Pursuing sustainable growth through an intense collaboration between universities/colleges and SMEs in West Flanders (Belgium)

Dr. Marie Van Looveren (WES)

Geographic location and economic structure of the province of West Flanders

The province of West Flanders is the most western province of Flanders. It borders on the sea in the west, the Netherlands in the north, the province of East Flanders in the east and on France in the south. From a Flemish point of view West Flanders is situated rather peripherally. According to Flemish standards, it is located far from the centre in Brussels and can, in a broader perspective, be situated in the triangle Ghent, Antwerp, Leuven. As we will see, this has important consequences for higher education as well.

The policy document 'Economy 2007 - 2010' of the province of West Flanders shows the socio-economic situation of the province.

Table 1

Socio-economic situation of West Flanders (From: Policy document 'Economy, 2007-2012', province of West Flanders)

		West Flanders		Flemish region
DEMOGRAPHY	Number of citizens, 1/1/2006	1.141.866		6.078.600
	Evolution population, 1995-2005	1,7%	<	3,4%
	Age coefficient, 1/1/2006	116,5	>	103,6
	Domestic ageing, 1/1/2006	19,7	>	19,0
	Dependence number, 1/1/2006	88,9	>	82,4
EMPLOYMENT	Jobs in industry, 31/12/2004	95.094		425.863
	Share in total number of jobs in industry	24,9%	>	21,1%
	Evolution industry, 1992-2004	-13,2%	|<|	-17,0%
	Total number of jobs in business services, 31/12/2004	17.051		150.063
	Overall share of jobs in business services	4,5%	<	7,5%
	Evolution business services, 1992-2004	+53,2%		+82,2%

OFFICES	Total number of offices with employment	33.677		151.412
	Employment in offices <200 employees	74,5%	>	69,1%
	Employment in offices >1.000 employees	3,9%	<	9,4%
	Number of offices with >1.000 employees	10		98
SELF-EMPLOYED ACTIVITY	Number of self-employed	21,3%	>	17,8%
	Number of persons liable to VAT, 1/1/2005	95.117		432.290
	Establishment ratio, 2005	7,4%	<	8,3%
	Closing-down ratio, 2005	5,6%	<	6,3%
	Net growth rate, 2005	1,8%	<	2,0%
	Turbulence ratio, 2005	13,0%	<	14,6%
LABOUR MARKET	Overall activity rate	75,1%	>	74,0%
	Employment rate (estimation)	70,0%	>	65,0%
	Activity rate	69,6%	>	67,8%
	Unemployment rate	6,9%	<	8,3%
CREATION OF PROSPERITY	Yearly economic growth, 1996-2005	2%	<	2,2%
	GDP per inhabitant, 2005	€ 26.542	<	€ 28.241
	Available income per inhabitant, 2004	€ 15.499	<	€ 16.348

The following can be concluded from this table (policy document Economy, p. 35-37):

- transition from an industrial economy to a knowledge economy in West Flanders evolves more slowly than in the rest of Flanders. This manifests itself in a slower decrease in the industrial employment and a less strong presence and growth in business services;
- West Flanders is a province which consists of SMEs and has a higher level of self-employed activity within the overall labour market;
- as far as the labour market is concerned, West Flanders is both on the supply and on the demand side a very performing region within Flanders;
- as for prosperity and the creation of prosperity, West Flanders is doing slightly less well.

Structure and functions of higher education in Flanders

Universities and colleges have different functions in our society. The most evident function is education and development of young people. After secondary school, youngsters of around 18 years old can decide in favour of a higher education. They can choose between a university and a college of higher education. University education gives students a chance to get a master's degree. College education usually leads to a bachelor's degree. There are also a limited number of college educations which yield a master's degree.

The most important difference between a professional bachelor degree and an academic degree is the objective involved. Professional bachelor courses are primarily focused on the professional practice and its purpose is to give students a level of general and specific knowledge and competences needed to practise independently a profession or a group of professions. A professionally-oriented bachelor's degree leads directly to the labour market.

Academic bachelor education puts emphasis on a broad academic (theoretical) training or an education in arts. They are based on scientific research and prepare you to get a master's degree.

Both professional and academic bachelor educations require at least 180 study points. After obtaining an academic bachelor's degree, the most obvious choice is to proceed to a master's degree.

