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Aims and Scope

The Journal on Efficiency and Responsibility in Education and Science aims to publish perspectives of authors dealing with issues of efficiency and/or responsibility in education and related scientific disciplines. The focus is on topics such as:

- theory and methodology of pedagogy and education;
- theory and methodology of science;
- human resources and human relations management;
- knowledge management and knowledge engineering;
- systems engineering and information engineering;
- quantitative methods.

The journal accepts quantitative, qualitative and experience-based full research papers, short communications or review studies. Applications and case studies introducing and describing impacts of new theoretical approaches in real conditions of practical case are also accepted.

All papers passed a double-blind peer review process.

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UNIVERSITY COMMUNICATION AND RESPONSIBILITY TOOLS STRENGHTHENING THEIR EFFICIENCY

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Abstract

In this paper we review ways in which universities manage their access to the future. We examine how responsibly they create and communicate information to potential students, alumni, and the public. Consequences for quality attributes for the university and its specific group relationships are discussed with a view to alumni systems. The discussion of these topics can bring valuable ideas for more communicative and responsible university activities aimed at the future, especially for universities in countries where external or internal conditions for future relationships building have not for years been strong enough.

Key Words

Alumni, Alumni System, Responsibility, Relationship, Environmental Powers, Ranking of Reputation, University

Introduction

Major challenges to businesses and organizations, including universities, are: increasing productivity, technological change and innovation, social responsibilities, ethics, ability to be (internationally) competitive, and to have timely, accurate information. A successful university, keeping in mind and solving the above challenges, provides the necessary education, knowledge and relationships to enable students to make effective career choices, to assert themselves, and bring to the university a never-ending, mutually profitable relationship. The paper will attempt to answer the following questions: In which ways is the university "business as usual?" and Do the ways and means used by Czech universities for communication and responsibility for the future match those of the best universities worldwide?

University access to the management of responsibility and communication, from the future point of view, will be evaluated on the basis of existing alumni systems and on the scale of published evaluation in the press. The data will be used as well from universities web pages, from school projects led by the author and from personal experience of authors from Harvard Business School (HBS) and University of Economics Prague (UEP).

The University and its Business

A university must effectively coordinate its actions in order to coordinate diverse university activities, and must be a place of sharing - not only by distributing duties and responsibilities, but by being a source of imagination and innovation (Cabal, 1993).

Every university has a number of responsibilities. As a foundation, a university provides a high quality of education and research, which includes responsibility for the quality of the "university product" and for societal development. With students it aims to: "*...have a key role in providing students with strategies and competences to allow them to be part of the current information society and hence to be able to develop a productive career"* (Gutert , Remau, www.elearningpapers.eu, 2009). These aims are the primary university business and responsibilities. What are the others? We can use a simplified comparison with several other disciplines. For example, with a process of creation values or with new concepts of creating a relationship with customers.

Customer Relationship Management *"is considered as one of the basic resources of a company's competitiveness"* (Gála , Pour, Toman, 2006: 165). Education can be viewed as a business offering a product and responding to market demands. Both statements lead to the conclusion, that a student is both – a product and a customer from his/her pre to post phases.

Phase 1: Potential student as potential customer evaluates positive university values with a view to becoming its customer: Is the university reputation best? e.g. in the country. Is the ratio of university alumni experiencing high levels of success in the labour market high?

Phase 2: The university comes along future students selection process. One attribute for university status is a meaningful rate of applicants to accepted students.

Phase 3: Student as a product and as a customer. The student, as an input, goes through transformation to turn into a succesful university output. Student evaluates, during his/her studies, the benefits of the process of education.

Phase 4: Alumni evaluates phases 1-3 and has active/passive/no relationship with the university.

Other variables influencing the functioning and the future of the university belong usually "environmental powers". Inside the university we can state e.g.: academic staff reputation, programme curriculum updating, teaching potential in disciplines, scope of vertical and horizontal communication, treatment of individuals and their outlook on success, (non) rigidity of faculty/department boundaries, research capacity and research profiles, capability in partnership with business practice, and the internationalization of education. Of course, we must take into account the powers of the external environment as well - economic, political, technological, and culture - and their influence on universities.

The basic orientation of the university should be to understand how the world is changing and to follow this understanding to prepare students for the future – for the challenges and rewards of companies who can change the world. Fundamentally, "do we know what" and "do we know how" to be sure that the university business runs efficiently and effectively to build upon unique strengths.

As the example we introduce some innovation of educational process presented by prestigious Universities. *"Yale set out in the fall of 2006 to create a distinctive new model of management education, one that eliminated traditional discipline-based courses and replaced them with courses designed to integrate teaching and learning across disciplinary boundaries. After two years of a new curriculum, response has been amazing, not only from our faculty and students but also from recruiters and other business schools. Our students still possess the same technical skills that they had under the old curriculum, but they now have a much better appreciation of the context within which those technical skills need to be applied"* (Podolny, 2008). Stanford Lets Students Customize (Joss, 2008): *"The core idea is that students are permitted to tailor their course work to an unprecedented degree. There are three levels of difficulty. Basic, accelerated, advanced. There is more than 100 electives to pursue specialized knowledge. To tie together gaining knowledge and achieving student goals must student before graduating attend Synthesis Seminar. The main aim is to get students to think across disciplines and functions. It also brings more number of small-group courses."*

Lack of university innovation responsibility, communication responsibility and "a personal touch" leads to poor student relationships with the university and poor alumni pride.

Rating a University's Reputation

Every business begins with the customer and his needs. Every business aims its efforts at obtaining some profit. Every business fills customer needs and gains profit through good strategies, information, human resources, and technologies. It is not possible to make a profit without maintaining good relationships with customers. Companies build customer marketing performance, customer relationship management and other tools for good relationships with customers. Universities should act in the same ways, "in a desire to obtain customers." Satisfied university customers disseminate its reputation and it brings new customers or old customers back. From this point of view the university business is like other businesses. In accordance with CRM programs, the university needs to establish four integrated elements to create substantial value. To have a strategy for customer managing (in our case the alumni relationship), to build compelling and well-executed programmes, to support activities with technology, and to to have the ability to organize and deliver the services over time.

Public University Ratings

Who prepares the rankings: government agency (e.g. Ministry of Higher Education), independent organizations, newspaper/magazine or accreditaiton agency. International ratings follow the type of institution conducting the rating internationally.

The "Times University Ratings" (universities.suite101.com, 2008) provides the most significant criterion for judging a university's reputation. 50% is assigned for quality by academic experts and employers. 20% is gained for citation number in scientific papers. 20% point is generated by the ratio of students to educators. And the last 10% is determined by the rate of foreign students and educators studying and working in the university. The best three Universities in the World (autumn 2008) are: Harvard University (US), Yale University (US), University of Cambridge (UK). The best Czech Universities are: Charles University (261. range) and ČVUT (414. range).

Also the "Eduniversal Palms" (eduniversal.com, 2008) indicates the level of an academic institution's international reputation for the best 1,000 Business Schools in the world. From October 2007 to March 2008, the 1,000 selected business schools' deans voted to give their recommendations about business schools to the Eduniversal Official Selection. The international criteria were based on the following elements: the accreditations obtained by the schools; the main classifications (Financial Times, Shanghai Jiao Tong, Business Week, Asia -week, Wall Street Journal, and others.); participation in international academic associations; the network of partners of Deans and Business Schools at the international and local levels; reputed studies and sites in the world of education and universities.

Also in the Czech Republic two daily magazines (HN, 23.2.2009, LN, 29.1.2009) executed and published in January and February 2009 results of the comparison of Czech Universities. The main criteria of this study were: research results, interest students in studying at concrete school, number of students completing one year of study in a foreign country, how many courses students can follow in a foreign language, and how the universities maintain a relationship with their alumni.

For the purposes of this paper we will aim at the university rating on the basis of the alumni criteria. This evaluation, based on this criteria, resulted from the survey of the alumni assertion in practice. Some schools extended the criteria to include the estimation of satisfaction with the quality, expertness and rigour of education, pay evaluation of alumni, disparity between alumni perceptions and the market reality, and the contribution of their university studies to life and career. Criteria "Alumni" were followed up, because the alumni can be an influential resource in evaluating the strengths and weaknesses of the school. Professionally successful alumni were taken as signs of excellent school. This kind of survey is not common in the Czech Republic, therefore, an integrated methodology does not exist. Therefore, the results just reflect the situation, whether or not the school takes the question of alumni into consideration and how many detailed results this field provides. Altogether, thirty-two schools were evaluated. Twenty-five schools were concerned with alumni criteria. Masaryk University Brno (MU) was the absolute winner in the evaluation of various fields of study.

Other criteria, in relation to alumni, can be the view of employers, and the view of students – potential alumni. Companies do not share a unified view of desirable criteria for alumni and the filed of study e.g. of informatics. Some employers' preferences are concerned with businesslike ability, some to good knowledge and gained work experience, some to a broad spectrum where the alumni can find employment, some to the incorporation of the technical and managerial orientation.

The alumni assertion (employment rate) into the labour market is rated (LN, 29.1. 2009) at the sample of twenty-two economic public schools at 100–94%. From faculties of informatics the alumni success is 98-99%. Students evaluated the school for the following points: recommending study at the faculty to potential students, evaluation of educators and development of professional competency during the studies. Hihg evaluation (more than 70 from 100 points) got 5 from 22 faculties. The faculty of informatics and management of the University of Hradec Králové (77 points) placed first, the faculty of informatics and statistics of University of economics Prague (73 points) placed second.

