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**Internet Based Rural Revitalization,  
A Key to European Competitiveness**

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## **Internet Based Rural Revitalization, a Key to European Competitiveness**

### **Disclaimer**

This article represents a personally developed conceptual and strategic vision rather than a scientific research based view, it therefore does not use references to underline its arguments. The general statistical data used are collected from Eurostat and national statistical sources in Europe.

### **Abstract**

Economic and demographic strengths are unevenly divided between European countries. The result is an unequal spread of employment opportunities. This drives an outward migration and economic decline for many "deprived" communities in Europe.

If no measures are taken soon, the cost of ignoring macro European competitiveness will become high and it will for many countries become increasingly difficult to catch up with globalization. To reverse the process, main target should become to exploit the cost-advantage "deprived" areas offer.

Based on the opportunities the 4<sup>th</sup> Industrial Revolution generates, economical sustainability can be reestablished via moving Internet based tasks. If one moves such tasks to deprived areas, an optimized global competitive edge can be created.

Current limitation is a lack of job candidates. Due to the past outflow, a fresh injection of educated or to be educated people is needed. In principle, one can address local rural people who would otherwise be forced to migrate to urban areas, one can address unemployed people from urban areas or economically stagnant European countries and finally one can address refugees or non-European migrants.

Many of the above candidates currently receive welfare at expensive urban locations and this without any realistic perspective on finding employment there. Revitalization would assist millions of people face better employment and integration chances. Such revitalization finances itself because it improves labor effectiveness and increases overall competitiveness.

Villages do have a lot to offer; they can fulfill a role as education incubator, employment incubator and economic or social mobility incubator. Being an incubator means that villages, at lower cost and with less pressure, can help people to discover, grow and exploit their individual potential.

Politically, revitalization requires a coherent supporting policy framework on a local, national and international level. Its target should be to maximize the transfer of Internet based jobs to deprived zones.

## **Internet Based Rural Revitalization, a Key to European Competitiveness**

In political discussions, including the Brexit one, many people have been pointing at the 1.3 million refugees who arrived during 2015 in Europe as an important factor for increased protectionism and nationalism. But should 0.3% refugees compared to the European population really imply a "refugee crisis"? No, at such a level it would normally be fully viable to accept people.

Looking closer, there are underlying imbalances leading to a "European Solidarity Crisis", a crisis which is often mistaken for the migrant acceptance issue. Economic and demographic strengths are unevenly spread between European countries. Whereas the North and West face economic growth, the South and East face stagnation; whereas France and the UK hardly face population ageing issues, Germany, Italy, Spain and Eastern-Europe face great challenges.

European countries adapt to globalization differently: for example, Germany holds its strong position in the global capital goods market, Italy faces insufficient preparedness to compete in the global consumer goods market. As a result, next to economic imbalances, demographic imbalances are generated as well.

Job availability and financial benefit based internal European migrant streams flow from East to West and South to North. Whereas Germany is able to attract many young educated Europeans, especially Eastern Europe faces demographic ageing of its population by outward migration. Europe as a whole is currently unfortunately not doing well in global comparison, neither from an economic nor from a demographic perspective.

Still Europe, with its common market of 500 million people, offers an enormous economic and job creation potential. Exploiting this opportunity and its related economics of scale requires European instead of national policies; it requires cementing solidarity instead of fragmentation. It means that fundamental economic imbalances and sustainability issues must be properly addressed. Without doing so, Europe's importance will - from a global competition perspective - be reduced to its few top performing national economies. These are size and population wise relatively small compared to other global players and Europe will therefore face great difficulties to match these bigger actors.

A key issue to cement European solidarity is to address the unequal spread of employment opportunities. From the longer term perspective, insufficient job availability in areas results in migration and economic decline to a "non-sustainability" level for many "deprived" communities. As long as social benefits do not reach a sufficiently high Universal Basic Income (UBI) minimum existence level, which would allow people to remain at less favorable locations, new equilibrium cannot be established. A downward spiral of degradation begins until a bottom is hit in which the "deprived" community is dissolved and very limited or no economical activity remains.

