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## Article

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## Resilience Thanks to Digital Applications: Driving Force of Regional Development

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**Abstract** *The English word Resilience appeals in the present days to many disciplines: armament and aerospace, ecology and biology, economy, physics, thermal, psychology, informatics, art and governance. The present article treats the economic definition of the word and its consequences because resilience is the ability to get back on the growth track after suffering a shock.*

**Key words** Regional development, digital economy, resilience, food industry  
JEL Codes: L66, Q18

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### 1. Introduction

Most economists consider regionalization to be a good thing because it frees competition, channelling people's energies and countries' resources to the activities they are most productive in. When examining regionalization - and in particular the de jure and/or de facto regional groups in Europe, North America or Asia-Pacific - economists are wondering if these processes contribute to accelerating or, on the contrary, braking globalization.

Many economic fall backs took place in the 20<sup>th</sup> century. By the end of 1991, the European continent was totally rebuilt. The communist world imploded and Central and Eastern European countries regained a new freedom. Under the influence of Helmut Kohl, but also of British politicians, who saw vast new economic opportunities, a speed procedure was set up in order to integrate the new democratic countries into the European Union. In 2004, the European Union absorbed ten new member states, two years later two more<sup>1</sup>. And the new member states were supported by all means. They embraced capitalism as economic system and introduced democracy as political organisation. I still remember my first visit to Poland in 1996 where the Belgian Ambassador in those days told me: "This economy grows in a stunning way. They reached now already the level, where we assumed they would be after twenty years." The countries were low wages countries close by the interest of Western-European and American companies to invest and thrive on this well-educated low cost work force were impressive.

But the world changed likewise, and at a quicker pace than the European integration. The acronym "BRIC" was launched in 2001 by Goldman Sachs. The acronym refers to Brazil, Russia, India and China; economies that started to grow at a tremendous pace after their political leaders decided to embrace global capitalism (Farah, 2006). The interest for Central and Eastern European economies and the newly created markets lowered quickly, because more densely populated areas with more buying power appeared at the horizon. Especially after they became member states to the European Union, the new European democracies lost attraction especially of the multinationals who like to "shop" for the lowest cost. Economic progress was introduced in the new member states but not disseminated into the entire country. Some areas of the country did well, others were forgotten and struggled with an obsolete economy, unprepared for a quickly changing world.

After the financial crisis of 2008, the Central and Easter-European economies were joined by the Southern-European economies. Although member states since the eighties<sup>2</sup>, they also had to catch up with the rules of capitalism and democracy. Their eagerness to join the club was not followed by the introduction of a multi-sectorial economy. Portugal was used as a low wages country by Italy, producing textile, agro- and leather products, sold as Italian luxury goods. Spain thrived on its booming building sector. Greece forgot to privatise its most essential parts of the economy and depended on its shipping business hoping for the loyalty of its super-rich shipping tycoons. We are all aware of the results. This time they have to reorganise their economy because their creditors put a knife to their throats, which is always a very unpleasant feeling.

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<sup>1</sup> [http://europa.eu/about-eu/eu-history/index\\_en.htm](http://europa.eu/about-eu/eu-history/index_en.htm)

<sup>2</sup> In 1981, Greece becomes the 10th member of the EU and Spain and Portugal follow five years later.

## 2. Resilience through digital economy

Economic literature has promoted a new conception, opposed to these points of view, and agreed by most specialists, which takes into account several degrees of depth and enlargement stages of regionalization. Thus, it is considered that there is first degree integration, in which the structures of production and trade are ordered by a more or less spontaneous form determined by the law of the competitive market. The second degree of integration/regionalization takes into account the fact that intergovernmental institutions and supranational authorities play a major role in conducting exchanges, while in the third degree is the ultimate, supreme stage of regionalization, being considered ideal.

But in all these misadventures, there are regions that bow their heads and wait until the tide changes and regions that rise again and fight for a better future. I could give the obvious examples in several European countries. They are mostly situated in densely populated areas with a population that has traditionally a more than average buying power: the Kent area in the UK, Flanders in Belgium, the Randstad Holland area in the Netherlands, Paris and Rhône-Alpes in France, Lombardia in Italy, Catalunya and Bask country in Spain, the Malmö and the Stockholm area in Sweden, Bavaria in Germany. They all had their dip, but because of a combination of elements -well developed education system and famous universities, traditional well managed homeland companies in various sectors, a geographically interesting location, a local authority with a national impact- they found their way out and restarted the growth process.