Master's degrees put emphasis on advanced scientific or artistic knowledge and competences needed to practise independently a science or an art or to practise a profession. A master's degree requires at least 60 study points. If desired, students can obtain a master's degree after a professional bachelor's degree by following a link up programme.

Higher education in West Flanders

Available courses

Professional bachelors

Flanders offers in total 280 professional bachelors. 18,5% or 52 of which are offered in one of the 3 colleges of West Flanders (KATHO 18, KHBO and HOWEST each 17).
It is striking that artistic courses are not at all present in the province and that applied linguistics is also missing, a study area which is well developed in the other provinces and which has also social relevance in a border province as West Flanders.

Colleges in West Flanders offer 4 educations in other domains which are exclusive in Flanders:

- Bachelor in applied architecture (HOWEST);
- Bachelor in network economy (HOWEST);
- Bachelor in air traffic (KHBO);
- Bachelor in social safety (KATHO).

Next do these unique educations, West Flanders has also a number of unique main subjects and options.

Academic bachelors

West Flanders offers 23 academic bachelor educations, which account for only 8% of the 278 academic bachelor educations in Flanders. 12 of them are given in KU Leuven campus Kortrijk, without any linkage to a master course in the province of West Flanders. The campus is limited (with a few exceptions) to the first two bachelor years, after which students automatically go to a university to complete their bachelor's education and to begin their master course. 10 of the remaining 11 academic bachelor's educations within West Flanders are in the field of industrial sciences and the last one is a bachelor in rehabilitation sciences and physical therapy (KHBO). For this latter as well, students must go to university after two years. In the field of industrial sciences and techniques, West Flanders offers 1 out of 5 academic bachelor educations. In total, there are 48 such educations in Flanders.

Masters

West Flanders offers only 12 master courses, 5 by KHBO and 7 by HOWEST. All these trainings belong to the area of industrial sciences and technique. Compared to Flanders, where 71 master courses are offered in industrial sciences, this is only 16%. Compared to the total number of master courses in Flanders (451), West Flanders only accounts for 2,5%.
We can conclude that the offer of specific academic bachelor courses and master courses in West Flanders is very limited. Three master courses given in West Flanders are unique in Flanders, namely: master in environmental sciences, master in industrial design and master in synthetics technology.

Research

Besides the educational function which higher education fulfils for our young people, institutions should also be a research and service centre. This function becomes increasingly more important if Flanders wants to be a leading region of knowledge. Investing in research is important for the global socio-economic development as well as for continuous progress in the field of education.
If we look at how financial resources for research are divided in Flanders (table 2) we can conclude that barely 1,4% of the means available in Flanders for research are meant for West Flanders. This percentage is not in proportion to a number of other parameters relevant for determining the level of means such as the number of financing points (3,7%), the rate of students studying in West Flanders (8%), the rate of West Flemish youngsters in the overall student population (18%) and the rate of the West Flemish population in Flanders (18,67%).

		West Flanders	Flemish region	%
R&DINDICATORS	Academic resources 2009	901.547	14.377.366	6,3
	Research basis 2009/variable research part	4.247.000	291.972.826	1,5
	PWO (Project linked Scientific Research) means 2008 (a)	1.412.347	9.000.000	15,7
	Hercules 2008	0	15.607.000	0,0
	IOF (Industrial Research Fund) 2008/BOF 2008 (Special Research Fund)/other (b)	1.532.000	210.700.000	0,7
	FWO (Fund Scientific Research) 2008	776.000	131.167.000	0,6
	Tetrafonds (Tetra fund) (2008)	932.769	7.658.188	12,2
	Total	9.801.663	680.482.380	1,4
POINTS OF COMPARISON	Number of students in West Flanders (2006-2007)	14.640	163.343	9,0
	Number of students coming from West Flanders (2006-2007)	29.343	163.343	18,0
	Number of inhabitants (1/1/2008)	1.150.487	6.161.600	18,7
	Financing points	1.000	27.000	3,7

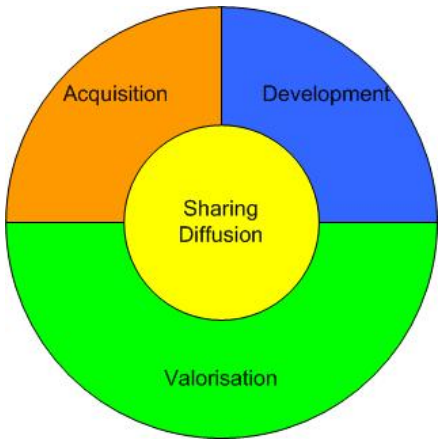
The offer of higher education in West Flanders is rather limited, both on the level of educational offer and on the level of research participation. Moreover, the knowledge-driven economic growth in the region evolves slower than elsewhere in Flanders. Because of the combination of those facts, the provincial government took the initiative to reinforce higher education, while stimulating the knowledge-driven growth of the provincial economy.