Alumni system

Alumni are counted as pillars of universities' greatness. They play many critical roles for the university – returning to teach and to learn, counselling graduating students, serving on advisory boards, providing financial resources for programs to execute the university's mission.

"A system is an organized combination of parts which form a complex entity, with interrelationships or interactions between the parts and between the system and the environment" (Appleby, 1991: 18). Social system consists of motivated individual actors interacting with each other, where values and norms are the major patterns of relationships.

An alumni system is social system. It allows (encourages, executes, maintains and develops) social networks and mutually advantageous cooperation between the university and the alumni. According to (Horný, 2003) the social system is a complex of humans - as the system elements and their social relations. Its basic functions are (Department of Psychology and Sociology, UEP, 2008):

- "Accommodation – readjustment to the external environment influence *(note of author – see e.g. an example of the studies innovation at Yale).*
- Aims reaching - main reason for the existence of social system *(note of author - e.g. thanks to innovation and to system sustaining customers and gaining new customers).*
- Integration – tangible link of single cells of the system *(note of author – linkage of the university functioning to potential students, students and alumni).*
- Standards maintenance which are determining suitable system behaviour *(note of author – to get lessons form traditions and best practice of other universities)*."

Alumni systems generates social networks, interconnects groups of people on the basis of common social interests given by the university character. A social network gives the alumni system a place for communication and information sharing, based, namely, on the application of modern ICT.

The alumni system's primary mission is to develop and maintain a knowledgeable and involved alumni as a constituent part dedicated to the welfare of the university. Alumni systems should have some entrepreneurial attributes – e.g. to focus on opportunities, to be concerned with effectiveness and efficiency, to focus on the customer, to discover ways of improving performance, to concentrate on satisfying customer needs, to be proactive rather than reactive.

Contemporary reality is based less on face-to-face communication, is more dynamic, and quickly paced. On the other side, the means of IT/ICT are a great supporter for communication and give great space for an exchange or sharing of information, knowledge, and news. This direction is logically reflected in the alumni systems, published usually as a part of the university or as a separate web sites. Alumni, students, potential students, firms, and the public have direct access to information, which can support not only virtual, but also face-to-face (official, private, personal, and group) communication and build relationships to the university and to other members or subjects in the community. This effort is supported by leading universities with direct periodical e-mail communication to registered (or all) alumni. Besides this communication channel other channels include yearly forwarding of the directory or quarterly forwarding the alumni bulletin, and various types of meetings (life-long education courses, reunion).

The alumni system is usually built, maintained and presented by an alumni association. This is an association of graduates (alumni) mainly organized around the university or its faculties, or among students who have studied in a certain city, region or country. They often organize social events, publish newsletters or magazines, raise funds, support alumni, provide forum to form friendships ("old boy" network) and relationships with the university, and business relationships with people of similar backgrounds. The role of alumni association goes through their existence to new ones. *According to Smith (2006) "With a vision for Virginia Tech that intends to move the university into a higher level of academic and research accomplishment, the Alumni Association will need to be alert for changes to the alumni profiles as well as needs of the university. The role of an alumni association of any university is two-fold. It must address the needs and interests of both the association of alumni and the university. Primary reasons for the existence of an alumni association are to know and understand the interests of the alumni community and to provide programs for individuals, affinity groups and the alumni community at large. It is a portal that provides a retrospective, yet current view into the university, opening opportunities for alumni to either stay involved or re-associate themselves with their alma mater. The second, but equally important reason is the university itself. The association must know and understand the interests and objectives of the university. It provides an avenue for the continuing education and engagement of its alumni, serving them and cultivating their support."*

The construction of a successful alumni system requires taking into consideration the whole complexity of various points of view: Historical tradition and contemporary conditions form the access of society members to people networking. The priority which the university gives to the alumni system in the context with other activities is important, as is the rate of notification and clarification of the possible contribution of the alumni system to the university.

In the Czech Republic, the tradition of building networks and relationships from any organization to its members and vice-versa is historically not very strong. Czech universities are, with the entrance into EU, under pressure on significant new actions such as: the accreditation process, establishing a new credit system, creating new curricula, and the internationalization of education. Tradition, educational priorities, and lack of experience with carrying on alumni systems successfully, are some of the causes for existing conditions with more formally established alumni systems which offer limited services and opportunities when compared to western universities.

Arguments and beliefs for the existence of alumni systems at the university are:

- alumni are most important ambassadors of the university, they can be counted as image-makers of the university,
- to sustain positive student experience and, afterwards,

alumni interest, involvement and input are essential to long-term relationships and support of the university,

- alumni are a great source for feedback,
- alumni systems enables social and career networking among alumni, university and business,
- information, communication, events, developed and organized by university and meaningful to alumni needs, bring former students "back" and new students "in",
- increased interaction among alumni and alumni with the university results in a higher level of donations and involvement with university development,
- maintaining positive alumni relations is an excellent way of generating business and research,
- alumni are a great source for referrals.

Requirements for fulfilling the alumni system mission can be divided into four parts:

"Matter-of-fact" requirements include the design of information and actions in harmony and the compactness of the alumni profile and university needs. Basic items of western university alumni systems usually contain information about the directory, personal alumni profile (with possibility to update it), alumni notes, discussion groups, upcoming events and programmes, publications, research matters, reunion planning, alumni achievement awards, travel programmes, alumni benefits, contacts to alumni staff, university links, and alumni giving.

"Organizational" requirements involve who takes care about the alumni system. There are several possible "providers". One of them can be (usually is) the Alumni Association as an independent, non-profit organization with the board of directors (volunteers, elected by the alumni community), executive director, secretary, and volunteer committees. A second possibility is, that the alumni staff is employed by the University, e.g. a "team/department of alumni relations". It is possibility to combine both as there is needed cooperation of professional university staff and the dual role of association (to serve to alumni and to the university).

"Financial" requirements can be solved through university funds, alumni membership fees, alumni giving, or private sector giving. The membership fee might be an obstacle to belong to alumni community at UEP (Havlan, 2008). In the Czech Republic alumni donations to universities are not common.

The "Technological" side of the alumni system is solved with the extensive support of information technology. The advantage of IT is evident. It is a tool for creating the computerized alumni database, web sites, community portals or extranets, which enable and support online university communication with alumni. The university can, using the IT tools, easily obtain contact information, maintain and update the alumni database, announce alumni programs, news and events, mail newsletters, categorize members by activity level, and view alumni giving summary. Alumni can interact with each other and stay in touch with university. It helps to increase interaction among alumni and with the university. Increased interaction usually results in increased satisfaction. Increased satisfaction results in a higher lever of involvement with university developments. Using a simple comparison of the university alumni public web sites shows that the content differs in particular from activities extension and provided services. Significant differences are seen in areas of further cooperation possibilities with the school, and in mutual relationship formation. Western universities base the alumni system management on experience and proficiency of a team of professionals formed for this purpose. A graduate is expected to be a member of the alumni community. It is a privilege to become a member of an association alumni board. The variety in western universities activities constitutes a major difference. From a provision of life-long email, periodic information about university life, professional development, scientific results, publications, offered courses, reunion, up to own journal edition and travelling options, insurance, credit cards, and donations.

In addition, the Czech environment provides some interesting reasons for the less developed attitude towards alumni, which rise from the educational system. Havlan (2008) presents in his diploma thesis (lead by author) the following reasons identified at UEP in comparison with western universities: university education is very anonymous and individualistic, the educational system does not lead students to long term contacts, he/she has less friends, as he/she does not belong to any concrete study group, the system has no tradition and is maintained just by two people. Therefore many alumni never meet, never come back to school. The university has lost its investment, because the relationship was not established.

But every solution is not forever. Every built system must be revised and improved. A good example is given by one of the Netherlands universities in its strategic plan (Tilburg University, 2009). Part of it is: "strengthening the alumni network". The plan is to re-evaluate alumni relationships, to restructure the alumni association, to give access to a virtual Dutch and foreign alumni community through new web based alumni relations-management system, what should lead to more effective and efficient organization and relationship results.

Alumni Systems Comparison

Every alumni system usually has public information and protected information. Registered alumni have access to pages that are restricted to other visitors. University alumni systems are not standardized. The information is differently sorted and placed. These are the reasons why the comparison of more concrete subjects would lead to contentious results. Therefore, the comparison is based on generalized available information acquired from studying web alumni systems of foreign universities (e.g. Harvard University, Harvard Business School, University of Cambridge, University of Manitoba, Virginia Tech, Westminster College, University of Minnesota) and Czech universities (e.g. University of Economics in Prague, Charles University, Masaryk University Brno, Czech Technical University in Prague, University Hradec Králové, University of West Bohemia in Pilsen). Concrete comments will follow the personal experience of the author with the HBS and UEP alumni system. As criteria for alumni systems comparison were used: attention to the alumni database complexity, alumni services, communication channels, reunion, alumni benefits, and donations.

