THE ROLE OF CRITICAL THINKING, ACADEMIC ENTREPRENEURSHIP AND TALENT IN THE ECONOMIC DEVELOPMENT

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Abstract

In general sense, the mission of universities has not traditionally involved a consciousness of the need to be wealth creating in the direct sense. However, the rise of the knowledge economy has forced them to become aware of the importance they have for the establishment of future regional ‘constructed advantage’. They have become vital actors in the knowledge society and economy. It is important however to take a broader view that includes use of university capabilities in support of economic development, public and social policy, cultural engagement. Cultural activity and industries are important for economic activity, science is part of our culture, the social sciences have roles in all three domains, and all three areas interact strongly. Consolidate links to different stakeholders (stakeholders include students as key members of the academic community, government at all levels, enterprise and business, different social and cultural actors), universities must respond to their needs through teaching, research and dissemination of results and knowledge transfer activities which serve to promote economic growth and competitiveness through creating and exploiting new knowledge.

Keywords
- Constructed advantage;
- University;
- Talent;
- Critical thinking;
- Economic growth.

Rezumat

În mod tradițional și în sens general, misiunea universităților nu se baza pe conștiențizarea rolului de a fi generatoare de bunăstare, în sens propriu. Economia cunoașterii le-a forțat însă să devină conștiente de importanța pe care o au în construirea unui viitor avantaj pe piață, fie că este vorba de firme, guvern sau alți actori sociali. Se impune însă o perspectiva mai largă care să permită utilizarea resurselor de care dispun universitățile în scopul promovării dezvoltării economice, politicilor publice și a celor sociale, precum și a implicării culturale. Activitățile din sfera culturală și industrială sunt importante pentru dinamica economică, știința fiind parte a culturii noastre, științele sociale având rol în toate cele trei domenii de activitate enumerate anterior, intercondiționându-se reciproc. Consolidându-și legăturile cu diferiți actori (studenți, guvern, întreprinderi și alți actori sociali și culturali) universitățile pot răspunde mai bine cerințelor acestora, prin cercetare, învățământ și transfer tehnologic, contribuind astfel la promovarea creșterii economice și a competitivității, prin crearea și exploatarea de noi seturi de cunoștințe.

Cuvinte cheie
- Avantaj creat;
- Mediul academic;
- Talent;
- Gândire critică;
- Creștere economică.
1. Introduction

In the old economy, regional competition revolved around the competition for firms. The location decisions of firms drove regional economies, and the location decisions of people followed from location of firms. For regions, the key was to combine endowments of natural resources or energy with advantages of transportation systems, labor costs, and/or business incentives to attract firms and industry. The knowledge economy dramatically alters this calculus. In the knowledge economy, those places that have talent thrive, while those that do not decline. Knowledge workers are both highly mobile and eagerly sought after by technology employers, and thus have the option of locating virtually anywhere they desire.

In a world where new ideas, new processes and new technologies can be communicated and implemented with unprecedented speed, the capacity of society both to create and introduce beneficial innovation is vital to its economic success and its social and cultural vitality. A society that fails to create new intellectual capital, which fails to exploit it, or is unable to make decisions about the direction of change, will be a derivate society, dependent upon inspiration from elsewhere, buffeted by international trends and unable to play a leading role in global development. It is the perspective that has created the aspiration of the European Union to be “the world’s leading knowledge-based economy by 2010”.

