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EXCELLENCE MODEL FOR SUSTAINABLE CONVERGENCE IN THE EU HIGHER EDUCATION

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Abstract

The present paper is constituted around the idea of EU sustainable convergence in higher education in the context of Bologna process.

Considering the Systems Theory and by using causal loops diagrams, it is brought forth an excellence model whose implementation facilitates the sustainable convergence achievement. The model represents the result of mapping and modelling a possible dynamics of the higher education system. Used in corroboration with a differentiation strategy, it can yield an efficient tool for solving the funding problem, of achieving excellence (within higher education institutions) and also of obtaining sustainable convergence (at the EU level). The implementation of the model provides each higher education institution the possibility of customizing strategic measures conjointly with the freedom of focusing on the core of its competitive advantage. The strength of the differentiation strategy – model dyad consists in fostering the cultural-economic diversity and the enabling of authentic excellence.

Reaching sustainable alignment and convergence in EU higher education takes time and concerted efforts. Achieving excellence within each and every higher education unit takes also strategic thinking at their very own level.

Keywords: convergence, authentic excellence, excellence model, quality management, sustainability, higher education

JEL Classification: I23, A00

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Introduction

Excellence fosters convergence in higher education systems within the European Union. The smooth application of quality management along with liberalization of services, capital and persons leads to harmonization in education across Europe and further on to sustainable convergence.

Excellence and convergence are two different qualities of higher education. Excellence represents an intrinsic value of higher education, while convergence is an external feature of that, and also a goal of the EU. If excellence is differently perceived by each education institution (depending on the specificity of its members, its organizational culture and the socioeconomic and political conditions), convergence is based on a degree of discipline, harmonisation and compliance with pre-established criteria. Internationalization is a dimension of excellence but also a result of convergence in European higher education (figure 1).

Student and academic staff mobility is a consequence of convergence across Europe, but also a criterion for excellence in quality management models (Teichler, 2012).

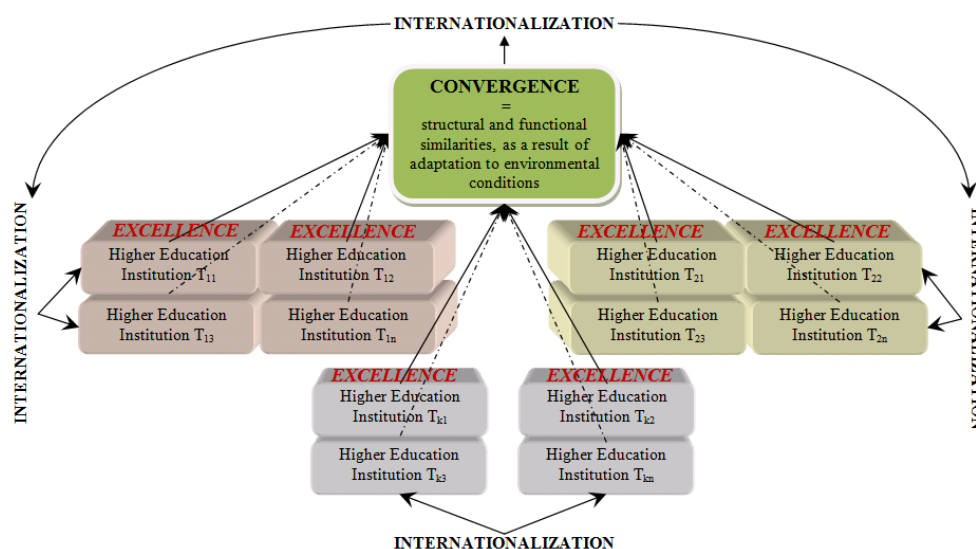


Figure 1: Excellence and convergence as purposes of the Bologna Process

Despite the existence of a large diversity of educational policies and education systems within EU countries, we consider that the application of a unique excellence model (or of a restricted number of models) would improve convergence of the higher education European system. Excellence could be related to personal performances, to organizational performance, but also to country performance. Cultural patterns, economic development, financing sources and allocation, access to education, institutional autonomy - are some of the factors that determine the differentiation of education systems in EU.