More striking is for example the Brainport Region Eindhoven. At the end of the nineteenth century manufacturing began to flourish, with Philips and DAF the most influential players. Eindhoven became a real 'company town' that shone throughout the region. The character of industrial Eindhoven has changed since 1970. The tobacco and textile industries have disappeared. DAF sold its car division to Volvo but remained successful in the production and development of trucks and coach undercarriages. The bankruptcy of DAF and reorganisation of Philips in the 1990s cost the region 36,000 jobs. The city was on the verge of a disaster. So the governors of the Eindhoven region opted for a new style of cooperation. This initiative taken by the chairman of the local chamber of commerce and the executive chairman of Eindhoven Technical University saw intensive co-operation between government, industry and research in a Triple Helix that attracted investment and brought organisations like TNO<sup>3</sup> to Eindhoven. Out of this Triple Helix co-operation emerged the 'Brainport' foundation, with its own ambition and strategy, in 2005.<sup>4</sup> In the past 20 years the Brainport region has gone through a tremendous transition, from a region of shrinking industry and major unemployment to an international high-tech hotspot in a global network. This transition, from manufacturing to a chain of knowledge and trust, characterises the strategic manoeuvrability and mentality of the region. It is a style of working that forms the basis for open innovation and teaches us that sharing knowledge leads to the multiplication of knowledge.<sup>5</sup> Since 2014, Eindhoven has become the Netherlands' strongest economic region.

Another nice example is the Łódź Voivodeship. Situated in the centre of Poland, the region counts 2.6 million inhabitants. With 145 inhabitants per km<sup>2</sup>, its urbanisation is higher than average in Poland. But the region suffered from the presence of the capital that attracted most investments and employment.

The city is a strong educational centre, with over 120.000 students, studying at institutes like the University of Łódź, the Technical University of Lodz, the Medical University of Łódź, the Academy of Fine Arts, or the National Film School<sup>6</sup>. The region has a Special Economic Zone, the ŁSSE, where investors guaranteeing jobs, can enjoy certain tax breaks.

After 1989, the landmark red brick textile factories in Lodz began to be converted for other uses, including arts and cultural centres, shopping centres (Manufaktura) other manufacturing purposes, and recently, IT and BPO office usage.<sup>7</sup>

The Lodz Region is carrying out the European Loris Plus project under its Regional Innovation Strategy (RIS), with the general goal to elaborate a strategic framework that allows for increasing the innovativeness & competitiveness of enterprises in the Region through the optimisation of infrastructures & regional innovation policy.<sup>8</sup>

<sup>3</sup> Nederlandse Organisatie voor Toegepast Natuurwetenschappelijk Onderzoek = Netherlands Organization for Applied Scientific Research

<sup>4</sup> <http://www.brainport.nl/en/about-brainport>

<sup>5</sup> <http://www.brainport.nl/en/about-brainport>

<sup>6</sup> The regional capital, Łódź, is often spoken of as the film capital of Poland. It was there that the Film School in Łódź was established in the late nineteen forties. It went on to become the *alma mater* of Andrzej Wajda, Roman Polański, Krzysztof Kieślowski, Sławomir Idziak and many another illustrious filmmaker. On <http://filmcommissionpoland.pl/about-poland/regions/lodzkie-vsxxk>

<sup>7</sup> <http://nlchamber.com.pl/lodz-2/#content>

<sup>8</sup> <http://www.knowledgocities.eu/partners/7>

White collar is replacing nowadays previous blue collar textile workers, busy in the same huge brick and wood style factories, originally built by legendary pre-war owners, which today have been completely refurbished. In the meantime Lodz became the main logistic hub in Poland with regional and local logistic centres.

### 3. How do resilient regions operate?

As with globalization, the way in which regionalization is perceived results from several recent phenomena: the apparent decline in US post-war economic hegemony, Japan's storm and certain European economies, especially Germany, and the disappearance of the bipolar world consecrated by the end of the Cold War and the Soviet Union's implosion; the acceleration, since the mid-1980s, of the formation or deepening movements of regional economic groups *de jure* and/or *de facto* in Europe, North America and Asia-Pacific; increasing the interest and willingness of developing countries (TCC) to bring together regional links with each other and also with developed economies. There is a change of situation from decades 50 to 70. While at that time numerous T.C.D. have tried, most often unsuccessfully, to find in regional integration an alternative to strengthening relations with the North, they now consider the two complementary axes.

Economic regionalization is one of the key features of the world economy in the post-war period. It has led to the formation of new power centres, which exert an increasing influence on the ratio of forces in the contemporary economy. As with globalization, regionalization has emerged as an effect of increasing interdependencies due to the development of the world labour division and the diversification of international specializations. Regionalization requires complementarity based on a similar level of development in order to be a coherent whole.

When regionalization is institutionalized - in the form of an international agreement, a supranational body or even a nation-state regrouping previously less integrated societies - we are dealing with a political phenomenon driven by political forces based on the powers of the state and which are motivated by economic or security concerns, seeking to strengthen the growth and strength of participants by reducing intra-regional barriers to the movement of goods, capital and, in some cases, individuals.

As one can see from the examples hereby, a region strikes back with all its partners. It is a common action by local government, civil society, knowledge centres and the existing employers of the region. Resilience is the result of common negotiation and planning. And the plans have to be adopted by all levels of society. Most of the time, the best result is made after organised discussions with leading and voluntarism members of society. The New York climate resilience plans have been the results of months of public debates and brainstorming. The level of education in Europe has become so high that people do not take things for granted anymore, may it come from captains of industry, priests or politicians. They have their own opinion, their own ambitions, their own ideas, and want them at least to be respected. And creativity is present in every society. The means on the other hand are available, when the proposals are beneficial. The idea that society should sponsor an initiative in order to improve living conditions of people is an obsolete way of thinking. But when initiatives have also an economic impact, create added value, investors can be attracted.