The attention to the alumni database complexity is, from the historical point of view, stronger at the western universities (including HBS). Even if UEP has quite a long history (founded at 1912 originally as "University of Commerce"), the problem is in the gap in information from "older alumni classes." In the last few years all graduates automatically obtained a lifelong e-mail address, which should facilitate communication between the alumni and the university. To acquire the complete database of all graduates would require more marketing activities by the use of various kinds of media.

Alumni services as a part of the alumni system of HBS and other western universities usually include an online directory (to facilitate communication among alumni, and for individual communication between the alumni and university), a search directory, a directory of services, my page, update your profile, email forwarding, alumni notes, discussion groups. In some cases it includes upcoming events, contacts to alumni staff, useful links. UEP alumni services are doubled. Alumni can be registered in "Econom Association" (EA founded 1991), which has 160 fee-paying members and several hundred just members; or in university "Development and counselling centre" (DCC). EA joins together alumni and other interested subjects (individuals or firms). DCC as a part of the university (with dominance the university part-time working staff-teachers from various faculties) is oriented to Partnership with the UEP and related PR activities, to Company presentations at the UEP and to Career and Psychological Counselling – it means that the services are oriented more to students and firms. The last section is the "alumni section", which is responsible for the alumni portal (alumni.vse.cz), where alumni can register and find upcoming events.

Communication channels at HBS are electronic or traditional. From the university, information is provided very regularly. The alumni communications office prepares and sends, through e-mail, a monthly a newsletter to every alumnus. The newsletter comprises news (e.g. videos online, conferences), events (virtual learning series, reunion, workshops), ideas in practice (e.g. in newsletter 18.5. 2009: "The Future of Management Education", "Managing in a Downturn"). Every alumnus receives, by mail, the HBS Alumni Quarterly Bulletin. The first part is aimed at actual themes (e.g. march 2009: health-care reform, faculty response to the financial crisis, Alumni in the News). The second part is devoted to Class Notes (alumni articles, photos). The alumni portal is the mail communication channel at UEP. Alumni are not automatically informed (neither by DCC and nor by EA), but must require sending information, when is registered. The main information tool for EA members is the bimonthly "UEP bulletin", which usually contains information that can also be found on the main UEP web site.

Reunions as an opportunity to reconnect with university colleagues, rediscover what the university means for alumni, learn about the ways that the university impacts the community, are regular activities, not only HBS, but all western universities. Reunions are usually held over several days. For this year, it usually covers the classes which graduate year is ended with 4 or 9. Invited are alumni, friends, and family members. Events include traditional class parties, campus tours, seminars and panels featuring the finest professors and alumni, and activities for the whole family. UEP organizes "The Day with UEP" once a year, which is organized by the university and EA and is aimed at all classes. This event includes discussions with leaders and teachers of faculties, but mainly is orientated on informal personal meetings and a cultural programme. In 2008 UEP 1,000 graduates attended. As it is usually announced on UEP web sites only, or the information is only distributed to registered alumni, "older alumni classes" usually do not take a part in this event and younger alumni classes must organize a place where they can meet.

Western universities (including HBS) usually offer alumni several benefits. They differ from university to university, but some of them are quite common: e.g. University Card & Discounts, Alumni Credit Card, Licensed Goods, Free Library Access, Alumni Insurance Program (for alumni and their family members), University Travel Benefits (hotels and car rentals), Savings Connection (movie tickets, travel, shopping). The UEP provides some benefits for the EA, e.g. discounts in the library, or discounts for renting rooms for member firms.

Donations ("make a gift") as an alumni support for university funding of important strategic initiatives is, as opposed to western universities (including HBS), not a part of the UEP alumni system.

The recommendations and key findings for improving the alumni system functioning in the Czech environment:

- to develop and promote a clear vision of the alumni programme; outline its contributions to the university and its benefits to alumni; to count the programme as a multi-departmental initiative,
- to professionalize services on the university side, to support higher alumni involvement,
- to support building a complex alumni database,
- to implement a comprehensive alumni communication system,
- to carry out research on alumni interests and needs,
- to publish and electronically distribute the alumni bulletin to all alumni,
- to organize alumni conferences (intellectual homecoming),
- to involve prestige alumni in the alumni association,
- to involve alumni in education, research or solved projects,
- to implement step by step alumni benefits and donations.

Conclusion

Facts and trends indicated above force us to rethink some traditions. Every university should consider, as an instrument of communication and responsibility strengthening, systematically building relations with students and alumni, and building an efficient alumni system. In this respect, the university should bring its behaviour nearer to real practice. In the near future „The Cinderella" should necessarily become "The peer," otherwise, the threat of loosing sources and resources is significant. Every university "will be forced," by the dynamic environment and competition, to take into consideration, that a high-quality alumni system is, for the university, a great source of benefits: feed-back from the professions as a source for higher educational quality and for better students assertion; new incentives to the university or subject field curriculum; higher university image and influential standing; the advancement and support for pedagogy and research; the "storehouse" of external co-operators; the sponsorship (in technology, know-how, students projects, awards of distinguished activities, etc.); professional contributions or publicity in school magazines or conferences; the reference for new applicants, for relationship with public; the reputation through significant results, through prominent alumni. Every university has to development and implement its own strategy for an effective alumni system. The main reason for paying strong attention and improving the alumni system and relations is to strengthen the university position in strong competition for sources for future development. Benefits which bring component parts of alumni systems can differ, as the universities operate in different environments with different conditions, culture, and traditions. Concrete recommendations have to respect these differences. One of objective criteria could be (in the article just marginally mentioned) the number of cooperating alumni. As an solid example (without analyze) is the information of HBS Alumni Relation (2009), prepared by the Alumni Communications office of Harvard Business School "What´s New at HBS – May 2009" as a part of the monthly electronically distributed bulletin to alumni – part Running the Numbers: 4 Days, 7 MBA classes, 46 Doctoral classes, 2600+ Alumni and guests attending. Other benefit would be in fees, or in visited events, or other kinds of cooperation, including visited www pages, and the level of donations. The effects just as a numbers has not high predicative value and usually are not publicly available especially in their relations.

The difference between the alumni systems is not only in the content of alumni web pages. It is in creating a culture and systematic education of students as potential graduates and alumni to the belonging and pride of being a part of the university. It is in communication with alumni through correctly tailored programmes and events, tailored according their (and university) needs and interests. It is in the assertion the real university interest in alumni community and relations with it. It is in following the numbers of alumni coming back, and the rate of their involvement in university activities. These, and there is no doubt, that many more points, can lead to the fulfilment of four blocks of competitive advantage – efficiency, quality, innovation and responsiveness to the "customer." to the understanding, that the university has the responsibility to alumni and alumni should have the responsibility to the university.

References

Apleby, Robert, C. (1992) Modern Business Administration, fifth edition, Pitman Publishing, ISBN 0-273-03332-8.

Benešová, P., Němeček T. (2009) HN - Hospodářské noviny Which schools are the best in Czech Republic? – Které školy jsou v Česku nejlepší? [23. 2. 2009].

Cabal A. B. (1993) The University as an Institution today: topics for reflection, ISBN 0880366853 [Online] Available: books.google.cz/books [20.3. 2009].

Department of Psychology and Sociology UEP (2008), Social System of Organization [Online] Available: kpsr.vse.cz/wp-content/uploads/2008/09/psp202-socialni-systém.ppt [20.3. 2009].

Gála, L., Pour, J., Toman, P. (2006) Podniková informatika, , Grada Publishing, a.s., 2006, ISBN 80-274-1278-4.

Gutert, M., Romeu T. (2009) A digital literacy propsal in online Higher Education: the UOC scenario [Online] Available: http://www.elearningpapers.eu/?page=doc&doc_id=1351&doclng=6 [18.3. 2009].

Havlan Jan (2008) Alumni system at UEP – Systém práce s absolventy studia na VŠE, Diploma thesis (led by Strizova)

Harvard Business School Alumni (2009) Tools [Online] Available: http://www.alumni.hbs.edu [28.3. 2009].

HBS Alumni Relations (2009), What´s New at HBS – May 2009, [Online] Available: alumniblasts@hbs.edu [18.5. 2009].

Horný, S., Palovská, H., Václavíková, M. (2003) Vybrané kapitoly systémové metodologie, 1. vyd. Praha: oeconomica, , 250 s., ISBN 80-245-0599-1.

Joss, R. (2008) Stanford Lets Students Customize, HBS Alumni Buletin, September 2008.

LN - Lidové noviny (2009) University ranking – Vysoké školy, žebříčky, [29. 1. 2009].

Luthans, F., Hodgetts R.M.: Business, second edition, The Dryden Press 1992, USA, ISBN 0-03-054624-9.

Podolny J. (2008) Knowledge Integration Rules at Yale, HBS Alumni Buletin, September 2008.

Post Harvard Edu (2009) University News [Online] Available: http://www.post.harvard.edu/haa/html/index.shtml [28.3. 2009].

Smith, James, E., President, Virginia Tech Alumni Association (2006) A Volunteer´s Perspective, Alma Mater Magazine – Spring 2006, [Online] Available: http://www.alumni.vt.edu/alumninews/2006-spring/volunteer.html [6.3. 2009].

Strategic plan, The Tilburg University community – Tilbburg University (2009) 31. Strenghtening the alumni network, [Online] Available: http.//www.tilburguniversity.nl/university/profile_mission/strategicplan/community.html [18.6. 2009].