A significant step to higher education convergence in the European Union is the Bologna process, having as one of the major goals cooperation in quality assurance systems in

European Higher Education Area (EHEA) and developing comparable criteria and standards in this field. Due to requirements on quality assurance that followed Bologna Declaration (2005), higher education institutions in Europe are basically obliged to implement their own internal quality system according to their mission, goals and organisational culture and to comply with the seven standards defined by the European Standards and Guidelines (ESG) (Rosa et al., 2012). According to the European Quality Assurance Register for Higher Education (EQAR) (2007, p.7), this is a common framework formed by “a widely shared set of underpinning values, expectations and good practices in relation to quality and its assurance”.

However, the convergence in education is a more complex phenomenon which goes behind economic convergence (Dima et al., 2013), or setting up a common set of rules and standards.

1. Review of the scientific literature

Peters and Waterman firstly introduced the idea of excellence (1982), the necessity of defining the concept and also of the measurement of its impact at organizational level.

According to Anninos (2007), excellence can be seen as a dynamical process of development and progressive transformation of thoughts, feelings and human behaviours, according to some set of fundamental values, ideas and knowledge.

Within organizations, reaching and maintaining excellence is supported by the systemic vision of management, the high involvement level of employees, the individual and group desire of evolution and perfection, the constant changing ability, and also by the “adaptation to new situations through quality monitoring at each stage of every process that takes place within the organization” (Anninos and Chytiris, 2011, p.35).

The literature generally accepts that excellence is difficult to be assessed and measured. In this regard, quality management (QM) models or excellence models have been developed to stimulate improvements in organizations (Raharjo et al., 2015) and to assess performance and results.

The business excellence model defines „*success for a variety of stakeholders in both financial and non-financial terms*” (Lascelles and Peacock, 1996, p. 153), while Edgeman (2000) defines excellence as a 3-D model (individual-organization-society) whose functionality ensures sustainable development.

On the other hand, one can witness a dichotomy within the approaches of both theoreticians and practitioners: some work towards finding general models of excellence, while others tend to analyse, test and (in)validate these models.

Some of these models are highly recognized at international level, such as the European Foundation for Quality Management (EFQM) (2003), the Malcolm Baldrige National Quality Award (MBNQA) (2007), the Common Assessment Framework (CAF), Australian Business Excellence Framework (ABEF) or the “4P” model, a people-oriented model (Dahlgaard-Park, 2009; Dahlgaard and Dahlgaard-Park, 2007) built on *people* quality variable as the essential driver to improve the other 3 variables: *partnerships*, *processes* and *products*.

Multiple papers study the structure and the influence of various factors within the structure of these models and the relationship between different criteria or the cause-effect analysis between compounding elements called “enablers” and “results” (Dijkstra, 1997; Eskildsen, 1998; Heras-Saizarbitoria et al., 2012).

An example is the analysis of Ghosh et al. (2003), who introduced a structural equation model that empirically validates the relationships between the elements of the Malcolm Baldrige National Quality Award MBNQA (2000), proving that *leadership is an essential factor for strategic planning*. Another example is provided by Eskildsen (1998), who conducted a longitudinal study of the EFQM excellence model and used a quantitative measurement tool that can provide insights into QM practices.

The critical success factors (CSFs) identified by the majority of studies devoted to these models relate to the implementation process rather than long-term sustainability (Saraph et al., 1989; Black and Porter, 1996; Tamimi, 1998; Sohal and Terziovski, 2000; Sebastianelli and Tamimi, 2003) and could be listed as: top leadership commitment, training and education of staff, HRM, process management and planning, quality data reporting, communication and customer satisfaction focus.

The excellence model defined by the European Foundation for Quality Management EFQM) is used to assess the performance of various European organizations. The model is based on enablers like: leadership, strategy, people, resources and partnerships, and processes, products and services. The model also comprises four “results” criteria: customer results, people results, society results, and business results. EFQM is the most popular model in Europe used by approximately two-thirds of European organisations for self-performance evaluation. The model is generally referred to as the business excellence model (BEM). There are various examples and analyses of the model applicability in the private, public and voluntary fields. The cultural differences between the public sector and the private sector in the application of the model are underlined by Bendell et al. (1994, p. 48), who identified barriers such as: “lack of individual ownership”, “responsibility or client care”, “lack of staff empowerment”, “centralised authority and bureaucratic proceduralisation”, “unclear and multiple customers and stakeholders”, “scale and complexity issues associated with large centralised organisations”.