The development of rural Europe over the past 50 years illustrates this well. Due to mechanization and larger scale farming, agricultural employment dropped from 20% to 5% of Europe's jobs and in countries like Germany and The Netherlands even further to only 2%. Urbanization, in which 45 million people exchanged the countryside for industrial employment concentrated in cities, followed. However, 20% of the European population, about 100 million people, still lives in rural areas and many of those face further downfall.

Intrinsically, urbanization has a lot to offer; cities are efficient, they are hubs of human interaction and optimized specialization. In a technologically developed society they are indispensable for advanced skill availability and for high expertise level based production. The drawback is that cities are pollution hubs and overcrowded, resulting in high living cost.

There is a related second vicious circle. Clustering of economic activities which requires labor and attracts migrants drives urbanization. General income levels rise and individual living standards improve. In stark contrast to current expectations, up to the 1950's it was usual to share small housing with large families. Nowadays a lack of living space in cities forces people to reconsider having children. The demographic effect is a decline in birthrates below sustainability, leading to a need for more migrants to fill the gaps.

Although the current outlook is that further urbanization will take place, the question is whether this is economically beneficial. Besides "urban demographic non-sustainability" and "rural economic non-sustainability", the current structural imbalance between rural and urban blocks potential positive effects. Migrating non- or less-specialized jobs to "deprived" areas, in principle should be a strong cost savings opportunity.

Technically, the migration of jobs to "deprived" areas is fully feasible via Internet. However, the economic incentive for companies to do so is severely limited by two factors. With minimum wages based on country-wide political arrangements, hardly taking local living-cost differences into account, and with labor market protection rather being a national than a European issue, policies are not much in favor of migrating basic jobs to lower cost areas. The potential for cross-border cost savings is huge though, with average wage levels being up to five times as high in more developed countries compared to lesser developed European Union members.

In order to achieve European optimization it is equally important to restrict the moving of tasks outside of one's own economical zone, Europe in this case. As long as there are unemployed people available who currently receive social benefits, migrating tasks outside of the EU could lead to increased European unemployment. Migrating beyond one's own economical zone should therefore only be considered for development aid purposes and avoided for individual company's cost reduction reasons; there can be a conflict between the micro and macro perspective here.

The above implies that one should not move jobs too close because, in most cases there would be insufficient cost benefit, at the same time one should not move jobs too far because in that case they no longer properly contribute to the European economy. Therefore the economic target should be to fully exploit the potential labor cost advantage "deprived" areas offer and thus generate an optimized global competitive edge for Europe. It should be followed by a strategy of balancing and long-term equalizing the living standards between prosperous and deprived areas within countries and between rich and poor EU member states. This process should be built on overall European growth rather than on transfer of prosperity from rich to poor countries though.

Such plan not only requires policy involvement from all EU member state governments, but it also requires innovative cross-border thinking by companies. Management decisions are too often based on national history and existing processes rather than driven by social responsibility. Even if there are clear cost benefits, "non-experience" founded risk perception often limits implementation of basically very feasible strategies.

Starting point for revitalization are the opportunities the 4<sup>th</sup> Industrial Revolution offers. In the coming five to ten years the majority of existing jobs will be restructured due to robotization and artificial intelligence based automation. Most jobs will not entirely disappear, but there will be a review of all detailed job-tasks and as a result most jobs will fundamentally change. This reorganization process offers a unique opportunity window because next to the question whether a task can be robotized or automated, a third question should be added, namely "can a task be more efficiently done by someone else?"; implying the dilemma whether a task should be outsourced or not. Thus an important result of the 4<sup>th</sup> Industrial Revolution should be geographical job-flexibility.

To be taken into consideration is that although many tasks can theoretically already be robotized or automated with readily available technology and that the expectation is that technology cost will rapidly come down and the availability of new technologies will rapidly increase, from a financial point of view, it is currently far from feasible to always substitute humans. Humans do compete with machines from this perspective and there are still many areas where robots or artificial intelligence based automation does not beat human intelligence.