2. Talented human capital and constructed advantage

Now it paid more attention to ‘constructed advantage’ in comparison to other well-known forms of economic advantage, as follows: comparative advantage and competitive advantage. The idea of comparative advantage, deriving from David Ricardo and trade theory, explained economic welfare in terms of initial resource endowments and trade in these between regions and nations. However, by the mid-1970s visible cracks were appearing in the economic models and frameworks that characterize pure comparative advantage. Thus countries with a large labour supply would naturally export goods that were labour intensive (e.g. China) while countries that were, say technologically advantaged (e.g. United States) produced and exported technologically advanced products. The paradox arose when advanced economies exported labour intensive goods as well as technologically intensive goods. The key weakness was the failure to acknowledge technological process change as well as product innovation being endogenous to economic growth. Porter referenced competitive advantage of firms in which distributed supply chains and the role of large domestic markets became accepted as being central to explanations of inter-firm and firm-market success. Intra-industry trade and localized demand conditions for market competitiveness were highlighted. But no explanation was offered on the stimulus for why some regions prosper and others do not, and the emphasis on markets meant crucial funding and policy support by the public sector was largely ignored.

The analytic observations of the two preceding perspectives do not embrace the new dynamics of innovation and the capability to exploit them that are keys to growth. The ‘new competitive advantage’ highlights regional development economics, the dynamic of which draws upon constructed advantage. The key characteristics of this are captured at three levels: economy – regionalization of economic development, integration of
knowledge generation and commercialization, smart infrastructure, strong local and global business networks; **governance** – strong policy-support for innovators, enhanced budgets for research, vision-led policy leadership, global positioning of local assets; **community** – sustainability, talented human capital, creative cultural environment.

The rise of knowledge economy radically alters the ways that cities and regions can establish and maintain ‘new competitive advantage’. The key to success in the old economy was simple – costs. In the mass production era, regions established competitive advantage via advantages in natural resource endowments, transportation access, the cost and productivity of physical labor, and by reducing the overall costs of doing business. Driven to reduce costs, firms selected locations that provided low-cost land, cheap or highly productive physical labor, and a cost-conscious business climate. Regional development strategies typically emphasized the use of so-called business incentives designed to win over businesses by pushing their costs even lower.

In the knowledge economy, regional **constructed advantage** comes to places that can quickly mobilize the best people, resources, and capabilities required to turn innovations into new business ideas and commercial products. Leading regions establish constructed advantage through their capabilities. They are vehicles for resource mobilization that can almost instantaneously bring together the resources required to launch new businesses and turn innovations into successful products. For these reasons, the nexus of ‘new competitive advantage’ shifts to those regions that can generate, retain, and attract the best **talent**.

The **talent** is the **critical factor of production** in the knowledge economy. In previous eras, nations and regions could prosper because they had strategic locations near raw materials or on major transportation routes. But today, it is the ability to attract talent that creates regional **constructed advantage**: those that have the talent win, those that do not lose. In this regard, the “quality” of a city or region has replaced cost and access as the pivot point of new competitive advantage.

3. The mission of universities in economic development

Universities are the indispensable players in the advancement of scientific knowledge, which continuously seeds new generations of applied research, scientific breakthroughs and streams of new products that enhance our lives and strengthen our economy. Universities play a central and strategic role in educating and training the scientists, teachers, researchers, entrepreneurs and other skilled workers that fuel innovation in high technology and the knowledge industries that are the primary drivers of successful regional economies today and are predicted to be the drivers of the global economy well into the future.

The university has become a factor of production in a knowledge economy and an increasingly direct source of economic development at the national and regional levels. The role of universities, in particular MIT and Stanford, in stimulating regional **economic development**, has been widely recognized.

Nevertheless, there is a tendency to assume that a university in one country is basically similar to a university in another. However, strong differences can also be found. They especially exist between countries in which universities are basically elements in a state bureaucracy, with basically similar levels of prestige and funding across schools, like EU. By contrast, in the US, even state universities operate as relatively independent entities
in competition with their peers, and aspiring peers, in their own region as well as in other parts of the country.

Despite differences, commonalities emerge as universities make the transition from teaching to research institutions and from “ivory tower” to entrepreneurial universities. These transitions are taking place at different rates in various countries and regions, sometimes successively, other times simultaneously. They may even occur in seemingly counter-intuitive reverse order, for example, when the introduction of an economic development mission stimulates the development of research projects, initially focused on local problems.