The necessity of new models introduction for public sector applicability of TQM was recognized by Morgan and Murgatroyd (1994), who distinguish between core, adaptive and problematic concepts, tools and applications (McAdam and Welsh, 2000).

In 2000, the Common Assessment Framework (CAF) was launched as the first European model specifically tailored for the public sector and it has been used especially in Italy, the Slovak Republic and Portugal as a basis for their specific public sector quality awards (Raharjo et al., 2015), the most recent version being CAF 2013.

Within the public sector, education, including higher education, is another field where the principles of quality management and excellence models can be applied to create better schools in a market –oriented environment where higher motivated teachers and students can improve the teaching/learning process (Rosa et al., 2012, Ghinea et al., 2012) and cope with the increasing pressures of more demanding stakeholders. Many authors consider that successful tools of TQM which transformed business could be used for education sector to overcome challenges due to declining resources, the need for more specialized academic staff, quality standards and criteria, increasing pressures coming from globalization and

internationalization process. The application of the relevant concepts of TQM to each and every aspect of academic life, such as teaching, learning and administrative side appears to be a viable solution (Sahney et al., 2004). However, the literature abounds in opinions in supporting the idea that TQM and excellence models applications in higher education cannot provide the outcomes expected since higher education institutions are very different types of organizations with different ethos and particular characteristics and the academic culture is strong and resistant to principles, concepts and the practicing of this type of management (like customer relationship management) (Rosa et al., 2012). Rosa and Amaral (2007) add the lack of communication channels, difficulty in measuring HE results, individualism and internal competition, bureaucracy, weak leadership commitment.

In their study, McAdam and Welsh (2000) tried to assess the implementation of the European Model of Total Quality Management to the education colleges in Northern Ireland, to identify the interests of the various stakeholders, the compatibility of the interests and the nature of their relationship. There are also cases where the application of quality management did not contribute to internal improvement (Harvey, 1995).

In 2012, pointing out the importance of business sustainability, Anninos and Chytiris introduced the concepts of sustainability, integrated management and innovation within (business) university curricula. Their paper builds on the relation sustainability-excellence and brings to light the main challenges of sustainable management (Anninos and Chytiris, 2012). They consider that excellence in education is mostly given by the quality of infrastructure and of the teaching staff, the providing for financial and human resources, the connection university-business, the connection to foreign institutions, the continuous adaptation of the curricula to the business environment such that the graduates possess the knowledge, the aptitudes and abilities in order to become responsible leaders and managers.

According to Cornuel (2007), excellence in education demonstrates the value of business education for economic development, the universities redirecting their research activities in solving corporate problems and becoming more competent in the job of educating and socializing the students. Excellence in business education is about creating value (not only financial), contributing to sound economic growth, improving human conditions and balancing social and economic interest (Emiliani, 2004).

Charles D. Kerns (n/a) considers that operational academic excellence is based on “outstanding teaching, relevant business connections, correlations with practice applicability, intellectual contributions”, showing at the same time how an integrated approach of academic excellence can be applied by the faculty. Some of the benefits of Excellence Model in higher education institutions are: anticipate students’ needs and expectations; visionary and inspirational leadership; staff commitment and responsibility; mutual relationships and partnerships, business collaboration and support, recognition and credibility etc.

Consequently, achieving excellence in higher education is not an easy task as recognized by various authors (Acito et al., 2008; Cornuel, 2005; Friga et al., 2003; Hamel, 2009). One major barrier is represented by the fact that business education is delivered differently among countries or institutions, even within the countries of the European Union.

The relationship between sustainability and business education has been introduced by practice and experience and further enforced by conferences and special issues by prestigious journals like Harvard Business Review, Academy of Management Learning and

Education, etc. focusing on “the areas that need to be transformed so that future managers are educated to produce business solutions scientifically and ethically correct”. This trend is strengthened by the criticism exercised on the effectiveness of business education and its contribution to excellence (Anninos and Chytiris, 2011, p. 63; Lefter et al., 2011). The sustainability issue has a clear influence on all dimensions of education process and in literature there are various studies and analysis provided especially by specialized literature (Rodríguez-Solera and Silva-Laya, 2017; Katrinly et al. 2017; Howlett et al. 2016 etc.).