Regional knowledge management

Knowledge development, knowledge acquisition, knowledge transfer and knowledge valorisation are key aspects in the contemporary and future economic development of a region. Creativity and innovation, both elements of the knowledge development phase, are the buzz words in the knowledge-driven economy of today. However, both aspects miss their point if they cannot be transferred and valorised/applied in the contexts they were meant for. In other words, it is of extreme importance to look into the full knowledge management chain when dealing with the knowledge-driven economy.

The knowledge management chain is actually not a chain of sequential steps, rather a continuous interaction of the four different aspects of the knowledge management. Knowledge sharing or diffusion is playing a central role in all this. Without proper knowledge sharing/diffusion there is no proper knowledge management. Knowledge validation remains the ultimate goal. It is therefore better represented as a knowledge circle.

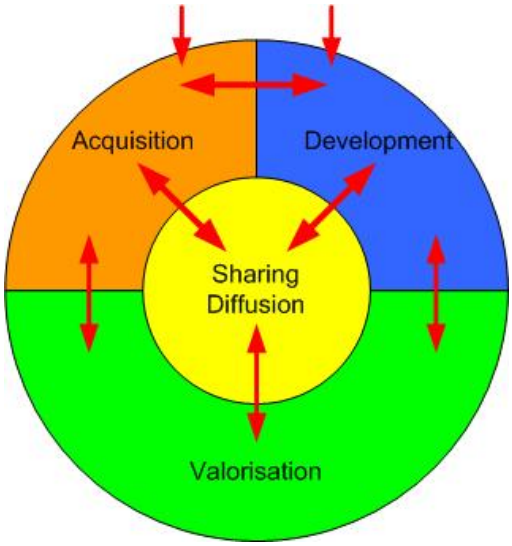
Figure 1



In this context of regional development, we need to see the knowledge management chain at two levels: the (semi)public regional level and the private corporate/organizational level. Both levels need to interact, reinforce and balance each other in order to bring along the wanted benefits for the knowledge-driven economy. The (semi)public regional level interacts with the private corporate level through its policy making in all aspects of the knowledge management cycle. The private corporate level acts upon these policies in applying knowledge management within its organization. There are in between public intermediary knowledge centres that have a dual capacity: in their capacity of policy making they could be placed under the public regional level. In the management of their own organizational knowledge they are considered to belong to the private corporate/organizational level. Policy making forms the dividing factor between both levels.

For the successful management of the (regional) knowledge, public policy makers need to be active on the various links between the knowledge circle components. So do private corporate actors. Each link deals with a specific work field that all together should smoothen the whole knowledge circle.

Figure 2



SMEs are in a particular situation as far as knowledge management is concerned. Very often knowledge development takes place outside their organizations in (larger) research centres, universities, key business, R&D centres and alike. A gap between knowledge creation/development and the knowledge implementation/valorisation is then easily created. Sometimes however, the SMEs are the cutting edge of knowledge development, through the fast and flexible creation of new products or niches. But then they lack the appropriate channels for knowledge transfer and dissemination.

The project

A few years ago an action plan was developed to focus on the gap between the innovation needs of SMEs and their lack of access to R&D. The different stakeholders started a process to realise a strategy of advancing the growth of a knowledge-driven economy in West Flanders. The colleges and university campus negotiated with the socioeconomic partners in order to set up a research agenda for the next years. The provincial authority took the initiative to encourage collaboration between colleges and the university campus (which are competitors from an educational perspective) on the one hand and socioeconomic fields which mainly consists of SMEs on the other hand.

The focus in the strategy will be put on the interaction between knowledge development, knowledge valorisation and knowledge diffusion. The strategy will be worked out on two different levels. The first is quite immediate and already put into practice, the second is on a longer term and is a more comprehensive strategy.

The accessible expertise and services centres

In a first step a concrete initiative, easily accessible expertise and services centres (LEDs) was set up on the initiative of the province.