The 2008 rankings (2009) [Online] Available: http://www.eduniversal.com/business-schools-ranking/select_area [23.3. 2009].

The Free library by Farlex (2009) What to do with your „exes“ – creating a successful alumni program [Online] Available: www.thefreelibrary.com/What+to+do+with+your+“exes“--creating+a+successful+alumni+program [5.3. 2009].

The Times (2008), Best Universities in the World – 2008, The Times Higher´s Rankings of International University Reputations, Oct. 16, 2008, [Online] Available: http://universities.suite101.com/article.cfm/worlds_best_universities_2008, [23.3. 2009].

University web sites studied with the aim to discover advanced solutions and gaps which fulfilling can lead to improving of university alumni system in Czech republic: Harvard University (www.harvard.com), Harvard Business School (www.hbs.com), University of Cambridge (www.cabmbridge.com), University of Manitoba (www.umanitoba.ca), Virginia Tech (www.vt.com), Westminster College (www.westminstercollege.com), University of Minesota (www.umn.com), University of Economics in Prague (www.vse.cz), Charles University in Prague (www.cuni.cz), Masaryk University Brno (www.mu.cz), Czech Technical University in Prague (www.cvut.cz), University Hradec Králové (www.uhk.cz), University of West Bohemia in Pilsen (www.zcu.cz)

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VARIOUS CONCEPTS OF HUMAN CAPITAL IN PROCESS OF EDUCATION

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Abstract

Theory of human capital views education as a specific production factor and as a specific sort of capital. Besides this theory, alternative concepts of education were developed. Filter theory is interested in a selective function of education and created a different point of view of economic analysis phenomena in education. Signal equilibrium is derived from the Pareto´s concept of efficiency and from the differences between private and public educational returns. Pieces of knowledge introduced in this paper resulted from solution of an institutional research intention MSM 6046070906 „Economics of resources of Czech agriculture and their efficient use in frame of multifunctional agri-food systems“.

Key Words

Pareto´s efficiency, human capital, filter theory, education, signal equilibrium

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Introduction

The importance of education in the contemporary world, also by the authorities of the European Union, is highly organized and supported. Education asserts oneself in the economic development, in the furtherance of Europe and capability to compete with the world.

With the aim and the importance of education, the theoretical economy has preoccupied this area for several decades. During this time, two basic theoretical trends of economic theory were defined. Human capital theory arose in the sixties of the last century, based on works by economists of the Chicago school, in which belonged G.Becker, J.Mincer, T.Schultz and others. Most noted was the contribution of G.Becker.

Its development was committed to a consistent application of the neoclassical economy as a methodological basis for the understanding of human behaviour. Its principles were applied on the effectiveness of deposits into the human capital and especially into education. Economic subjects allocated their resources with the aim of maximizing pure advantage, while taking into consideration the alternative costs, risk and principles used by the neoclassical theory.

"Capital is based on the fact that it is production factor which, itself, is produced. Human capital is the accumulation of investments into labour force. The most important sort of human capital is education. As all forms of capital, education means expenditures of resources in a specific moment, which should increase future productivity. Education investments are connected with a specific person and this connection gives the characteristic features to human capital in contrast to investments into other kinds of capital." (Šrédl, 2003, p. 37)

As we see, the theory of human capital states that education is a specific production factor and is a specific kind of capital. Besides this states, there are alternative views on education, for instance the filter theory. This accentuates above all the selective function of the education and at the same time represents a somewhat different view of phenomena invested in the framework of economic analysis of education. On a parallel is the screening theory, which is interested in the similarity of labour market participants and their decision making. The main representative here is M.Spence.

Material and Methods

Education as a filter

Screening theory rates the education above all as an implement, enabling selection between educated individuals, according to their applicable qualities. At first it is considered the selective function of education. It does not accept the neoclassical premise of perfect acquaintance. The level of knowledge the potential employer has comes from signals contained only by a limited amount of information. One of these signals is education. The employer makes selections, however, according to other signals, such as race, sex, age etc.

From the point of view of the filter theory, education is of less importance than the rising of productivity, but education informs about the amount and quality of human capital. Therefore, the level of capability and desirable properties occur with the individual even before their professional preparation begins. The significance of education is in their demonstration of the acquaintance of the subject and the labour market. The significance of education therefore serves as a signal of the labour market.

Effectiveness of education depends on the ability of the market to allocate the needed individuals on the corresponding variances, so on the level of successful education is achieved by its selective function. Filter theory considered education as secondary. The effectiveness of education is important, however there are differently productive individuals, who are well educated. The extension of education in society is decreasing the contents of the respective signals.

As stated by F.Hirsch: "Education is in its economical function filter and factory. The extension of the number of diplomas means by itself a decrease of the number of singular from the individual diplomas" (Hirsch, 1976, p.48). Extension of education in society owes wide support from the part of government as well as from other institutions, which can lead to reduction of its importance from the point of view of reaching a better job as it was in the *sixties and seventies* of the 20th *century* in developed countries.

Hirsch anticipated the importance of the broad extension of university diplomas. But the lot of diplomas cannot be only positive.

Accentuation of the selective function of education gained a new importance only several decades later. More importantly is the analysis of education's influence in its role as a signal.

Results and Discusion

Functioning of education as a signal

The significance of a market signal and its function on markets, in this case of the labour market, M. Spence defines market signals as activities or properties of individuals in the market, which changes ideas and expectations of other individuals participating in the market. This very broad concept of the signal contains such different phenomena as prices, advertisements, advertising notice etc.

In labour markets, we meet some special signals. In the same way as in all markets here takes place processes of communication and exchanges of information. Potential employers are mostly unsure of the qualities of the person interested in employment. This is the question of investing under conditions of risk and uncertainty.

However, in a similar situation each buyer in the market sees that the degree of a risk is sometimes higher. Corresponding systems of the elimination (or reduction) of the risk are specific for different markets. In the labour market, the inquiring can adhere to certain ascertainable or presented features of the potential employee, like education, image, past employments, but also ethnic features or conceivably race and sex. These are examples of the signals in the labour market.

An important constituent of the given concept is expectation. Preconditions, that the individuals are learning based on experience and are revising their preceding estimations, are correct. In such cases, the markets react differently from previous ones. The screening theory is complemented by the hypothesis of persistent corrections of economic estimations.

Typical transactions on the labour market are bilateral, the employee is selling his working time, abilities and the employer is buying them. The quality of working services is however for the employer uncertain, he is buying a possession under conditions of risk and uncertainty, likewise the employee is buying a possession having unknown properties. It means the working conditions and further properties, while wage is pure transfer resulting from this transaction. None of the two sides (employee, as well as employer) can be sure at the moment, when the transaction concludes, what characteristic feature has exactly been submitted by the other side. That is to say, the employee does not know, how the potential working conditions will be and the employer does not know, how well the employee will work, how productive his services will be. Employee and employer adapt according to affirmation (expectation) of the future state.

Equilibrium in the labour market is already set. If the expectations of the employers concerning the relation between the productivity of the worker, which at the moment of hiring was unknown, and his features (education, working experience or further features) are confirmed by real results at his work, the employer does not change his expectations. The same should apply to the employee from the point of view between his expectation and the real state of affairs. Spence calls this signal equilibrium.

The employer to an extent can reduce this based on the past experiences and also on the basis of signals. Thus, if he gain the potentially useful information in the form of explicit characteristic features; such as level and type of education, personal characteristics, he can also take his behaviour according to impressions and other signals, which are not necessarily "rational" in the current sense.

Acquiring of this information may require certain costs, the employer compares returns from their obtaining and cost for their acquiring. Jervis (1970) classifies signals like this:

- Potential signal- represents observable changeable characterization of the individual.
- Potential index - represents observable unchangeable characterization of the individual.

Actual signal (index) is a potential signal (index), which affects the probable estimation of the employee's productivity from the part of the employer. Potential signals and indexes can thus change into actual ones, if they begin to influence the expectation of the employer. One of these is education.

The employer could determine the productivity of the individual and regulate him according to it. But in reality it takes time, before the latent abilities of the employee become apparent. He gets and from certain signals and type of school education, or for instance prestige of the graduated university etc. for the potential employee the education as a matter of choice. The number of years and kind of education represent for him financial and psychical cost (including alternative ones). The problem is his estimation of the optimum level of education.

For the employer it is at least, to a certain extent, advantageous to acquire information contained in the signals, because the use of the accessible information about talented people means for him an advantage in competition with other employers. As long as other employers use this information he would begin to fall behind them and his ability to compete would recede.

Education, as a signal, can be analyzed according to these questions:

1. How it is possible to characterize the state of signal equilibrium?
2. To what extent are participants in the labour market (employers and attendants) informed about the appropriateness of this and to what extent is this information complete and reliable?
3. Are signals as a source effectively employed?
4. Are featured signals representative?
5. What role does the demonstration and function of signals the process of learning come into play?
6. How big a role is played by uncertainty (imperfect information, misleading demonstration of signal activity) in the market?
7. How does this uncertainty influence the allocation of the labour market?
8. How many equilibrium states exist and are they on the same level?

Even if specific signal effects are sporadic in the labour market and require special investigation, they represent only one effect of signal activity, which appears in all economic markets. Their big significance leads to the fact, that signal activity begins to be investigated here. However, the importance of acquaintance and of further effects of signal activity is also outside labour markets. Their investigation is henceforth an open question.

