

# **Conceptualizing Export Growth in the Context of Triple Helix in Shrinking Regions A Case Study of South East Drenthe (The Netherlands)**

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## **Abstract**

This paper is a theoretical exercise to conceptualize the application of triple helix concept in one of the shrinking provinces of the Netherland. The triple helix concept is embodied in the form of the so called export promotion measure to provide low threshold alternative to the marginalized companies in the province. With help of revenue matrix, there are four sketches are depicted graphically to show the result of export promotion measure. The results show that the content wise high expertise of the professional education, the strategical assignments from the willing companies and the support of funding from the government turn out to be necessary conditions for the success for moving to the potential sector for the export, that in turn is able to create the necessary demand essential to the existence of the corporate sector in the shrinking provinces.

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**Keywords:** Shrinking region, export measures, triple helix

## **Introduction**

Are the shrinking regions just a victim of urbanization trends or there is something more structural problems related to the national policy? Irrespective of the reasons for the shrinking tendencies in a given region the ever depleting population has to deal up with the effects of such shrinking. The effects are not only economic, but also social and psychological and in the worst case politically visible in the neglect of the area.

An educational institution is a part of dynamic social structure and in the shrinking region is more apparent. While, an educational institution may be a reflection of the region, the mass of the educated population may not find it's earning potential in the shrinking region and may find it necessary to

migrate to economic thriving regions to find the higher earning and better living conditions.

The part of the firm sector that is targeted at local population have to deal to the decreasing demand. This article conceptualizes the attempt to revert the effects of the shrinking region on the firm sector by contributing to the creating opportunities or expanding the potential of export revenue in the international markets. The export promotion measures facilitated by the government and guided by the lecturers to bring out the potential of the companies with help of the market research carried out by the student form the essence of the program. The next section introduces the theory in short and explain the framework.

### **Research Methods**

The nature of the paper is conceptual and the methods used are desk research and observational research. This observational research of approximately eighty companies over the years is substantiated with demand articulation of these companies. On the basis of the circumstances in which they entered our research we developed a few primary criteria to typify the companies which are common in the industrial economics:

- Export revenues as a percentage of total revenue
- Sales development on the local market

Based on this we categorized four types of companies and possible growth paths.

### **Theory**

Since the industrial revolution the infrastructural support by the government to the industries and entrepreneurs became evident (Leitão, 2009). On the other hand, the governmental support of educational development became apparent after the universalization of it. However, it took two centuries to synthesize these three elements into what is called a Triple Helix, developed by Henry Etzkowitz, originally quoted as follows:

“The Triple Helix thesis is that the potential for innovation and economic development in a knowledge society lies in a more prominent role for the university and in the hybridization of elements from university, industry and government to generate new institutional and social forms for the production, transfer and application of knowledge. This vision encompasses not only the creative destruction that appears as a natural innovation dynamic, but also the creative renewal that arises within each of the three institutional spheres of university, industry and government, as well as at their intersections. The Triple Helix model thus introduces a three-dimensional perspective of innovation dynamics at the levels of industry, scientific institutions and governments, and emphasizes the interplay

between differentiation and integration in the evolution of the complex system of industry-academia-government.” (Henry Etzkowitz, 2013).

This kind of cycle is a natural process which does not have a destructive character, but is a structural phenomenon in the developed economic world. The role played by education in Triple Helix is to interfere in order to limit the period of the trough phase. The typical problem of a shrink region is that the depression phase is continuous. The normal market forces do not work effectively to lead the economy to recovery. The typical Keynesian investment injection is needed to stimulate entrepreneurs. By applying the Triple Helix, all parties involved win. Government wins because it recovers its income source by reducing the depletion of population. Entrepreneurs win because they are shown the way how to increase their market value. Educational institutions win because they are able to provide the students with extraordinary professional capacities due to experience in a real case.

The Triple Helix efforts can be placed in the framework of minimum critical effort model of growth (Leibenstein, 1957). This theory states that in order to create growth stimuli critical minimum efforts are required in terms of investment. The investment in the Triple Helix has three directional flows, namely knowledge, funds and entrepreneurial innovation. The regional market is shrinking and the market expansion is possible only through international trade, because the national market is saturated. The entrepreneurial innovation is implanted in an international market through the strategic knowledge imparted by the educational institutions. The funding of which is by the third Helix partner, the government.

The effect of the international Triple Helix has been evident in developed countries like Japan. The Japanese model of industrial strategy can find similarities with the Triple Helix model. This model, success of which was evident from as early as the 1970's, was constructed by the Ministry of International Trade and Industry (MITI). The characteristic success is achieved through the redeployment of higher value added resources, which is not possible without a knowledge base, that in turn is part of the educational institutions (Cowling, 2011).