Beyond rules and standards, the excellence for sustainable convergence in higher education should become a driver for all parties involved: leadership and management, stakeholders, students and academic staff and it should have dimensions related to policies and structure, funding, internationalization, and quality assurance.

2. The Higher Education System as Complex Adaptive System

Pursuant to specialised literature (Heylighen et al., 2007; McGarvey and Hannon, 2004; Cvitanovic et al., 2012), the world is made of a multitude of complex systems, which function on similar structural characteristics. Within this system of systems, a simple change of a single component can result in a chain modification of different other components, leading sometimes to a massive, unpredictable change (Forrester, 1999; Hanneman, 1988; Sterman, 2000).

According to system theory, any entity or group of living entities, from simple cells to social organizations, must be seen as a dynamical unit (potential system) which interacts with other systems within a common framework, which constitutes itself into a super-system. No system can exist independently, the systems influence each other, and also they influence the environment, which in turn, due to a rebound effect, can produce a modification of the systems themselves (Ghinea et al., 2015).

Out of the multitude of definitions of a system we are going to use that of Ackoff (1971). He presents the system as an entity (of either physical or theoretical nature) made of interdependent elements which fulfil the following conditions: a. the behaviour of the elements influence the behaviour of the entire entity; b. there is an interdependency between the behaviour of the elements and of the entire entity; c. independent of the structure of the sub-groups of elements, they all have effect on the behaviour of the entire entity, and no such effect is independent.

If the interdependency relations among the system's components are not linear, the system is said to be complex. If the elements of the system, the system itself, and/or its environment are modified in time due to these interactions, the system is called dynamic.

According to Forrester, complex systems are counter-intuitive, in a way that corrections induced by a straightforward reading of the hints provided by these systems are often inefficient or even damaging. The intuitive, simple strategies and policies that are the basis of human-related experience may produce in case of complex systems negative outcomes (Forrester, 1999).

An *adaptive complex system* is a special case in which complexity comes from non-linearity, diversity and a higher degree of interdependency among the elements, while the adaptive feature resides in the ability to learn and change based on the own experience

(Meadows et al., 1972; Mesarovic and Pestel, 1975). In this case, a dramatic situation requiring immediate and strong action might prove to be, by elapsing the time range, a short, self-resolving crisis.

Applying the previously presented concepts to the autonomous education components (universities, students, government etc.), which interact locally within a global world, we state the following: the higher education system is a complex dynamical system which, under proper incentives and management (Dima and Ghinea, 2016), proves to be self-adjusting, maintaining itself in a state of dynamic equilibrium.

3. The Right Strategy for Sustainable Convergence

Good intentions are necessary but not sufficient in order to obtain sustainable convergence within EU. Without a proper general strategy, the education systems will not be able to define their own strategies, putting at risk the objectives themselves, and the perception of the universities within the public eye.

While a business model is a representation of the activity development and of the producing of value (Teece, 2010), the strategy locates the organization on a long term, with respect to clients and competitors. Even if the same model can be implemented by various strategies, the outcome is not always the same. As a consequence, the best strategy and the best model have to be identified in order to maximize the chances of reaching simultaneously excellence and sustainable convergence in European higher education.

For the analysis we have chosen four strategies indicated by Harvard Business Review, namely: low-cost strategy, differentiation strategy, customer relationship management strategy, and network effect strategy (Society for Human Resource Management, 2006).

Since the customer relationship management strategy relies on the personal connection between the organization and the customer, and given the fact that the education system cannot meet the expectations and preferences of all employers, we shall not consider this type of strategy as appropriate for our approach.

The network effect strategy applies to markets that can offer a dominant position to the respective organization. Its success is based on the number and variety of (chained) products and/or services that are offered. The larger the number of products/services, the higher the value. Also known as the “winner takes it all” strategy, it leaves not much room to competitors, which makes this type of strategy inappropriate for obtaining excellence in a multitude of higher education systems, and increasing convergence within EU.

Regarding the low-cost strategy, this goes very well with standardized products with a minimal level of differentiation, where quality is not the issue. Recommended for cases of operational efficiency, experience curve exploitation, unbeatable supply chain or redesigning the products, we consider this type of strategy also inappropriate for the Bologna objectives.