Signal effects – example

Let us presume there is one employer and a group of people applying for work. Each individual is able to produce a certain final product. But whose work is unknown to the potential employer. For simplicity, there will be only two final values of the final product: 1 and 2. If perfect information were a function, the employer would pay in the form of a wage that is equivalent of the two values of the final product (1 and 2) to his employees.

Presume that the share of individual on the final product 1 is equal to n and the share of individual will be a final product 2 is equal to 1- n.

But perfect information is not valid and the employers must decide whom he will engage on the basis of post experience, observable properties of the applicants and his own expectations. The results of these estimations can and need not be in harmony with real abilities of the applications. The employers will pay the wage to the engaged workers on the basis of the expected final product.

If this expected final product would be the same for everybody, as if there were no signals, nor indexes, it would look like this: (Spence, 1974)

$$W = n + 2(1- n) = 2-n$$

W – welfare

n – share of individual on the final product

Compared with the situation of perfect information, the individuals with final product 1 would be treated preferentially, as they would be undistinguishable from the members of the group with a final product 2. These on the contrary would be discriminated against. The return of an individual in the first group (mp=1) is increasing, when n is decreasing, harming the return individual in the second group from rising, when n is increasing.

The employer essentially needs to take interest in distinguishing between members of both groups, because the total amount of work and paid wages are the same.

If better information is accessible, for the employer it is more advantageous to employ it, as it means his higher return in comparison with a situation with zero information. If we presume the existence of other employers, utilizing information contained in signals, our employer would be certainly handicapped. If he wants to keep up in the market, he must employ his information.

Conclusion

The filter theory views the level of the archived education as a relative index, which is far more affected by the level of education achieved by other individuals, than by the absolute level of education. It is above all an implement of selection, although other features are of secondary importance.

The concept of education in the signal theory complements the neoclassical concept of the human capital theory, more than to negate it. Deciding on conditions of risk and uncertainty in contemporary times is the subject of the new classical theory's investigation. It is also developing the analysis of situations of imperfect information, as in this case.

F.Hirsch and other theorists in this direction are not so interested in the effectiveness of education as such, but in its broader impacts. M. Spence's theory and others theories accentuates the significance of signals in the labour market. Education is one such signal. Spence understands that equilibrium in the labour market is such a state. When the expectations of participants in the market (especially employers) are confirmed by reactions in the market, there is no need to correct their behaviour further. Spence consequently understands equilibrium as a state when expectations are in harmony with reality (correct expectations). This state can be called signal equilibrium. It occurs in the process of gradual adaptation. Owing to appearance of signals, some participants in the labour market are gaining, while others are losing. Education as a signal leads the employer to decisions, which are based on the minmax principle (maximization of returns and minimization of cost) in harmony with the principles of the neoclassical theory.

The signal theory does however also refer to the possibility of imperfect information, thus limited implication ability of signals, including the education signal. Signals concerning differences between employees, which the employer uses for his market decisions, does not need to contain important information; they may distort or change their meaning. The possibility of an incorrect decision in the sense of suboptimal allocation, which does not bring maximum advantage, is, according to his theory, just as possible as achieving of optimum allocation of sources. The signal theory represents important deepening of knowledge concerning the function of education in the contemporary economic theory.

The higher education in the society is more dispersed, it does not guarantee to its bearer an advantage in comparison with situation, where the share of educated people would be lower.

References

Hirsch, F. Social Limits to Growth, Twentieth Century Fund, 1976.

Lewis, D., Convention: A Philosophical Study. Cambridge-Massachusetts, Harvard University Press, 1969.

Solomon, L. C. The quality of education, World Bank, Washington, DC, 1986.

Spence, M., Market Signalling. Cambridge - Massachusetts, 1974.

Šrédl, K. "Evaluation of common projects efficiency in agriculture", In: Agricultural Economics – Czech, 49, 2003 (1): p.37 - 39.

Varian, H., Mikroekonomie. Praha, Victoria Publishing, 1995.

Wachtel P. The effects of school quality on achievement, attainment levels and lifetime earnings. Explor. Econ. Res. 2 1975.

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THE CZECH LABOUR MARKET AND FLEXICURITY

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Abstract

Flexicurity reflects the current basic trend within the EU in guaranteeing high employment levels and attainability of national fiscal systems. It was introduced in Denmark in 90ties and helped to reduce the (long-term) unemployment levels significantly. The Czech labour market, despite the transformation process, has still a space for further improvement, especially in the time of economic slow-down. The aim of the paper is to describe the flexicurity elements in the Czech Republic. First of all, we describe the general economical background and compare it with other Central European economies and with situation in Denmark where the concept comes from. In other parts of the paper we analyze the particular elements of the so called golden triangle of flexicurity – flexible labour market, generous welfare system and active labour market policies. We also focus on the components of the flexicurity, which the Czech labour market still lacks and would be useful to implement them.

Despite the fact that the previous period (years 2005-2008) was very successful, the period was not used effectively to reform the labour market deeper. The Czech labour market faces nowadays several crucial problems such as too high employment protection of the regular workers or small incentives for the long-term unemployed to re-enter the labour market. As a result of these features we can speak without doubt about dual labour market protecting part of labour force too generously and leaving too many people outside the market. Further the construction of the social system does not motivate the long-term unemployed to enter the labour market again or to get further qualification to boost their chances to get a job again. All these facts lead to the ineffective operation with the human capital in the Czech Republic and deepen the costs on social and relating policies.

Key Words

Flexicurity, labour market, Czech Republic, European Union, social systems

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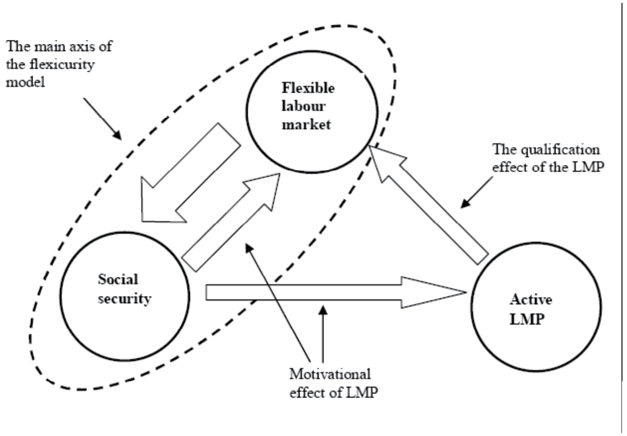
Introduction

The Czech labour market was in the recent two decades deeply reformed due to the political and economical changes. Despite these reform steps there is a space for the future improvement, especially in the time of the global economic slow-down. The paper focuses on the elements of the flexicurity model (so called golden triangle) which could be implemented into the Czech labour market and improve its functioning.

In Denmark this concept was used in the broader way in 1990ties and helped to reduce the unemployment levels significantly. The basic idea of this model comes from so called Golden triangle and is focused on **combination of adaptability to a changing international environment and a solidary welfare system**. It combines a liberal and flexible labour market with low barriers to (re)enter/leave and generous welfare system. The high degree of mobility from employer to employer is linked to the very level of employment protection which is usually connected rather with Anglo-Saxon economies than for a solidary Scandinavia.

Thanks to the generous unemployment support the Danes are not afraid of changing the job. Based on this we speak about so called **high numerical flexibility** – number of people changing the job is therefore substantially higher than in the EU. Denmark has a highest figures in the percentage of employed which are each year affected by unemployment and receive unemployment benefits or social assistance (around 20 percent) within the EU. But the majority of these unemployed persons manage to find their own way back into a new job.

The third part consists of **active labour markets policy** (ALMP) which enables to prequalify those who do not enter the labour market within the short period. There are two important effects in this connection. On the one hand, as a result of the active measures, the participants in various programmes (e.g. job training and education) are upgraded and therefore improve their chances of getting a job (qualification effect). On the other hand, the measures can have a **motivational effect** in that unemployed persons who are approaching the time when they are due for activation may intensify their search for ordinary jobs, in case they consider activation a negative prospect (Madsen 2006:7). The golden triangly is depicted below on the picture No.1.



Picture No. 1 Golden Triangle of Flexicurity

Source: Madsen (2006), p. 6

The EU implemented this concept into the Lisbon Strategy in 2006. Lisbon strategy, started in 2000 on European council in Lisbon (Council of the European Union 2000: 1), aimed on improving of the EU competitiveness within the world economy. In 2004 the Strategy was primarily focused on the economic growth. Growth could be created only in case there are enough jobs with a high productivity. Otherwise the EU states would not be able to guarantee current welfare standards in the future. Based on these circumstances, the flexicurity concept was strongly welcomed within the EU.

In 2006, the Spring European council (Council of the European Union 2006: 2) stressed the need to develop more systematically in the National Reform Programmes comprehensive policy strategies to improve the adaptability of workers and enterprises. It noted that the Commission, jointly with Member States and social partners, will explore the development of a set of common principles on flexicurity (European Commission 2007a: 4). As the Commission further noted, "Common principles of flexicurity will provide Member States and the European Union with a common understanding of flexicurity and the challenges it aims to address. They will strongly underline **the involvement of the EU in securing Europe's social and economic future**"(European Commission 2007a: 4).