Applied successfully in the leading universities such as Stanford (Triple Helix Research Group, sd), the urge to apply the concept to Universities of Applied Sciences became evident due to the heavy focus of these institutions on professional competencies related to ever globalizing business. The cooperation between Universities of Applied Sciences and industries is inherent to the nature of higher vocational education.

The Dublin Descriptors (European Commission, 2008) guide the higher education in Europe. However, the first cycle of the Dublin Descriptors is silent on this issue. Only in the third cycle (PhD) it refers to

internationalization. With reference to afore mentioned globalization, these descriptors do not fulfill the requirements for the students in an ever globalizing world. The national competencies derived from the Dublin Descriptors however include competencies related to internationalization, explicitly or implicitly (Vereniging hogescholen en VSNU, 2014).

The study program specific competencies of Domain of Commerce, the framework in which the authors work, are operationalized taking into account the international dimension of the business specific competencies, as laid down by the national authorities (Vereniging Hogescholen, 2016).

The international dimension is operationalized for all formulated competencies, in order to meet the requirements of the three stakeholders of the Triple Helix.

### Current practice

As mentioned in the former section, within the Domain of Commerce, the international dimension is operationalized for all formulated competencies, in order to meet the requirements of the three stakeholders of the Triple Helix.

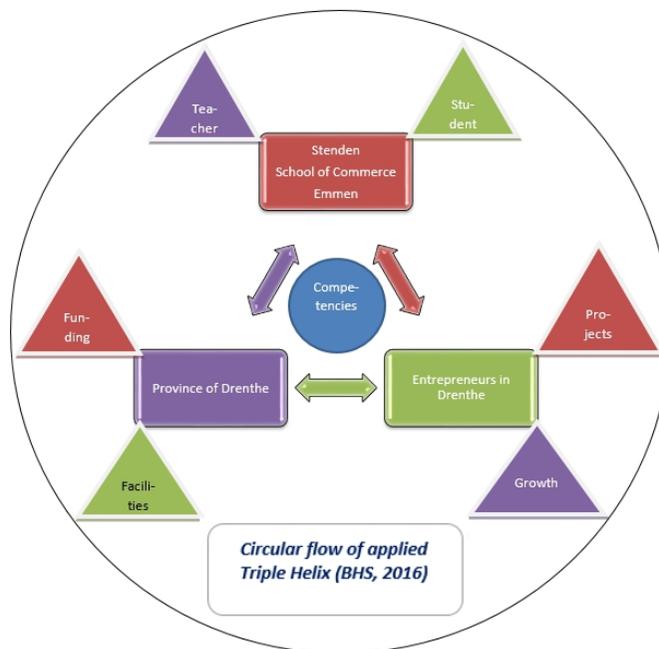


Figure 1 Circular flow of applied Triple Helix (BHS, 2016)

Figure 1 above shows the working of Triple Helix in practice. The starting point is the cooperation of Stenden University of Applied Sciences (School of Commerce – hereafter SoC) in Emmen, located in the province of Drenthe, which is on the verge of shrinking (Provincie Drenthe, 2016). This

has implications in terms of population, livability, employment and economic growth. The short term effects of the decline in population are already visible in the closing of elementary schools (Provincie Drenthe, 2016) and retail shops (PBL, 2016). Recently attempts have been undertaken to improve the livability for example in Emmen, the biggest city of Drenthe, by renovating the center and the zoo, and introducing an integrative concept of entertainment by offering the new zoo and the new theatre in one area. In order to boost the economic environment the province of Drenthe has taken measures to stimulate entrepreneurship. The province plays a facilitative and supportive role towards entrepreneurial innovation. An example of this is the opening of entrepreneurial factories in Assen, Emmen and Hoogeveen, in which also students of SoC participate (Ondernemersfabriekdrenthe, sd). Another example is the funding of the coaching on expertise and the organization of the events of the Export Carrousel.

Entrepreneurs are the backbone of the economy, they are the engine of economic growth as Schumpeter correctly said as early as in 1942. The entrepreneurs need to innovate in order to stay competitive. The innovations have different dimensions and fills from the economics to technology. The economic innovation has a range of factors from export marketing to distribution channels.