The last resort - the differentiation strategy - is, in general, used by organizations that are focused on personalized products, willing to invest in market research, understanding customer preferences, continuous innovation, knowledge dissemination and establishing good practices. We find this to be a perfect fit to the goals of achieving excellence in higher education, either in universities, or national/European education systems.

Yet, even if the best seemingly strategy is chosen, that does not guarantee the success. The way the strategy is applied is of tremendous importance for achieving the respective goals.

Consequently, the differentiation strategy allows for the possibility of personalizing the strategic measures, function of the particular socioeconomic conditions, leading to a better understanding of the market, and also to the increase of the own competitive advantage.

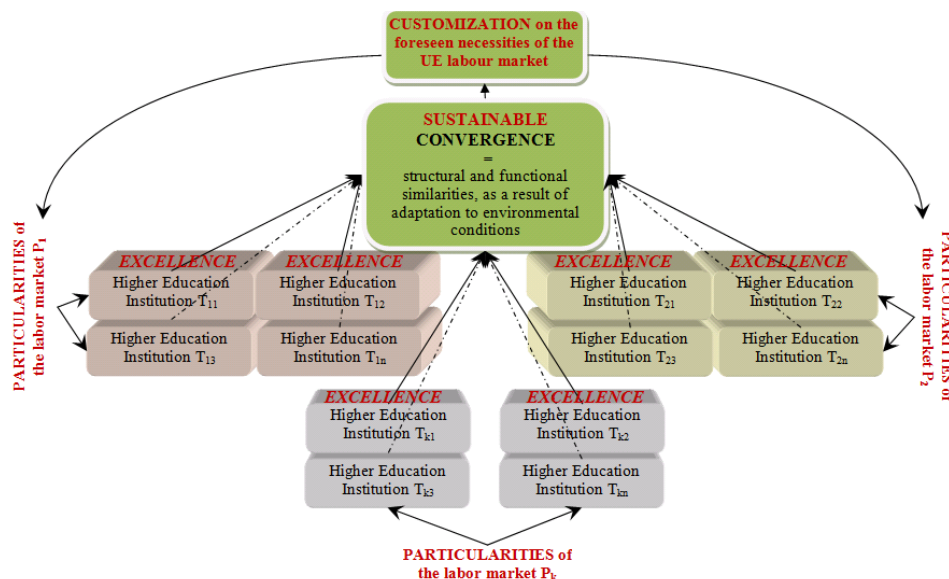


Figure 2: Achieving sustainable convergence

Source: authors' own design

Summing up, we choose the differentiation strategy, keeping in mind that the element leading to excellence and sustainable convergence is the particular application of the higher education process to the requirements of the respective labour market (Figure 2).

The challenge is to align the differentiation strategy to a conceptual model, such that the Bologna objectives of excellence and sustainable convergence are achieved. This is the main goal of this paper: designing the excellence model which, implemented via the differentiation strategy, leads to sustainable convergence of higher education within EU.

4. Research methodology

The research project *Multivariate analysis of convergence in European Higher Education* developed between 2011 and 2014 a thorough analysis of the EU educational system at macro and micro level and the convergence/divergence trends. According to the results obtained, the mechanisms that determine convergence to certain extents were continuously fuelled by the low homogeneity level manifested at EU level, by the weak link between theory and practice, governance deficiencies or insufficient funding, and a whole plethora of other factors.

The model developed by Dima et al. (2013) displays on a tree structure the main dimensions of educational systems which are relevant for pursuing education convergence

at EU level (Figure 3): educational policies, internationalization, funding mechanisms, and quality assurance, and three relevant indicators for each dimension.

These concepts have been borrowed and analysed both as enablers and as results becoming subsequently the variables of the excellence model that we are proposing.

Thus, we start from the underlying assumption that *a model* facilitates the understanding of the interconnectivity between the elements of a complex system considering that the higher education system is a complex adaptive system and we resorted to mapping the dynamic relations that ensure the functioning of this system. We used system diagrams method (Kim, 1993; Senge, 1999) also known as causal loop diagrams.