With the development of the easily accessible expertise and services centres (LEDs), the province of West Flanders wants to boost the existing knowledge and expertise level within colleges.

In this way, SMEs and organizations are offered creative solutions to their problems. They are stimulated to be attentive to the latest developments and they can count on a thorough support in order to apply them themselves, finally resulting in a dynamic field of action that pays attention to strategic innovation. SMEs and other organizations can appeal to these LEDs for among others consultancy, problem analysis, practical problem solutions and mobilizing/assisting trainees or thesis students. Currently, 10 LEDs are active.

- H2O
- Food
- Network economy
- Logistic innovation and knowledge circulation
- Networking in vehicles
- Synthetics technology
- Mechatronics
- HRM & strategic communication
- Social economy
- Geriatric care and social facilities

The colleges also benefit from the development of LEDs: by working together and complementarily, means can be used more efficiently. Moreover, the systematic approach from the field of action leads continuously to the latest relevant training offer. The project is also supported by the Kortrijk Centre of Entrepreneurship responsible for the practical coordination, and the Innovation Centre of West Flanders. The LEDs were approved in June 2008 as an objective 2 project – part knowledge innovation and economy.

The creation of clusters

To take a next step forward, the province is now working on the elaboration of clusters. Following the European and international trend to cluster activities, the choice was made to create clusters where research and valorisation of knowledge meet.

Clusters can be defined as a group of firms, related economic actors, and institutions that are located near each other and have reached a sufficient scale to develop specialized expertise, services, resources, suppliers and skills (Commission of the European Communities, 2008)[1]. A common element of most cluster definitions is the aspect of a concentration of one or more sectors within a given region as well as the emphasis on networking and cooperation between companies and institutions.

Clustering research and valorisation can improve the competitiveness in three ways:

1. Improve productivity through improved access to specialized suppliers, skills and information;
2. Innovation is given more importance as the need for improvement in processes of production is highlighted, and firms working together can satisfy this need;
3. Once established, clusters will grow as a result of the creation of new firms and the entrance of new suppliers (Porter, 1998)

In our specific case clusters will be created around seven themes. The choice of these themes is based on a joint analysis of the research expertise present in the colleges and the technological and economic needs and demands of the SMEs.

The creation of clusters seems to be a necessary step in order to facilitate the proper working of the knowledge circle. Central in the knowledge circle is the sharing or diffusion of knowledge. It is not evident for SMEs to share knowledge, they often protect their knowledge in an effort to create a competitive advantage. They forget that knowledge only has value when it is accumulated knowledge. From that point of view it is extremely important to create an environment for SMEs in which they are willing to share and consequently accumulate knowledge. Clustering research and economic action have an important side effect which creates this environment, the creation of social capital.

[1] Commission of the European Communities (2008). The concept of clusters and cluster policies and their role for competitiveness and innovation: main statistical results and lessons learned. Commission of the European Communities: Brussels. 77 p.

Clusters and the creation of social capital

The first use of the concept social capital dates from 1916, when Lyda J. Hanifan stressed the importance of participation in community life for school performances (in: Woolcock, 1998, 192; Woolcock and Narayan 2000, 228-229; Putnam, 2000, 19). In the following decades, this term was rarely used without any further systematic elaborations or linking between the contexts in which this occurred. The first initiative for a further elaboration of this concept was taken by the neoclassic economists. Beside the three classic basic factors for economic growth, land, labour and physical capital they introduced the term 'human capital' (Woolcock, 1998, 154). The extent to which a society has well trained employees, determines also how the physical capital, labour and land can be used and which output can be expected. This is human capital.
Furthermore, it became clear that not only the amount of training but also the extent to which the training added value can be used and spread, is very important indeed. It needs good networks between people in order to enable a good information flow and a good cooperation between people. These insights in this so-called new "economic sociology" led to the introduction of the concept 'social capital'. From here, the concept expanded enormously and has been elaborated in different sectors and by various academics. The first steps in the development of the concept were taken by Jane Jacobs, Pierre Bourdieu and Jean-Claude Passeron and Glenn Loury. James Coleman, Ronald Burt, Robert Putnam and Alejandro Portes (Woolcock, 1998, 155) carried out profound elaborations of this concept. Literature on social capital shows that there is a lot of discussion about the actual meaning of the term. In a general article on social capital, Wolcock describes the term as "a broad term encompassing the norms and networks facilitating collective action for mutual benefit." (Woolcock, 1998, 155).