The economic innovation is at micro level to provide a competitive advantage to the entrepreneurs. The students of SoC of Stenden Emmen play a role in this field. Operating in the complex situation of meeting the theoretical demands of the teachers and operational implementation for the entrepreneurs, the students face the challenge of pointing out realistic competitive advantages for Small and Medium Enterprises (SME's) in the province of Drenthe.

The internationalization is a consequence of the globalization trend in general and trade in particular. The practical implications for Stenden are the incorporation of this concept in the staff, curriculum, students and facilities nationally and abroad.

### **Current practice one**

The first current practice is the trilateral cooperation between the province of Drenthe, regional businesses (selected by the chamber of commerce) and the SoC of Stenden. This takes place in a specialization semester, called the Export Carrousel. The starting point is the competencies which participating students are expected to require at the end of the 7<sup>th</sup> semester. The students work on projects for companies which aspire to break into a (new) international market. The students of different nationalities or origins are expected to work on the project independently in a project

organization, guided closely by teachers not only process wise but also content wise.

The teachers teach relevant subjects updated with the latest trends, issues and general framework, so that the students are equipped to apply to the specific critical problems of SME. Every project of an SME is unique. By solving the problem in international context, using the PBL steps, they carry out research which makes them competent to operate in an international commercial environment. The competencies have three aspects: knowledge, skills and attitude. It is the responsibility of the teachers to assess the attainment of these competencies.

Afore mentioned projects are company specific, real, commercial, complicated and challenging. The fact that the representatives of the companies spend time to coach and provide information is an indication of the real nature of the problem. It is commercial because they are non-charity and have objectives related to profit, sales and international growth. The complicatedness of the project arises due to the interdisciplinary elements that students have to take into account: international marketing strategies, patents, international law, customs, product adaptation, distribution strategies, pricing and international promotion and communication. The projects are challenging because the students have to reach the highest level of the relevant competencies as described in the next section. However, the international context of the learning environment provides them with experiences and skills in operationalized competencies or the learning outcomes.

The international marketing and entry strategies which are the outcome of the Export Carrousel are provided with implementation plans. The implementation plans give operational tools for the companies to apply the strategies and thereby make a move ahead towards the realization of the goal of the company and guarantee sustainability of the company's existence. The entrepreneur generates revenues by meeting the potential demand abroad, and hereby continues to provide or even increase the employment opportunities in the economically shrinking region of Drenthe. However minimal this may be for one entrepreneur, summation wise this adds to visible economic growth over the years. This is precisely the reason why the province of Drenthe participates with funding and other facilities in the Triple Helix program, expressed in the Export Carrousel.

### **Framing the concepts**

On the basis of this we constructed a matrix showing the ground framework to reflect the revenue structure of companies in the shrinking region of Drenthe.

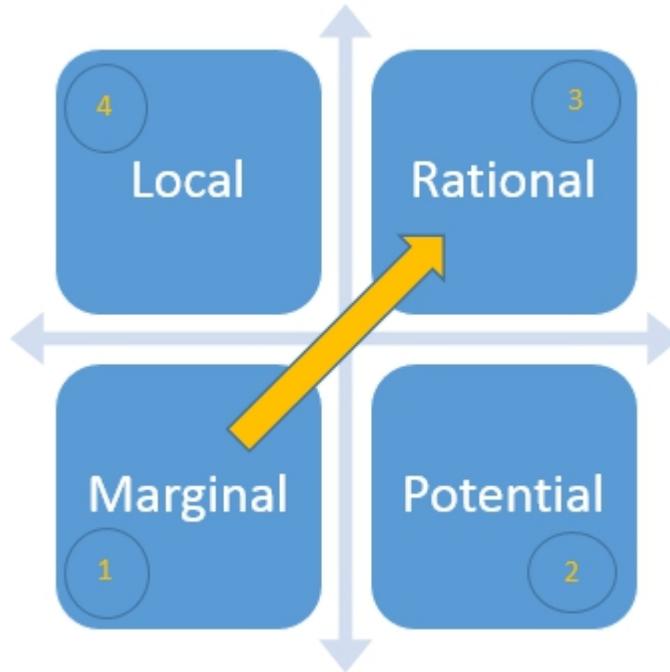


Figure 2 Matrix of trapped small firms in shrinking region (BHS, 2016)

Figure 2 reflects per block the revenues and share of export in it for the companies in a shrinking region. The left bottom block 1 reflects the marginal companies, which have low revenue mainly derived from the local market. The right bottom block 2 reflects the potential companies, which have low revenue mainly derived from foreign markets. The right upper block 3 reflects the rational companies, which have high revenue mainly derived from foreign markets. The left upper block 4 reflects the lucky companies, which have high revenue mainly derived from the local market.