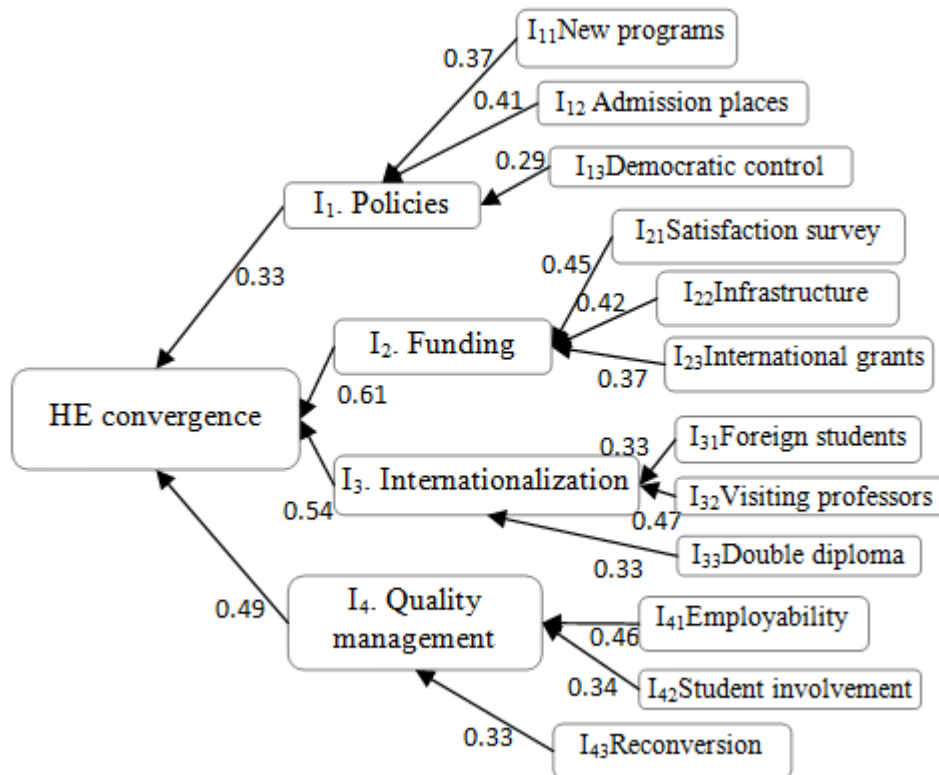


Figure 3: The real convergence model

Source: Dima et al., 2013

This method implies, beyond the identification of variables, the identification of causal links among variables. A link of type O indicates a negative causality, which corresponds to a negative correlated variation of the node values (initial versus receptor). On the other hand, a link of type S corresponds to a positive causality (positive correlation).

Decelerating causal loops balance the system by restoring it to its initial state. Given the negative feedback (the first and the last causality are opposite), the balancing loop generates a self-limiting behaviour.

The role of the accelerating causal loops is to reinforce the trend, be it a positive or a negative one, and they can determine either a flourishing or a decline period. Given their positive feedback, this type of loops continuously enhance the distance between the initial and the current state of the system, moving it away from the former and triggering a self-generating behaviour.

Through the causality type, we can identify the accelerating and decelerating causal loops which depict behavioural system patterns. This identification comes in handy when we deal with an imperious change within the system.

We therefore conceive the model of excellence for higher education under the name ENCLOSURE (**Excellence Model for Sustainable Higher Education**), as introduced by figure 4. The model is based on causal loop diagrams and Systems Theory, and takes as variables the factors of influence displayed by Dima et al model. ENCLOSURE model reflects the dynamic relationships that ensure not only the system functionality, but also the achievement of excellence for each higher education unit, in their attempt to reach sustainable convergence.

The aim of this model is not to give a precise structural representation of the higher education unit functionality, but to represent the dynamic relationships which:

- Can ensure the coherence of the strategy of the respective institution;
- Can facilitate the achievement of excellence within the respective institution;
- Can lead to an education policy which is relevant for the socioeconomic and political conditions in each particular country;
- Can stimulate excellence and hence convergence, at either macro (EU), or micro (member country) level.

When applied correctly, ENCLOSURE enhances excellence attainment within each higher education institution, implicitly leading to sustainable convergence of the European higher education systems.