In the late 19th and early 20th century academia went through the first academic revolution, introducing research into the academic science and making it more or less compatible with teaching, at least at the graduate level. Many universities in the USA and worldwide are still undergoing this transformation of mission. At the same time, the increased salience of knowledge and research to economic development has opened up a third mission, the role of the university in economic development.

The traditional thesis of what to do in a declining, or even growing regional economy, which still holds today, is to improve the business climate. The typically strategy is to reduce taxes, which is believed to be the best way to attract or retain firms. A second related tactic is to offer subsidies, either to induce firms to relocate or to retain a firm threatening to move elsewhere.

The integration of academic and business goals is the basis of the entrepreneurial university and knowledge-based regional economic development. The “third mission” brings into focus the classical discussion between “academic freedom” within independent universities and “the university in service of society”, although in a new environment.

Increasingly, in the USA, Europe and elsewhere, an entrepreneurial university, integrating, teaching, research and economic development is a common element in the development of knowledge-based regional economic growth. In the USA the entrepreneurial university engaged in economic development is an overlay on an academic entrepreneurial system where universities and researchers search for research resources. European universities are often in the situation of establishing a liaison office to link with industry while simultaneously attempting to build a research base at institutions traditionally devoted to teaching. The data from a survey of representative universities (including traditional, technical and new or specialist universities) in six EU countries show most academic entrepreneurship activity devoted to varieties of industrial or national science council research, consultancy and external training. Less activity was devoted to licensing, spinout or research marketing.

Nevertheless, the introduction of an explicit third mission has introduced strains among the older universities and emerging regional colleges and led to a debate over the purpose of the university. One thesis is to strengthen and maintain the older foundations as centers of basic research. Another is to support the development of regional colleges as foci of applied research oriented to local economies. In any event, the humboldtian paradigm, based on an elite model of higher education, has been superceded, not only by the massification of higher education, but though the incorporation of a variety of entrepreneurial elements in academic practice. Even though traditional academic ideology often lags substantive organizational change, an expanded role for the university in regional and national
economic and social development is underway in the USA and EU.

4. Critical thinking as the essence of tertiary learning (higher education)

Critical thinking is a powerful resource in economic environment and society; although those in power might often have viewed the lack of critical thinking favorably. When we are thinking critically, we are not just thinking passively and accepting everything we see and hear. We are thinking actively. We are asking questions about what we see and hear, evaluating, categorizing, and finding relationships. Some critical thinking activities are: interpreting according to a framework, relating theory to practice, making a claim and supporting it, using appropriate evidence, making link between ideas, asking questions, evaluating, predicting, describing, analyzing, synthesizing, categorizing, establishing cause and effect, comparing and contrasting, identifying problems and solutions.

These sorts of activities would probably describe a person with critical thinking dispositions: diligences in seeking relevant information; reasonableness in selecting and applying criteria; persistence through difficulties are encountered; precision to the degree permitted by the subject and the circumstances; orderliness in working with complexity. Someone strongly disposed toward critical thinking would probably agree with statements like these: “rather than relying on someone else’s notes, I prefer to read the material myself”; “even if a problem is tougher than I expected, I’ll keep working on it”; “making intelligent decision is more important than winning arguments”. A person with weak critical thinking dispositions would probably disagree with the statement above but be likely to agree with these: “if my belief is truly sincere, evidence to the contrary is irrelevant”; “I prefer jobs where the supervisor says exactly what to do and exactly how to do it”; “selling an idea is like selling cars, you say whatever works”. In the Soviet higher education system focused heavily on vocational and other specialized training, subsequently spread first to its non-Russian republics and satellite states, students would seldom engage in critical thinking, class discussion and writing. In consequence, upon acceptance (at university), for the next four years students would pursue an education focused on giving them (a) specific, limited set of vocational knowledge in their given field. Students would memorize information from textbooks and be lectured at by the professors.