The above mentioned Export Carrousel major attends mostly to the needs of marginalized companies and guides to develop a strategic vision to reach block 3, the rational companies. However, this does not mean that the companies in block 2 are not attended to.

Based on this matrix, we have developed four conceptualized diagrams (figure 3) which takes into account the economic theory and the reality of shrinking regions. The assumptions are as follows: the population is declining and thereby the companies face declining average revenue, the companies have no resources and the government doesn't provide export subsidy.

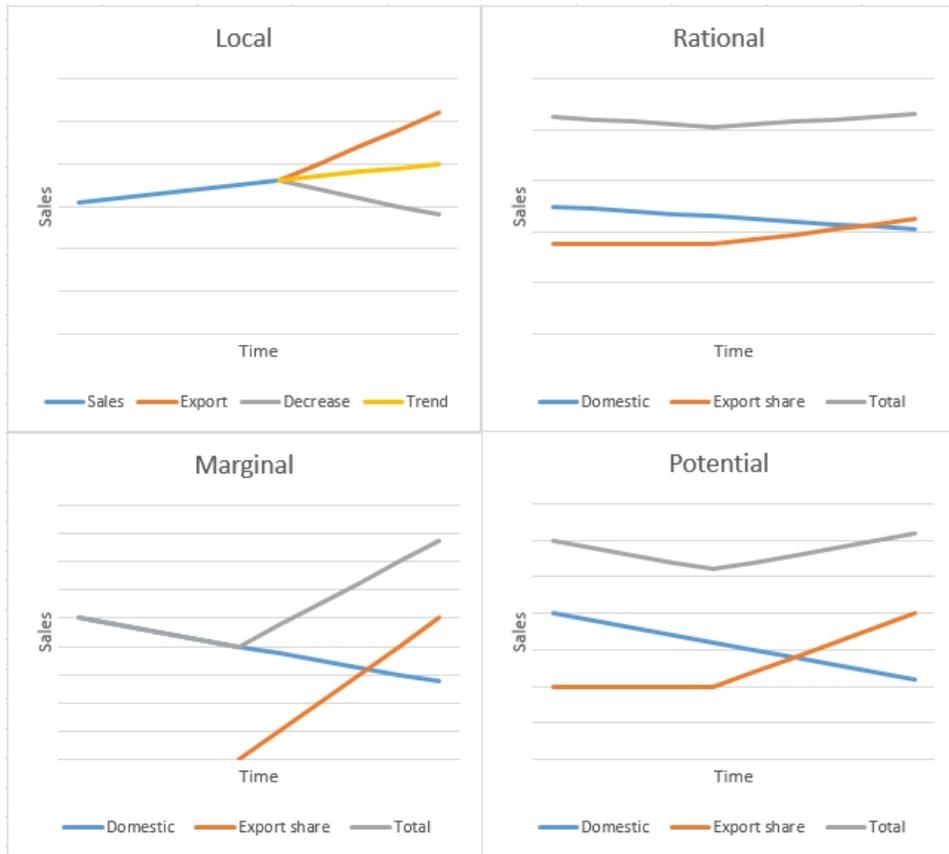


Figure 3 Sales curves for small companies in shrinking region (BHS, 2016)

The marginal firm faces decreasing sales revenues, and responds to it by participating in the export activities. This could lead to increasing revenues. The orange line represents the export revenues. The potential firm is already active in export but realizes that there is still growth potential. The rational firm gets its revenues mainly from export and needs to increase that share due to decreasing regional sales. The local firm has an increasing revenue from the regional market and expects continuous increase in the future. However, his expectations may not be in term with the reality. On one hand the orange line shows what the situation could be with export, on the other hand the grey line indicates a decrease in regional revenue. The transformation from marginal to rational is the essence of the Export Carrousel: from no export at all to a substantial, stable or growing, export share in revenues.

### Conclusion

As can be seen above the paper shows the conceptualization of the Export Carrousel in the context of the Triple Helix in a shrinking region. The

most feasible strategy to improve the revenue of a company in a shrinking region is to export. We have not taken into account the strategy of product development or product differentiation. This remains an area for future work, just as the exercise to prove the graphs mathematically and the result statistically.

Our research will continue by determining, based on a set of relevant measurable criteria, the position in the matrix of the companies at the baseline of our project, and their position in 2017, leading to a statistical analysis of the growth paths of the companies resulting from the Export Carrousel.

The concept of Export Carrousel is replicable in shrinking regions all over the world, provided the critical success factors are present, which also open another avenue for the research.

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