5. Results and discussions

The ENCLOSURE model considers the real involvement of the business environment of utmost importance. We truly believe that signing/concluding partnerships between higher education institutions and employers active on the labour market for refining the knowledge, abilities and capabilities of the graduate (product/outcome of the first and resource of the last) emerges as an important landmark of efficiency/effectiveness and adequacy of higher education. To the extent to which the labour market requirements are reflected in the university curricula, and the profile of the graduate in terms of soft and hard skills, is the one agreed upon by the employer, convergence will only bring benefits.

Incentivising the private sector in the education process will also facilitate obtaining the infrastructure necessary for the scientific-pedagogical endeavour (I_{22} in Figure 4), which, on its turn will not only determine the enhancing of students' satisfaction levels (I_{21} in Figure 4), but also the capacity of specific universities to attract/initiate, involve and/or support international research grants (I_{23} in Figure 4).

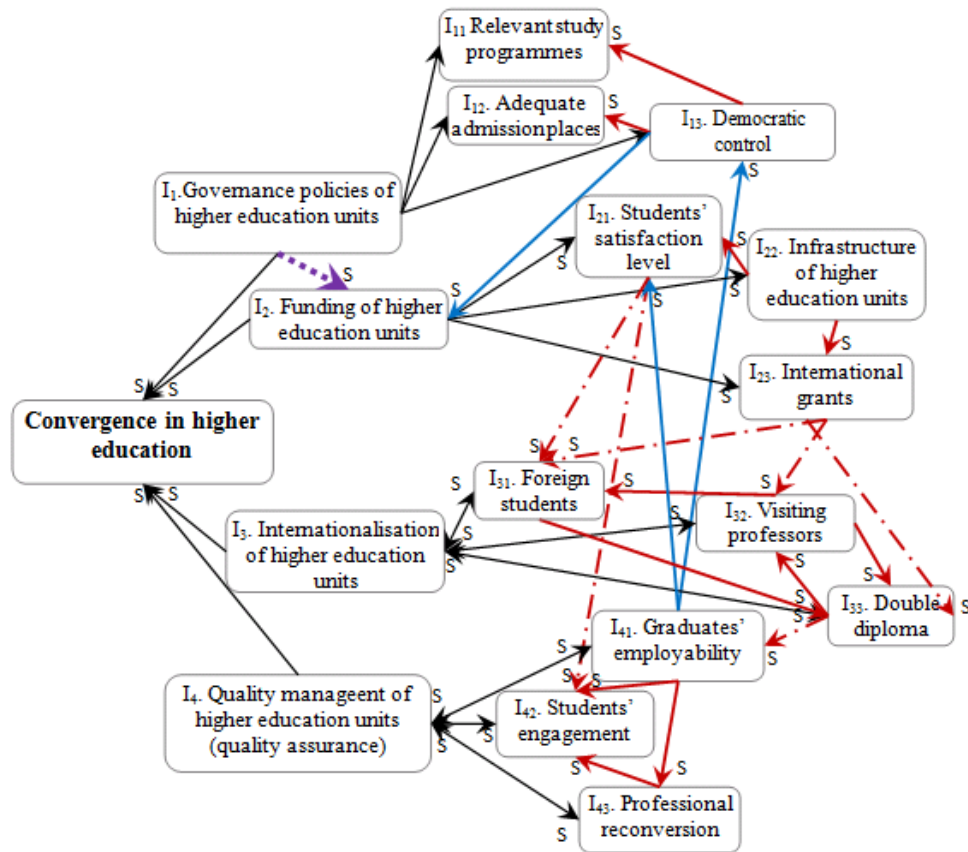


Figure 4: ENCLOSURE – Excellence model for sustainable convergence

The participation in important research projects, be them national or international, has the capacity of amplifying the international visibility of the professors, individually, and of their affiliated institutions (influence of I_{23} over I_{31} , I_{32} and I_{33} in Figure 4). A similar impact is exhibited by students' satisfaction (I_{22}) especially over the number of foreign students registered by the higher education unit (I_{31}). As a result, the university in question registers an increase of mobilities towards and from it. This fact further leads to a better international visibility and nevertheless the multiplying of the agreed upon double degree programmes ($I_{32} \leftrightarrow I_{33}$ reciprocal/inter influence; $I_{32} \rightarrow I_{31}$ and $I_{31} \rightarrow I_{33}$ influences).