All disciplines require we to ask questions, relate theory to practice, find and use appropriate evidence, evaluate, find links, and categorize. Science is often concerned with interpreting within a framework, describing, explaining, predicting, and identifying cause and effect. Management is often concerned with identifying problems and solutions, relating theories to practice, and making comparisons and contrasts. IT is often concerned with analyzing complex situations into component parts. Literature and History are often concerned with making claims and supporting them, usually in the light of particular framework of analysis (ex. postmodernism etc.). By teaching students how to think rather than what to think, and how to learn rather than what to learn, a critical thinking (liberal education) produces graduates who are better able to adapt and respond to the demands of a fast-changing economic and social environment.

Actually the knowledge environment is expanding so fast and changing so much that in about some years after graduation professional
training of graduates will be in serious need of renewal. Creative or innovative thinking is the kind of thinking that leads to new insights, novel approaches, and fresh perspectives, whole new ways of understanding and conceiving of things. By promoting critical thinking through teaching and research universities are essential elements in upholding sustainable economic development.

1. Conclusions

Entrepreneurship, along with high technology industry and the ability to attract knowledge workers, is an essential element of regional economic growth. Hence, constructed advantage is a strategic policy perspective of practical utility to business firms, associations and policy makers.

Governments worldwide recognize the value of universities in satisfying a diversity of social needs: as providers of trained personnel and credible credentials; creators of useful knowledge; as sources of entrepreneurship; as powerful attractors of business investment into a region; as sources of expertise and innovative thinking.

Some industrial companies also need to better understand and recognize the values and missions of universities. The objectives of industry (maximizing shareholder value) and of universities (maximizing public welfare) do not coincide. There is a need for alignment of the two sets of objectives by implementing agreed upon guidelines and boundaries. The parties need to understand each other much better and accept their constraints. In particular, industry should recognize that universities can take an active role and that this is beneficial to industry in the long term. Trust must be built on all sides.

It should be recognized that it is not the mission of universities to bring products to the market. A holistic approach is necessary, starting with basic science and extending up to social sciences. Universities alone will clearly be insufficient base to make a substantial contribution to regional development beyond their current capabilities, but universities and, specifically their most accomplished research individuals, teams and centers working in a networked system connecting research producers to resource-providers and users within and beyond any specific region constitute an goldmine of potentially valuable knowledge (The National University of Singapore is routinely contracted by its government to design economic and social policies. This is in collaboration with the likes of Stanford, Penn State (Wharton), Cambridge, Copenhagen and Shanghai universities.). The role of the EU in regard to universities and regional development is to design a model or models for delivering greater resources to the greatest number of institutions needing to develop ‘constructed advantage’. The indications of movement in the ‘factories of the twenty-first century’ are suggestive of the contest between knowledge economy equity and efficiency being resolved through new forms of university and research governance, more corporate possibly less collegiate.

Critical thinking is a necessary condition for the free market economic systems. Critical thinking can be seen as having two components: a set of skills to process and generate information and beliefs, and the habit, based on intellectual commitment, of using those skills to guide behavior. It is thus to be contrasted with: the mere acquisition and retention of information alone, because it involves a particular way in which information is sought and treated; the mere possession of set of skills, because it involves the continual use of them; and the mere use of those skills, “as an exercise”, without acceptance of their results.
Having a critical spirit does not mean that the person is always negative and hypercritical of everyone and everything. A critical spirit in a positive sense means: concern to become and remain well informed; alertness to opportunities to use critical thinking; flexibility in considering alternatives and opinions; prudence in suspending, making or altering judgments; willingness to reconsider and revise views where honest reflection suggests that change is warranted.

Critical thinking of any kind is never universal in any individual; everyone is subject to episodes of irrational thought. Its quality is therefore usually a matter of degree and dependent on, among other things, the quality and depth of experience in a given domain of thinking or with respect to a particular class of questions. For this reason, the development of critical thinking skills and disposition is a life-long endeavor.

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