To illustrate the contributions of the model in the other EU Member States we can notice an example of Sweden. The so-called Career Transition Agreements were established as part of collective agreements to support workers in the case of redundancies Career Transition Agreements help workers who become redundant due to lack of work to find new jobs and can thus be seen as a complement to the public employment service (European Commission 2007c: 12). Such a measure helps to improve the worker's position and turn him back to the labour market. Other example comes from Hungary. The new Labour Code launched in 2003 allows employees to request a modification of their working time, which allows full-time workers to ask to work part-time and vice versa (European Commission 2007c: 12). This helps to the workers to combine the family life and professional career.

The aim of the paper is therefore to test the hypothesis "**the Czech Republic has not applied the flexicurity and its elements into the labour market policies yet**". To test the hypothesis we will use research methods such as induction, deduction and comparative analyses.

General labour market background

In the past two decades the Czech labour market, together with other Central European economies had to face deep political, social and economical changes and transform the labour markets as well. At the beginning of the 90ties the labour force was almost overnight confronted with many new requirements (e.g. language knowledge, IT skills, flexibility). According to Nesporova, Cazes (Nesporova, Cazes 2003:10) these changes had impact on:

1. Decline in employment rates.
2. Shrinking participation rates.
3. Growth of unemployment rates (long-term unemployment, unemployment of disadvanced groups, regional unemployment).

All these changes had an impact on labour market performance which weakened significantly at the beginning of 1990ties. First after economical and labour markets reforms the Czech economy started to grow. Within the period 2000-2008 the GDP grew strongly above EU average, in 2005-2008 was the annual GDP growth more than 6%. This had a positive effect on labour market performance. The employment rates were raising and unemployment rates declining. In 2008 reached the unemployment rate according to the Czech Statistical Office the long-term minimum 4,2%. Nevertheless, within 7 months due to the impact of the economic crisis reached the unemployment the opposite record (7,9% in 2nd quarter 2009 according to the national methodology) and is expected to grow further. In the table Nr. 1 are illustrated the latest data indicating recent labour market situation in the Czech Republic and in Central Europe. The figures are compared with Danish labour market to demonstrate shortly the differences and similarities between Denmark and Central Europe.

In case we focus on performance of the Central European region we can state that the whole region had in 2008 lower employment rates than is usual in Denmark. The difference between the employment rate in the Czech Republic and Denmark was 12%, in other CE states was the difference even wider.

	Employ-ment rate	Unempl. rate 08/09	Long-term un-employment/ total unem.	Part-time empl /total employ-ment	Social expendi-tures/GDP (06)	GDP/head EU27=100
CR	66,6	6,9	50,2	3,5	18,7	80,4
Hungary	56,7	9,6	47,6	3,1	22,3	62,9
Poland	59,2	8,0	29,0	9,3	19,2	57,5
Slovakia	62,3	11,6	66,1	2,7	15,9	71,9
Denmark	78,4	5,9	16,1	18,0	29,1	118,3

Table No. 1 Labour market indicators in % – Central Europe vs. Denmark, 2008

Source: Eurostat database, OECD, *Employment Outlook 2009* – forthcoming edition

Further, very essential difference was among the long-term unemployment rate. This low figures in Denmark result from the flexicurity model as mentioned above. Danish labour market has the lowest long-term unemployment thanks to the qualification and motivation effects. In the Czech Republic, Slovakia and Hungary is every other person unemployed longer than 12 months. That indicates that all these states still do not have effective ways how to bring the unemployed back on the labour market. One year is considered for a period, after which the return on labour market gets more complicated and the unemployed lose not only their skills and qualification but also a working habits.

Another difference we can see in part-time employment. This is one of the ways how to boost the employment rates and is favoured mainly by women to combine the professional and private life. Nevertheless, this type of employment is preferred only rarely in the Central Europe. Due to the lower economic level, tabulated in the last column, the second full-income in the family is very often a necessity to guarantee a certain living standard. Anyway, this type of employment can be used by particular groups on the labour market (e.g. mothers on maternity leave, students, and retired people); in case the part-time employment would be more beneficial for companies and employers.

For quite surprising we can regard the fact that the harmonized data for Danish and Czech unemployment indicate only relatively small gap (5,9% respectively 6,9%). Other Central European states achieved in 2nd quarter 2009 higher levels of the unemployment rate.

Period 2005-08 is in general considered for a very successful and until autumn 2008 strongly prevailed the demand on labour force. First the impact of economic crisis and the slow-down of the economy reflected the real labour market situation with all its weaknesses. In the next part of the paper we will focus on the flexicurity elements which already exist in the Czech Republic and aim on the measures which could further improve the labour market situation.

Flexible labour market

Flexibility and low barriers between outsiders and insiders are considered for crucial for proper functioning of the labour market and effective operation of the human capital. In this aspect the Czech labour market faces one the most essential problems. There is a huge difference in employment protection among various groups of workers. This strictness, measured by **Employment Protection Legislation (EPL) index,** was constructed by OECD. EPL indicates how easy or complicated is hiring and firing the workers in particular economy. The figure can oscillate from 0 (no protection) to 6 (maximum protection). In other words, the higher is the figure, the higher is the employment protection. Table No. 2 records the EPL index for the selected EU Member States who are OECD members as well. As we can see the Danish economy has lower employment protection according to the European standards (overall strictness in Denmark is 1,8). Furthermore, the barriers are low for all the employers groups **with small differences in employment protection** regime. In the EU only UK and Ireland had the lower value of the EPL. On the contrary, the highest protection of employers was in the Southern Europe (Portugal, Spain, and Greece).

In case the states implement the flexicurity model into their economies they would have to reform the labour codes, reduce the employment protection and especially the differences between various groups of workers on the labour market. The problem is rather a realization and reform of national labour codes, although the Danish case clearly shows that the lower employment protection does not harm the employees. Despite a high fraction of workers affected in Denmark by unemployment each year (around 20 percent), the majority of these unemployed persons manage to find their own way back into a new job. As an indication, the long-term unemployment as a percentage of total unemployment (6+ months, 12+ months) was in 2004 respectively 45 percent and 22.6 percent in Denmark, compared to 60.4 percent and 42.4 percent in EU-15 (Madsen 2007:15).

Type of contract	**Regular**	**Temporary**	**Overal EPL strictness**	
State/ Year	**2008**	**2008**	**1998**	**2008**
Czech Republic	**3,0**	**0,9**	**1,9**	**2,0**
Denmark	1,6	1,4	1,9	1,8
Finland	2,2	1,8	2,2	2,0
France	2,5	3,6	2,8	2,9
Germany	3,0	1,2	2,6	2,4
Greece	2,3	3,1	3,5	2,8
Hungary	1,9	1,4	1,5	1,7
Ireland	1,6	0,6	1,2	1,3
Italy	1,8	2,0	3,1	2,4
Netherlands	2,7	1,2	2,8	2,1
Poland	2,1	1,8	1,9	2,2
Portugal	4,2	2,1	3,5	2,9
Slovak Republic	2,5	0,4	2,2	1,8
Spain	2,5	3,5	3,0	3,9
Sweden	2,9	0,9	2,5	2,2
United Kingdom	1,1	0,4	1,0	1,1
OECD average	2,1	1,8	2,2	2,1
OECD median	2,4	1,4	2,4	2,2
OECD mode	2,5	1,4	1,9	2,0

Table No. 1. EPL in 2008 in selected OECD states

Source: OECD, http://www.oecd.org/document/22/0,3343,en_2649_39023495_43221014_1_1_1_1,00.html#epl

In the Czech Republic the overall strictness reached 2,0 in 2008. In other words such an overall employment protection is very common within in the OECD (OECD average is 2,1, median 2,2 and mode 2,0). The problem is a significant difference between protection of regular and temporary workers. Only in Portugal and in the Slovak Republic is the gap between protection between regular and temporary workers wider. The EPL index for regular workers is 3,0 and is above the OECD average and median value. On the contrary, the temporary protection is only 0,9 which is below the values typical for OECD. Furthermore, about only 9% of regular workers has a contract for a fixed period (Nekolová 2008: 27). As a result, on the Czech labour market do exist two groups of workers and in the final effect two different labour markets. Fist group is generously protected with quite complicated rules for firing the workers, in the other group the employment protection is very weak compared to the international standards.

Such a high employment protection of most of the workers has a negative effect on employment; the companies are afraid of hiring the workers on regular contracts and prefer other forms of employment e.g. temporary employment or short-term agreements etc. These forms of employment face mainly young workers who entered the labour market recently and the workers with low achieved education. This group of workers are threat by unemployment as well. According to the Czech Statistical Office the unemployment rate of the workers with primary education was about 24% in 2009. In case the employment protection is too high, the effect on this group is negative. The companies rather do not hire these workers and they aim often into grey economy or work semi-legally. Here we can see also the link with construction of social benefit system.

For a positive step to create more flexible labour market we can consider the proposals of **Pro-family package** introduced by the Czech government in 2008. Its goal was reconciliation of work and family life by proposals such as: institute of mutual parental aid, services of the institute of a mini-nursery, tax allowances for employers providing or subcontracting care for children of their employees or strengthening the motivation of employers to employ parents caring for children on the basis of a part time job (National Reform Programme 2008: 68). Due to the political changes in 2009 the package has not been launched yet. The measures included in the package in general would boost especially female employment. Although the package would have a positive effect on labour market flexibility, we should realize that it aims at a group which is planning to return on the labour market in the future. Definitely, the proposals would make the return on the labour market easier but they do not solve the problem of dual labour market at all.