Cascading, the existence of double degree programmes will lead to a better recognition of the graduates' skills from higher education institutions, increasing their real chances of entering the national or international labour market ($I_{33} \rightarrow I_{41}$ influence). In this manner the student will conscientiously and considerably get involved in the educational process ($I_{21} \rightarrow I_{42}$ and $I_{41} \rightarrow I_{42}$ influences), and, moreover the level of trust in professional reconversion will rise ($I_{41} \rightarrow I_{43}$ influence).

With respect to policies and governance, the effects we are aiming for are, on the one side, a rebound effect, increased employability by boosting students' satisfaction levels ($I_{41} \rightarrow I_{21}$) in contrast with the effect of a diligent lobbying activity for reflecting reality ($I_{41} \rightarrow I_{13}$), followed also by the chain reactions attached to one decision or another.

Consequently, in a fundamental manner, if there is a real collaboration between the higher education institutions and the private sector, the profile of the graduates will match the needs of the employer to a large extent, so their employability is higher. This case leads to the employers' perspectives being thoroughly considered and taken into consideration in the governance dimension. Additionally, the private sector will get encouraged to participate in financing and supporting higher education institutions ($I_{13} \rightarrow I_2$ influence) and the programmes will be better designed as to address the needs of all the actors on the labour market ($I_{13} \rightarrow I_{11}$ and $I_{13} \rightarrow I_{12}$ influences).

As it has been described, all the influences are positive, meaning of S type. Consequently, both ending nodes fluctuate in the same direction. This ultimately results in a continuous enlargement of the distance between the initial and the current state of the system, removing it from the former and triggering a *self-generating* behaviour. In other words the public-private partnership as part of ENCLOSURE model not only that is suitable for the proposed strategy, but it also triggers and maintains it. No matter the interest diversity claimed as main drawback, the business environment involvement acts as a catalyst for students' relevant knowledge acquisition and handling, graduates' insertion on the labour market of the originating country, retention of young researchers liable to pursue doctoral studies and/or gain international recognition, and even more upstream, on the professors' motivation level.

As it can be observed, the elements that can bring about the change falls within policies and governance, and not strictly within funding, which is an effect and not the most important determining factor (see the purple dotted arrow between I_1 and I_2 in Figure 4). To the extent to which the governance practice favours the chain of interdependencies presented in the model, the effects are the ones described. Otherwise, the course can be obstructed, all the measures being undertaken only on a short term or meant to remedy an arising problem.

Realistically, the most important obstacle is the reduced degree of homogeneity found within the clusters, mainly in the candidates' cluster. Here, even in the favourable situation in which the governance is adequately regulated, the differences in the economic welfare being too large, even an ideal course of the causalities can lead to obtaining different results and consequently, to an unaltered heterogeneity of the cluster.

Conclusions

Reaching sustainable alignment and convergence in EU higher education takes time and concerted efforts. Achieving excellence within each and every higher education unit takes also strategic thinking at their very own level.

Despite the general adhesion in pursuing these goals, it still is a process full of obstacles, firstly because of the different status of national economies, secondly, because of the cultural disparity that lingers across Europe, and not least the persistence in malfunctions treatment instead of comprehensive analysis and actions.

In general, HE institutions campaign for and request the reform of the education system on top bottom approach (starting with the management policies of the higher education units), while the Ministry of Education reacts by requiring a better and more efficient internationalisation, as well as a better targeted quality management of the higher education units. The bone of contention among the two approaches still remains – the *funding*.

ENCLOSURE represents the result of mapping and modelling a possible dynamics of the higher education system. Used in corroboration with a differentiation strategy, it can yield an efficient tool for solving the funding problem, of achieving excellence (within higher education institutions) and also of obtaining sustainable convergence (at the EU level). The implementation of the model provides each higher education institution the possibility of customizing strategic measures conjointly with the freedom of focusing on the core of its competitive advantage. The strength of the *differentiation strategy – ENCLOSURE model* dyad consists in fostering the cultural-economic diversity and the enabling of authentic excellence.

However, achieving excellence and sustainable convergence is not implicit. The balance between diversity and standardization is not easy to attain, due to the interdependencies between the model components, and their continuous evolution.

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