

War for Brains

The availability of brains is one of the strategic factors in the emerging knowledge-based economies of the 21st century. It will be the engine for strong growth rates, high income and lower unemployment – also for less qualified people. The importance of brains for the economic success of a society stems from the positive stimulating growth effects of knowledge externalities, and the fact that knowledge spillovers are locally bounded. A strategic decision therefore has to be taken by policymakers: should they produce brains nationally and invest in the accumulation of human capital by publicly subsidising education and research activities? Or should an economy “free ride” and “import” human capital that has been produced outside the country – and that has been financed by others?

Historically in Europe, the answer has been a strong tendency towards a home-based accumulation of human capital. Schooling and advanced education have been seen as typical national tasks. However, the national dimension of human capital has changed dramatically in recent years. Advances in microelectronics, further progress in computer technology, new telecommunications developments and modern transportation systems have reduced transaction costs and the costs of long-distance movements of human capital. Human capital has become internationally mobile. People can move around the world within hours, their human capital goes even faster and is available worldwide within seconds. Highly skilled people have the opportunity to communicate and to sell their knowledge around the globe. Cyberspace and the internet allow them to become functionally mobile while staying at their home base. The result is a spaceless and timeless worldwide mobility of human capital without migration of people.

This functional mobility without migration of people means that the location of the human capital provider and that of the human capital user may differ substantially. A very recent example stems from medicine: a surgeon in New York removed the gall-bladder of a patient while the latter was lying in a hospital in Strasbourg. Tele-medicine and a highly sophisticated robot made possible this operation over a distance of about 7000 kilometres. In education, virtual universities are gaining momentum and professors interact with their students via the internet. Many more service activities do not need personal contact between the provider and the user of human capital. The virtual service business will become even more attractive as a consequence of the brutal terror attacks against America of 11th September: more intensive security checks, longer waiting lines, increasing air ticket costs and fears that it could happen again will make more people want to meet each other in cyberspace rather than in real places.

The split between people and their human capital has fundamental economic consequences. When a surgeon can sit anywhere in a medical computer laboratory to treat his patients wherever they are on Earth, the key question becomes what factors determine the surgeon's choice. And the really new answer is that the decision depends much more on income spending than on income generation. It is the place of living and not the place of work that matters. The surgeon will choose an area of residence where he gets the highest standard of living and he will offer his services worldwide from this place. All this means that the choice of location is not so much the result of hard production factors like natural resources, industrial facilities or cheap land, and not even state subsidies or corporate taxes are key issues. More important are soft factors like high security, low crime rates, good international schools, beautiful parks, excellent sports facilities and an open-minded neighbourhood.

The more mobile brains become, the more a worldwide war for brains will arise. Just as flowers do their best to attract insects to make use of the latter's mobility and to compensate for their own immobility, locations with their immobile people will do their best to attract mobile brains. And the potential rewards for the most attractive places are worth the efforts. Attracting a few key people could be decisive for the success or failure of the whole economy. There are thousands of locations and millions of people but only one Julia Roberts. And she is the one that makes the difference between a shallow B-movie and a cash-bringing blockbuster. Thus, settled people, invested capital, infrastructure facilities, airports and business areas will fight to attract highly skilled people and to share at least to some degree in their professional success and to earn a complementary rent. Furthermore, locations will specialise in producing "attractivity" that can be sold to mobile brains. What began with off-shore locations for financial capital will continue for human capital as well.

While historically the United States has been extremely pragmatic and has rolled out red carpets to brains from all over the world, Europe has been reluctant to open its borders. The understanding of knowledge as an internationally tradable economic commodity is rather new for Europe. The import of brains via the immigration of highly skilled people has emerged as a strategy just recently. Opinion has only started to change now that qualified workers in the information and communication sectors have become scarce. More and more Europeans realise that in a knowledge-based economy the internationalisation of knowledge production, knowledge trading and knowledge application is crucial for success or failure and for wealth or poverty – also for lower qualified Europeans!

The main issue is how to capture the geographically localised positive knowledge externalities of skilled people. If we look at the USA we see immediately how successfully it applies this strategy. America is good at attracting the highly skilled because of a number of natural and man-made benefits. The quality of life is very important to the highly skilled. They want to live where the weather is nice and the environment is clean. Safety, freedom of choice, freedom to act and to move, guaranteed property rights and friendly surroundings in which they can raise healthy children are additional factors that influence the decision. Therefore, in addition to natural attributes, such as sun, sea and sand, man-made political and social factors play a role.

The most powerful weapon in the war for brains is the openness of a system. This means intellectual openness to new ideas, innovation and knowledge. It also means social openness to new forms of living and opportunities to move up the social ladder from dishwasher to millionaire. And it means openness to foreigners. The ability to enter and leave without significant barriers such as residence registration and other "red tape" makes a difference.

The highly skilled like to live in clusters. Nationality does not matter so much. More important is a familiar social milieu. Brains prefer to cluster with other brains. Thus, a cumulative process gets started. One highly skilled worker leads to another, who looks for an innovative environment and like-minded colleagues offering the creative atmosphere for new ideas, better opportunities and future career prospects. In turn, the supply of highly skilled attracts companies to these "core" areas. Silicon Valley is an example of the success of such a model.

Late, but hopefully not too late, Europe's slowly ageing society has started to realise that with defensive tactics the emerging war for brains will be lost before it has really begun. European countries are beginning to open up their borders to facilitate immigration. The barbaric terrorist attack against America may provoke a backlash. This would be worse than stupid: it would be a tremendous loss of opportunities. The climax of the western European drama could be the failure to seize a unique chance. Millions of highly qualified brains live on the doorstep of the EU. But instead of rolling out red carpets, EU politicians are considering hanging old iron curtains up again and delaying the granting of the right of free movement to people from the new east European member states. It is time for the European Union to wake up and go into the offensive in the battle for talents in central and eastern Europe.

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