Generous welfare system

Before focusing on the topic of welfare system we should mention the structure of unemployment. According to the Czech Statistical Office the unemployment rate of primary educated reached almost 24% in 2nd quarter of 2009. In the group of workers with secondary education it was 7% and for people with tertiary education only 2%. About 33% of the long-term unemployed are again people with primary education; another 42% achieved only secondary education without graduation. Into the group of long-term unemployed belonged in this 2nd quarter 2009 almost 95 thousand people, more than 31 thousand of them do not work longer than 8 years. Because the wages tend to rise with the achieved education, it is obvious that the group most threat by long-term unemployment are the workers with primary education having predominantly the low-income as well. It is crucial therefore make the work pay and deepens further **the gap between unemployment benefits and minimum wage**.

Positive fact is that the Czech Republic in 2007 reformed its social benefit system with a view to increase the motivation of inactive low-income groups to enter the labour market. The new legal adjustment is giving financial advantage to those welfare recipients, who are actively solving their situation (e.g. by looking for a job). In case a person asking for welfare benefit does not actively cooperate in looking for a job, rejects a job or does not show own effort to raise his/her income, the amount of the social allowance will be lowered, possible down to a new category of survival minimum. At the same time, the welfare system has been simplified. A number of previous social allowances have been replaced by three new allowances: living allowance, exceptional immediate allowance and supplementary allowance (National Reform Programme 2008:70). As a result, according to the Eurostat database, the long-term unemployment rate dropped from 3,9% to 2,2%.since 2006 to 2008.

Despite the reform there is still a problem with low motivation of the long-term unemployed to enter the labour market. Thanks to the construction of the social system receives the family with 2 children, one adult long-term unemployed and other economically inactive about 80% of the average income of the low-income group (Nekolová 2008:51). To summarize, the combination of the relative generous social system and high employment protection does not motivate the low-income and low-educated group of unemployed to re-enter the labour market. As the result it is for this group more beneficial to stay purposely unemployed.

Active LMP

Active labour market policy is one part of public employment policy.Itisexecutedonthecentral(SocialSecurityAdministration) and on the local level (Labour Offices). The Labour Offices can within their financial budget decide what type of ALPM they will apply according to the need of the local labour market. As mentioned above, this type of labour market policy is relative new and the amount of means is though continuous growth quite low. Within the 90ties this type of policy was used very rarely. Fist since the EU accession was the position of this policy improved and the financial amounts grew. Nevertheless, in 2007 only 0,2% of GDP aimed at ALMP which means it is still undersized.

What misses further is a general consensus about the role of the ALMP. Today, there are two types of ALPM provided by Labour offices – financial incentives to the companies and nonfinancial incentives such as qualification courses for unemployed, consulting etc. The ALMP is financed from the state budget, European Social Fund and Operation Programme (OP) Human Resources Development. According to the Czech National Reform Programme in 2007-13 the OP Human Resources Developement allocates 1,84 billion EUR (National Reform Programme Czech Republic 2008: 81).

The aim of the ALPM in the Czech Republic is to bring the unemployed back to the labour market – we speak about so called enforced participation which is typical for Anglo-Saxon states. The problem lies, according to Nekolová (Nekolová 2008:51), in fact that the groups most threat by unemployment are not interested into the ALMP measures. According to her interviews with the Labour Offices workers there is a pressure from the central level to fulfil formally the Individual Action Planes with long-term unemployed. The unemployed can receive further higher social benefits. The effect of the ALPM is negative and the people remain therefore unemployed.

Another problem is lack of the tradition of further education after completing the formal education. The intensity of further education and qualification is recorded by the Eurostat using the Life-long learning index. The results of the Czech Republic are impressive. In the Czech Republic only 8% of the workforce received education or training in the four weeks preceding the survey in 2008 (compared with almost 30% in Denmark or 32% in Sweden). In the Czech Republic is still prevailing the feeling that in case the person gets skills and knowledge during education period it can apply them during the whole professional career.

For interesting we can consider the reasons why the further (pre)qualification after completing formal education remains on such a low levels. From the questionnaire of the National Training Fund in 2003 results that in case the person is once formally educated, the businesses do not invest into the further education due to the high costs (25%). About 9% of businesses think that only the state is responsible for the education and about 14% of the workers are not interested.

As we can see, the position of the ALPM is still quite weak caused by the low amount of money invested into this policy and general attitude to the need of investing into the human resources. The group of the long-term unemployed, at which should be the ALMP aimed the most, is not interested.

Conclusion

Flexicurity concept is in general considered for a very successfully thanks to its balance between low employment protection and generous welfare system which stimulates the workers mobility among the jobs. This system is especially beneficiary in case of frictional unemployment when the people are actively job seeking. The workers unemployed for a longer period are according to this the concept prequalified to facilitate the return on the labour market.

In case we test the hypothesis stated in the introduction we can say that **most of the flexicurity elements have not been applied into the Czech labour market policies yet**. Following elements lack on the labour market and should be implemented.

First of all, the employment protection of the regular workers is (measured by employment protection legislation index) too high what causes the rigidities on the labour market. There is also a substantial difference in protection of regular and temporary workers, one of the widest within the OECD. That dissuades the companies from hiring the workers for shorter period because they would stay in the company also after the time they were needed.

The problem lies also in the construction of the welfare system. According to the researches the group most threat of being unemployment and long-term unemployment are the workers with low education achieved belonging into the low-income group. In 2009 about 33% of the long-term unemployed were the people with primary education; another 42% of them achieved only secondary education without graduation. This group suffers from high employment protection because the companies are afraid to hire them as regular workers for shorter periods.

The same group is further not interested in qualification within the ALMP and the system does not really force them to join such prequalification. Compulsory participation in the prequalification courses should be one of the necessary conditions for the long-term unemployed to receive the social benefits. In Denmark, the welfare system is very generous in case of unemployment allowing receiving up to 90% of the previous income, but the conditions to receive the unemployment benefits are much stricter.

Finally we can say that in case the people are very often not interested in receiving the job. The current system has actually no financial or non-financial means how to bring them back on labour market. The solution in this case could be to combine lower employment protection with positive taxes for the low-income group to make the jobs more financially attractive.

Further, the Czech Republic has quite a short tradition of prequalification or further education of human resources during their career. This fact again reduces employability. It corresponds with the value of the Life-long learning index which is below the EU average. Only 8% of workforce received education or training in the four weeks preceding the survey in the Czech Republic what is and significantly below the level of the Scandinavian countries (e.g. 30% in Denmark).

To summarize, the Czech Republic has still space to improve dealing with the human resources. For the biggest problem we can consider group of long-term unemployed belonging to the low-educated and low-income group. Despite the reforms of the social system the current form of flexicurity in the Czech Republic does not effectively aim at this particular group leaving it outside the labour market.

References:

Cazes, S., Nešporová, A. (2003) *Balancing flexibility and security in the Central and Eastern Europe*, ILO, Geneva

Council of European Union, (2008) *Integrated Guidelines 2008-10*, Bruselles

Council of European Union, (2000) *Presidency Conclusions, Lisbon European Council 23- 24 March 2000*, available on website [26.11.2009]

http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/ec/72968.pdf

Council of European Union (2006) *Presidency Conclusions, Bruselles European Council 23- 24 March 2006*, available on website [26.11.2009]

http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/ec/89013.pdf

Czech Statistical Office, website

http://www.czso.cz/csu/2009edicniplan.nsf/p/3103-09 [26.9.2009]

Czech Statistical Office, website: http://www.czso.cz/csu/csu.nsf/informace/czam080409.doc [26.9.2009]

European Commission (2007a), *Flexicurity Pathways, Report by the European Expert Group on Flexicurity* Brusessles

European Commission (2007b), *Flexicurity Practices*, Brusessles

European Commission (2007C) *Towards Common Principles of Flexicurity, DG Employment*, Luxembourg, ISBN 978-92-79-06477-7

Eurostat (2008) *Eurostat Yearbook, Europe in Figures*, Luxembourg, ISBN 978-92-79-06607-8

Madsen P.K. (2002) *A Danish model of Flexicurity – A Paradise with some Snakes*, University of Copenhagen, Copenhagen

Madsen P.K. (2006) *Flexicurity, A new perspective on labour markets and welfare states in Europe*, CARMA Research Papers 2006:3, University Aalborg

Madsen P.K. (2007), *Distribution of Responsibility for Security and Labour Markets Policy, Country Report: Denmark*, WP 07/51, CARMA, Aalborg University, Aalborg

National Reform Programme of the Czech Republic 2008-10, available on website http://ec.europa.eu/growthandjobs/national-dimension/member-states-2008-2010-reports/index_en.htm [26.9.2009]

National Training Fund (2003) *Zpráva o situaci v rozvoji lidských zdrojů malých a středních podniků [Report on situation of human resources development in small and middle enterprises]*, Prague

Nekolová, M (2008) *Flexicurity - hledání rovnováhy mezi flexibilitou a ochranou trhu práce v České republice [Flexicurity - searching of the balance between flexibility and labour market protection in the Czech Republic]*, Research Institute for Labour and Social Affairs, Prague, ISBN 978-80-87007-89-1

OECD (2007) *Education at Glance 2007*, Paris, ISBN 978-92-64-0532-0

OECD (2008) *Employment Outlook 2008*, Paris, ISBN 978-92-64-04632-0

OECD (2009) *Employment Outlook 2009* forthcoming edition available on: http://www.oecd.org/document/46/0,3343,en_2649_33927_40401454_1_1_1_37457,00.html [26.9.2009]

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SYSTEM ARCHETYPES IN SELECTED PROCESSES OF ECONOMIC INTEGRATION

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Abstract

The field of economic integration processes requires a systems approach in order to understand behavior in complicated situations. Our aims are to recognize better structures which are not evident, as well as those that are fundamental for understanding complex situations. The goal of this contribution is the mapping of system archetypes, including their mutual interdependencies found within the processes of economic integration. We will focus on structures that can be found in the integration process of free movement of persons, also known as the labor force. It will be shown how these repeating structures - system archetypes - can make the study of complex integration processes easier, and can be a key to understanding limits in their functioning.