Despite the various visions on the concept social capital, we also find a number of shared elements. Primarily, we usually find references to two types of social capital. Social capital has to do with the networks a individual or community disposes of as well as with the standards and values which facilitate acting within these networks (Uphoff, 2000; Grootaert and Van Bastelaer, 2000; Dekker & Uslaner, 2001, Stone, 2001). Many authors refer to this distinction by making a difference between structural and cognitive social capital. Uphoff (2000, 218-219) describes the difference between structural and cognitive social capital as follows:

> *‘ the structural category is associated with various forms of social organization, particularly roles, rules, precedents and procedures as well as a wide variety of networks that contribute to cooperation, and specifically to mutually beneficial collective action (MBCA), which is the stream of benefits that results from social capital. The cognitive category derives from mental processes and resulting ideas, reinforced by culture and ideology, specifically norms, values, attitudes, and beliefs that contribute cooperative behaviour and MBCA’*

Structural capital is rather tangible and can be observed. You could say that one can count the number of networks, roles and procedures of individuals. The cognitive social capital, though, is less visible and more subjective. It has to do with general standards and shared values and mutual trust which make it possible to live together. Both types are closely linked. It is possible to consider them separately but in practice they will always be linked to each other by what is usual referred to as ‘expectations’ (Uphoff, 2000, 219). Both networks and standards are the results of the expectations which are created, leading in turn to new expectations. In theory, structural and cognitive types of social capital can be examined separately, but in practice it is hard to separate them.

The creation of social capital has a great number of advantages important for the regional knowledge- driven growth. Social capital facilitates the collective action in a community. Nobody gains from unselfish help for the community but a large extent of social capital in a community will nevertheless lead to a good cooperation to the advantage of the public interest. Social capital ensures that a community makes progress. Social transactions and simple trade are strongly facilitated by the presence of social capital. Furthermore, social capital is beneficial as it strengthens the idea of being in the same boat. In this way, people feel connected and it creates more solidarity between people. Social capital facilitates the gathering of information to obtain our goals.

Social capital and knowledge sharing

The features of social capital, the presence of various networks between people and firms on the one hand and the more intangible aspects of shared norms and trust are of great importance for knowledge sharing or knowledge diffusion. SMEs and even colleges and universities are not always eager to share their knowledge.

As knowledge is often perceived as a competitive advantage, firms prefer to protect it. On the other hand knowledge is or becomes worthless when it is not constantly challenged and renewed. The innovation of today will be old fashioned tomorrow.

Through the creation of thematic clusters the SMEs and the research departments will have a common meeting place where social capital, which inevitably is created, will enable the willingness to share knowledge and to work together towards a shared goal, the creation of a knowledge-driven economy on a regional level as well as in their own specific sector. SMEs will enter the cluster with their questions or problems they are confronted with. Other firms that belong to the cluster might have an answer to the question or problem or might be confronted with the same questions. On the other side researchers with a certain expertise are looking for accumulating their knowledge or are looking for ways of applying their research results. The demands and the offers on very specific themes will become more and more visible. As they become more visible it will be easier to find the right person or firm which will be able to find a good solution. Knowledge can be shared, when another firm has already a solution for a question, or knowledge can be developed when there is not yet a proper answer. The risk of inventing the hot water several times is decreased within a cluster.

The presence of social capital, in its structural and cognitive form, will facilitate the knowledge exchange and the interaction between firms. The simple fact of having a common meeting place will create new links between people and firms who didn’t know each other before but do have the same issues or questions. The trust that will be created between the members of the cluster will create an atmosphere that facilitates the knowledge sharing opposite to the prior protectionist reflex.

Returning to our knowledge cycle, the interaction between the different stages will be accelerated and more and more knowledge can be developed, applied, acquired and shared. As such clustering research and economic activity will contribute to the creation and the growth of a regional knowledge driven economy.

It is within this context that the provincial authority of West-Flanders encourages the colleges and the university campus on the one hand and socioeconomic partners on the other hand to work together in an atmosphere of multiple connections and trust to bring our regional economy into the 21 century.

Bibliography

- **Commission of the European Communities** (2008). The concept of clusters and cluster policies and their role for competitiveness and innovation: main statistical results and lessons learned. Commission of the European Communities: Brussels. 77 p.
- Porter M.E. (1998), On Competition, HBS Press.