Further, most job tasks still require specific facilities or physical human interaction with customers or colleagues. However, there are by now many examples of tasks that can be fully or almost fully - for example with limited travel - done via Internet without any physical interaction with others. Outsourcing such labor is not new and is rapidly growing worldwide. The complexity level of the activities meanwhile greatly varies and covers a spectrum from microworking and ICT tasks brought to third-world countries, via "shared services" in Eastern European capitals up to "specialized" distance-teaching, tele-medicine and tele-psychology.

Finally, it is important to realize that geographically moving tasks via Internet rather than complete jobs does not necessarily imply taking the same quantity of jobs away at the origin. Mostly the simpler tasks can be moved to lower cost locations; core and specialized activities usually remain. Relocation of tasks primarily results in a cost based global competitive edge for companies; this in turn maximizes employment and potentially further expands core jobs as well.

The impact of bringing jobs to people instead of migrating people to jobs is potentially huge. In the European Union there are meanwhile 150 million services related jobs. Services currently count for 70% of the total jobs; agriculture related jobs count for 5% and production related jobs count approximately for 25%. In general, service based jobs contain more tasks that can be migrated via Internet compared to agricultural or industrial production jobs. If one limits one's view to this segment, it nevertheless means that for every 1% of services related tasks which can be packaged as Internet based jobs, there is the potential to geographically relocate and address 1.5 million people.

Although, as said before, the services sector mostly covers activities in which urban physical presence is essential, it can still be conservatively estimated that at least 5-10% of all services related tasks could potentially be freely moved via Internet. This means a direct relocation potential of 7.5-15 million jobs in Europe. If this job creation potential is exclusively used for rural revitalization, non-Internet skills based, induced "community supporting" jobs will be created. This induced potential would generate at least another estimated 7.5-15 million jobs. If one finally further uses the EU ratio between 500 million inhabitants and 215 million people employed, potentially, economical sustainability can be reestablished for 35-70 million people. With such a number, theoretically, the previous 45 million people outflow from the past 50 years could be fully compensated; even without taking expected higher rural birthrate expectations into account.

However, there are a number of obstacles to be addressed before an Internet jobs based rural revitalization strategy can be successfully implemented. Migrating simple tasks out of cost advantage reasons embeds a substantial risk of creating a second-class rural versus a first-class urban society and this is for sure not what one would like to accomplish. Of course, the specialization gap between rural and urban will remain: this gap has historically always been present and can also currently not be fundamentally changed. At the same time, does a less specialized life-style automatically imply reduced living standards? Lower general cost and natural rural qualities like gardening possibilities and substantially more available private space can largely compensate perceived living-standard differences between rural and urban.

Nevertheless, it is essential to address potential social and educational gaps between rural and urban. On the one side this can be done by paying sufficient attention to attracting specialized Internet based tasks to rural areas and by stimulating entrepreneurial activities in the revitalized communities and on the other there should be a strong focus on education and on creating fluid mobility between rural and urban vice versa.

If one analyzes the spectrum of job tasks which can be migrated via Internet, this is not limited to relatively simple low-end activities; there are numerous high level advanced "specialist's skills requiring" tasks that do not require physical interaction with customers or colleagues. For example tele-medicine services in which patients first consult a doctor by phone or Internet before in person visiting their "own" general practitioner. This example is a good illustration of the hybrid approach which is sometimes needed for the revitalization of rural infrastructural facilities. A tele-medicine doctor can be easily positioned at a rural place where he financially cannot support himself exclusively from general practice, but where a combination of the two activities can create job sustainability.

Looking at entrepreneurial opportunities in deprived areas there is, next to frequently available options in tourism or the hospitality industry, in principle more than sufficient potential for locating a great number of SME type industrial production jobs there. Lower labor cost combined with substantially improved, IT based, logistical solutions can often outweigh geographical drawbacks. With existing European highway network access for many rural communities and with broadband Internet being present in most areas, the relative disadvantage from rural areas compared to urban ones has been reduced.

