies favours this process. It is by no means strange, then, that a great many

recent innovations in products or services in emerging activities are the result of these new businesses.

All over the world, this evolution requires new organisational and work forms. The new competitive businesses show a network configuration and they are self-organising in multidisciplinary work teams of variable geometry, breaking down the traditional barriers of functional areas. Specialisation based on knowledge and direct communications enable the configuration of specific work teams for each project. **This flexibility calls for creative and talented people with a vocation of responsibility and leadership, with self-scheduling and teamwork skills, with a spirit of risk and with a strong involvement in long life learning.** These skills are the ones that should be fostered by the education system of a society that seeks to improve parameters of wellbeing through a more entrepreneurial population.

The lack of a relational culture can also entail a significant obstacle to business creation as social networks based on relationships of mutual trust and respect allow people to come into contact with other agents, detect opportunities, build alliances and foster the transfer of knowledge. At the start of the creation process, it is common for entrepreneurs to use their reference groups as points of access to new social networks. This informal learning process is based on skills that have to be developed throughout people's education as, in order to ensure the growth and consolidation of the business, over time they will need formalised links that enable them to reach commercial agreements and develop cooperative networks and new forms of social relationships.

A sign of the huge importance that is given to relational culture as a success factor is the fact that many public business support agencies focus their material and financial efforts on favouring these networking actions. However, **we should avoid the temptation of believing that people's knowledge and abilities are less important than their address book.** Certainly, innovation processes are eminently interactive and collective, such that entrepreneurs do not innovate in isolation. However, in reality, most successful entrepreneurs did not begin with very extensive social networks. It is a question, then, of the **level of qualification, of previous experience, of the ability to absorb and assimilate external knowledge, of being able to take advantage of business opportunities and a wise selection of interactions** rather than the simple proximity of the entrepreneurs to a specific environment or the size of their relational networks.

In our societies, improved economic and social productivity will be based in the future on being able to create new jobs with higher value and on being able to add more value to present jobs. And society as a whole devoting more effort to investing in talent will have to enable ideas worldwide to become tangible realities and others that have already emerged to be able to offer a greater social yield.

---