One last example could be the P2P-network principles (Bauwens, 2005). The collaborative peer-to-peer process describes a decentralized form of collaborative work based on similar principles of computer peer-to-peer networks. The employees are not subject to hierarchical authority and everyone is free to contribute without prior selection. They are united by a common project or a common good that can produce the group. Finally, there is no essential employee, although there may be more or less large contributors (Bauwens and Sussan, 2005). Applications of these principles exist in many countries already: economic cooperation, open source, peer-to-peer networking, crowdsourcing, fab labs, micro factories, creators' movement and urban agriculture. These are all paths to a post-capitalist society, where the market will be subject to the public interest (Lievens and Bauwens, 2013). Most of these directions are ICT based. These trends enable more than just technological innovation. They spur innovation in business models, business networking and the transfer of knowledge and access to international markets.

### 4. Local food as an opposite to global food industry

I recently attended a conference by Pascale Naessens<sup>9</sup>, a Flemish self-declared foodie or food guru, who claims that the global food industry is responsible for our bad eating habits and that we should eat more healthily, with a lot of variety in our food habits, using less carbohydrates and more fresh vegetables, enough grease, less sugars. This same trend is emphasized by Chef Rene Redzepi<sup>10</sup> of Danish star restaurant Noma that will close its doors by the end of 2016. The star

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<sup>9</sup> <http://www.purepascale.com/en>

<sup>10</sup> [https://en.wikipedia.org/wiki/Ren%C3%A9\\_Redzepi](https://en.wikipedia.org/wiki/Ren%C3%A9_Redzepi)

chef plans to start up a new restaurant only supplied by the vegetables coming from his own urban garden. I noticed in the same line of trends the start of a website of neighboring farms in my own province Flemish Brabant<sup>11</sup>, where one can order vegetables, meat, milk, honey from neighboring farms that joined forces, and that supply the customers who ordered on their app, on a certain location in my home town once a week. These trends are of course also inspired by the fact that the local farmers are forced to sell the products from their farm with a loss to the greedy supermarket chains. But they would be unable to look for an alternative if it were not because of the localization trend in the mind of an increasing number of Western-European customers. And again, it is thanks to digitalization trends that these developments can take place.

## 5. Resilient small cultures

One of the immense arguments against globalization in the previous century was the dominance of American English and the overwhelming power of American culture introduced through all television stations in the world. Forty years later we are amazed by Scandinavian programs such as the Danish-Swedish "The Bridge" or the excellent Danish "Borgen". We are thrilled by the British program "Outlander" that mixes English and Scottish Gaelic or by "Hinterland" that mixes English and Welsh. Local Flemish production companies produce television series that are featured on BBC4. American series have to be good, or they cannot stand the comparison anymore with the high quality programs produced in minor or major European languages. And although digital applications such as Netflix are widely spread and could make a difference in spreading American programs over the world, this European trend has been put in motion thanks to the liberalization of the TV market. In some regions, the market was kept closed because of a protective cultural policy, with post-synchronized programs purchased elsewhere and dubbed on location and no investment in local fiction programs. In the more culturally resilient regions the market was opened wide, foreign programs were subtitled, but local companies were invited to create new fiction. They had to be creative and original, because competing with the large British and American production companies. Europe stimulated cross-border collaboration in order to create European programs. And the results are there: in the regions with many production houses, actors, cameramen, directors, film score composers, musicians find jobs and can live a decent life. Since the regions with smaller languages subtitle their programs, the audience is sensitive to the variety of languages, appreciates the multicultural approach and is open to the world which again stimulates local visual artists, dancers, theatre producers of the same region. On their turn they compare their own productions with what is happening in other countries and offer their productions abroad.

## 6. Conclusions

Regionalization can be a powerful means of collective action for participants to counter or limit the power held by these groups at a national level. It may also help to establish or restore at least temporarily the collective sovereignty of states in the field of economic policy vis-à-vis these groups.

Even if diminishing or eradicating the powers of oligopolies and national pressure groups is not a declared objective of regionalization, it is absolutely vital to boost competition within a region. And, in turn, increased national competitiveness can boost the region's growth and dynamism compared to the rest of the world. Regionalization can thus be a response to globalization while stimulating the micro-economic forces that drive this process.

Solutions in order to put a region on the economic map (again), are harsh to find and require a great deal of creativity. But it requires also a window to the world. Opportunities are created every day and can be extrapolated inside the most remote areas of the continent. A regional approach requires input from the regional authorities in the overall strategy development and policy making. Not every region or province has had a glorious past with successful entrepreneurs and creative universities. Sometimes things have to be created from scratch. Regional authorities have to create the circumstances and to stimulate their organized inhabitants to collaborate and to think for the benefit of the community.

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<sup>11</sup> "De buurderij" (the neighboring farm) is an initiative started in France where already 19 distribution locations are active in Picardie and 18 in Nord-Pas de Calais. Also present in the U.K.

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