A critical component for rural revitalization is education. With robotization and artificial intelligence based automation progressing rapidly, the human labor skills requirements are getting more advanced and dynamic. As a result, education and vocational training are becoming life-long activities instead of one time achievements. Looking at deprived, especially rural areas the educational infrastructure is often very weak or no longer existing. On the one side this is a handicap, but at the other side it represents a great opportunity because one can start rebuilding from scratch according to the latest available technological options instead of being forced to slowly modernize a historical framework.

Whereas in the past, education has largely focused on one time "up-to-date" personal knowledge transfer from teacher to student, it is now focused on optimizing the development of "learning skills" rather than dominantly studying or mastering specific content. Of course basic knowledge requirements remain, but developments in distance learning propose better, more personalized, options for knowledge transfer for almost any age-group and education level. Next to the "classical" distance learning courses via Internet, which mostly include a strong and individualized teacher student interaction, new mass-scale solutions with less interaction have been developed over the past five years. MOOC (Massive Open Online Course) participation, where hundreds of thousands of students are simultaneously studying the same subject is growing rapidly and gives access to the most reputable teachers in the world.

However, there is a substantial risk of disconnection from education for those who are less individualistic, less motivated or less disciplined. The classical classroom based structure has a high level of social control and social reward. MOOC experience so far shows that 90% of the people do not finish their courses. This is not necessarily as bad as it may seem at first sight because also a partial course can add value and the 10% who finish courses, represent a very high absolute number. Still most people participating in MOOC education are people who have already completed other studies and who are experienced and qualified learners. Especially young pupils need continuous and permanent supervision to reach this point, but distance learning technologies face great difficulties to offer proper guidance. Revitalizing a rural educational infrastructure implies that there should be a strong focus on distance learning tools for knowledge transfer, but this should be embedded in a social structure where the teacher's task is to teach learning skills and be an active mentor for emotional student group interaction and the pupils' personal development.

Finally, if one wants to really close the gap between rural and urban environments, this requires fluid mobility between them. As such, there are many reasons to move from one to the other and back. At some stages of life it is beneficial to live in a rural, at other stages in an urban environment. As said before, larger families are doubtless currently better off in a rural environment, whereas specialized skills possessing professionals have better chances to advance their careers in an urban environment. Retired people presumably can enjoy the cost difference and get more value for money in a rural environment, whereas old and needy people, requiring specialist medical attention, can receive better care in an urban environment. So far, general European mobility is at a very low level due to language and cultural barriers. Local migration has also almost exclusively been from rural to urban, leaving behind depressed local economies. To structurally change this one needs a different approach.

Although urban environments offer more specialized and specific human interactions, they are at the same time more anonymous due to the impossibility to interact with everyone from the large quantity of people surrounding. This causes people to be selective and results in people ending-up living in sub-cultures or even in parallel societies, limiting their reference framework. Smaller communities may seem to be more restricted in their interaction potential but at the same time often generate a more intense exposure to social and cultural differences. Whereas in cities it is relatively easy to escape into individualism and egocentrism, in villages one is continuously stimulated to participate and share one's life. Such cross-pollination characteristic in principle is advantageous to improve understanding between people. Villages can thus be an incubator for personal and social development. Upon migration, the acquired expansion of one's reference framework can contribute to improved urban interaction.

Further, current global technological developments lead to very dynamic, volatile and disruptive forces impacting people's life. Scaling down and going back to the basics in order to be or become better prepared for them can be a useful counterweight. Villages do have a lot to offer; they can fulfill a role as education incubator, employment incubator and economic or social mobility incubator. Being an incubator means that villages, at lower cost and with less pressure, can help people to discover and exploit their individual potentials upon which further specialization or deepening can be built. Acquiring elementary learning or social skills and obtaining initial work experience are very often non-specialized, yet an essential basis for upward mobility. Incubator villages can offer an excellent quality/performance/cost ratio in this case.

After addressing all the previously mentioned obstacles for rural revitalization, the most important factor has not been mentioned yet. Current main limitation is a lack of job matching candidates in deprived or rural areas. Due to the past outflow, a fresh injection of educated people is needed. But looking at the broad spectrum of tasks that can be migrated via Internet there also is a corresponding wide spectrum of labor skill requirements that could be involved. In principle, one can address local people who currently face insufficient opportunities and will otherwise be forced to migrate to urban areas, one can address unemployed people from urban areas or economically stagnating European countries who face skills mismatch related to high cost and wage levels and finally one can address refugees or non-European migrants who could be offered long-term opportunities because of European demographical reasons, but do not possess matching skills to directly enter the labor market and need an "education incubator" and "integration incubator" to find a starting point for upward economic mobility.

Many of the above candidates currently receive welfare at expensive urban locations and this without any realistic perspective on finding employment there. At the same time their living standard is relatively low because of the high living cost at the cities. Social benefit money is thus mostly spent poorly on consumption instead of being invested in them. Inclusion of lower cost rural areas should therefore be top priority both at government policy as well as at corporate social responsibility levels. Besides addressing the disadvantage of the more than 100 million people currently living in the countryside, it would assist millions of people who face better employment and integration chances by moving there. Finally, revitalizing rural Europe implies a better sharing of the European workload, reducing unemployment; it would generate substantial extra spending power and would substantially improve the global competitiveness of Europe due to lower average labor cost.

Since revitalization of rural Europe exceeds the competence of individual stakeholders, it requires a coherent policy framework on a local, national and international level. Target should be to maximize the transfer of Internet based jobs to the most deprived EU areas. The political feasibility of establishing such a necessary framework depends on balancing the many interests involved and unfortunately currently the individual, more local, interests often do not match macro-European ones. Optimally, trans-border migration of Internet tasks to the lowest possible cost areas should be stimulated, but this conflicts with protective nationalistic labor market policies which currently are politically dominant. Also, between urban and rural similar levels of protectionism or lack of solidarity can be found. Finally there are the labor unions which strongly defend their achieved national minimum wages. Summarized, there is a long way to go before voters and their representing politicians will support solidarity instead of fragmentation and the protectionism gaps can be bridged. At the same time technologies develop so rapidly that action is becoming urgent.

The cost of ignoring macro European competitiveness, lagging behind in globalization, is extremely high and it will become increasingly difficult to catch up for many European countries if no measures are taken soon. The above implies that a fundamental shift in politics is required to move Europe forward. Usually, change and innovation are seen as threats rather than as challenges. Ordinary people are conservative in general and do not like risks and uncertainty and tend to vote against it. Thus new proactive political leadership is required which takes such risks and shows their voters the way forward. Rationally seen there is a lot to be gained and very little to be lost. The revitalization of rural Europe is beneficial for everyone in the end and is rather a matter of reallocating the existing welfare and regional development budgets than to find or create new financial sources. In principle revitalization finances itself, because it improves labor effectiveness and increases overall European competitiveness.

Because it is beyond the scope of private companies to cohesively revitalize deprived communities, a political framework is essential to create the proper regulatory conditions, take measures to create a supportive infrastructure and to provide the right - especially those that prevent companies from leaving Europe - economical or subvention stimuli. Still the real driving force behind rural revitalization must be private sector initiative, seeking better productivity and lower cost in order to increase their competitiveness in a global market.

Apart from core financial business parameters there also is a moral obligation to accept corporate social responsibility in respect to inclusion of deprived areas and their inhabitants. If companies increasingly demand more dynamic and higher labor skills from their workers, they also should be willing to socially invest in them and help people to prepare for rising expectations. Nevertheless, educating and providing work experience to rural people is a good synergetic business investment, which pays off over longer term.

In the forest one can regularly cut trees and use them to build houses elsewhere as long as one seeds new ones. Revitalizing the deprived rural areas of Europe possesses a strong analogy with forestry, because villages can be an excellent incubator for personal growth and identity, for education, for work-experience and for cultural integration. Fluid migration between rural and urban areas can exploit this potential. Political solidarity and corporate social responsibility should generate the required ecological sustainability for it.

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Budapest, 13 October 2016**

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