Key Words

System Thinking, System Archetypes, Economic Integration, EU Internal Market, Labor Forces

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Introduction

This paper is focused on a new approach of how to examine integration processes, specifically in the field of economic policy. This field has previously been approached only with relatively simple quantitative tools and methods. There were prevailing microeconomic issues based on theory of preferential trade liberalization, combined with theory of market structures (including the Nash equilibrium in Cournot model) and economy of scale in this research. Some macroeconomic approach has been used in studies of integration of national labor markets (Baldwin 2008). Results have been equal to these methods. Emphasis has been put on the examination of parts while almost ignoring the complexity of the processes. We can say – with great simplification – that research of economic integration has hit the methodological ceiling. Overcoming this situation is a scientific problem. That is why we decided to test a hypothesis: Is it possible to apply a system approach on processes of integration?

We start with analyses of the behavior of people (labor force), companies, and governments in integration of national labor markets. We derive more general model of behavior and compare it with system archetypes behavior. So we can say that we are testing applicability of system archetypes in research of economic integration. Except for the area of labor market integration, some other areas of integration are only mentioned.

Material and Methods

Economic Integration

Let´s start with a brief explanation of the object – economic integration and economic policy related to these processes. Processes of integration are a fundamental part of globalization. Globalization itself is a very comprehensive process: starting in economy (trade) and transport, accompanied with policy and military, and with consequences for social, cultural and even natural processes. The trigger is in the behavior of companies – from national ones, multinational (or transnational) companies grew up to operate internationally. This is the process of internationalization (Balassa and Wyplosz 1961). Today, internationalization has reached the global scale.

The response to internationalization from the side of governments is an economic integration policy. Countries are creating regional or global integration areas. Regional integration areas are more frequent - the European Union could be an example. The WTO (World Trade Organization) is an example of the latter.

The core of integration processes is the removal of barriers that block a cross-border movement of production factors among countries. Production factors are goods, services, labor force and capital. In addition to these, there are also other factors of production - information or local conditions like climate, raw materials, fertility of soil etc. However, since these factors are immobile or hyper-mobile, they are not greatly taken into account in economic integration. Mobility of the former factors could be seen as flows regulated with barriers of different types: tariffs, quantitative quotas or export/import subsidies (etc.) are prevailing in the case of goods, and different legislative restrictions in the case of services, labor and capital. Step by step minimizing or total abolishment of these barriers is the purpose of integration and the goal of integrative economic policy.

There are steps in integration: first, removing barriers on movement of goods (industrial) creates a free trade area. In the next step, the integrating countries set a common foreign trade policy together toward so-called third countries. A custom union with apparent economic borders is the result (Doucek 2005). Removing barriers continues inside of such a custom union – labor, capital and services are allowed to move more and more freely. Finally, there are single markets for all the factors in the integration area. According to the level of freedom of the factor movement and also used perspective such an area is called a common, internal or single market (Cecchini 1988). The functioning of integrated areas requires proper economic policy: formulation and implementation is increasingly done in common, eventually by common central authorities. That is why the next steps are economic and political unions.

Integration and System Approach

Integration processes interlink national economies to form larger integration areas. The rules functioning within these areas are reflected in policy-making at different levels - from international, via national, to locals. That is why policy-making in economic integration frameworks is a complicated activity and problems are hard to solve - in fact there is a complex system with a high level of detailed and dynamic complexity (Richardson 2005).

At the same time cognitive limitations, conventionality and the current paradigm of perception of reality – mainly the linearization and tendency to omit feedbacks and delays – still exert a powerful influence on our way of thinking. These influences, that are often referred to as “bounded rationality” (Kahneman 2003) also play a significant role similar to limited information (like its ambiguity, antagonism, lack of clarity), non-linearity that is typical for the economic system, and the defensive behavior of complex social systems. Simultaneously, the general market development reflects the general socio-economic development (Mulej 2006).

Traditional methods (Adda and Cooper 2003), (Pelkmans 1997) and (Mildeová 1994) are not able to help policy makers with the problems described above. Thus the main aim of the paper is to contribute to the development of system thinking in economy and support its practical use and further research.

One of the goals of the paper is to confirm, or refuse, the hypothesis: although the original approach of Senge (Senge 1990) to system archetypes was mainly focused on the environment inside companies, formulas of behavior that have been regularly repeated could be detected also outside - not only inside organizations. We should verify that these repeating structures - system archetypes (generic structures, archetypes of behavior) - make the study of complex social systems easier, and provide a key to the understanding of the structures and limitations in economic integration.

The relation between system thinking and system dynamics will be discussed.

The connecting goal of the paper is to show that system approach support necessitates changes in the thinking and behavior of decision-makers and policy-makers.

It aims to contribute to the development of theoretic knowledge and practical recommendations for the use of systems methods, and point to new opportunities, especially for decision making support and the improvement of systems thinking in problems related to complex social systems. In our case, we will mainly focus on an area connected to the real-life problems of the economy (and particularly labor forces) from the integration's viewpoint.

The outputs of the paper should be a contribution to a forum in which researchers and policy makers interact to introduce innovations in the field of systems thinking and economy.

Classical and progressive methods for working were applied, such as: induction and deduction, analysis of information, Occam's Razor to the problem definition and definition of its borders, construction of hypotheses, experiment and hypotheses testing, abstraction and modelling, synthesis towards a generalization of results, and contribution to systems theory and economic theory as well.

There is a system thinking paradigm used as a main point of view (Richmond 1993). The present prevailing paradigm of thought is based on the simple causality of observed processes, and with such an approach the recognition of the impact of different policies is very complicated (Richardson 1991). The system thinking that we have been using brings with it a new approach and new tools which can cope better with the complexity (Ragsdell and Wilby 2001). It provides us with a new basic framework for the investigation of these processes (Čančer and Mulej 2008).

The system approach paradigm is based on a principle of relating every cause to its impact and to every other cause with a feed-back loop. This is shifting the approach from a simple (one-way) causality to loop causality, from mutually independent factors to mutually dependent ones without any static weight. We can see the world as a lasting, mutually dependent self -supporting dynamic process. Using a system hierarchy for investigations of economic integration seems to be a promising approach (Němcová and Mildeová 2007).

One important finding of system thinking is that there are many very similar dynamic loops in dynamic systems representing a certain area of human behavior, and certain structures are repeated constantly (Breierova 1997). These repeating structures - system archetypes (generic structures, archetypes of behavior) - were first postulated by Ludwig von Bertalanffy in the 1930s and later were developed and finally labeled as "Archetypes" by Peter Senge (Senge 1990).

At the same time however, we should bear in mind that the system thinking (or systemic thinking) has no unified definition. In general system thinking - dealing with the whole system and thinking about how things interact with one another and systemic thinking Systemic thinking combines analysis (making sense of things by taking them apart) and synthesis (making sense of things by seeing how they fit together for finding the repeating pattern). The term systemics refers to an initiative to study systems from a holistic point of view. Later authors (Mulej and Kajzer 1998, Mulej 2007) leave aside Bertalanffy's intention: systems theory is a worldview of holism and attacks over-specialization (Bertalanffy 1968) and support requisite holism by interdisciplinary creative cooperation or make crucial contributions inside their selected viewpoints alone.

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Results and Discussion

Archetypal Behavior in Cases of the Movement of Labor Force

The task of the research project, which this paper is a part of, is to examine the functioning of the internal market among countries of the Visegrad Group after their entry into the European Union (Němcová and Mildeová 2009). The basis of successful internal market functioning is the free movement of four basic factors - goods, services, capital, and labor (although this is frequently referred to as the free movement of persons only). As a simplification, we are going to concentrate on the moving of persons only. The production factor movement is a partially predictable process which repeats certain formulas; therefore, it is legitimate to examine the existence of archetypal behavior in these cases.

Member states of the national labor markets integrated into the EU Internal Market, and step by step an Internal Labor Market has been created. For the EU27 there are important time-lags, the most visible ones being transitional periods for the partial opening used by a few original member states towards new ones. However, there are additional conditions like rules of recognition of qualification etc. The labor force movement has a number of feed-backs – relationship to the source development and target labor markets, changes in unemployment, and the wage development and prices in the short-term. In the long-term there are processes like forming qualification structures of the population, which can limit or support the economic growth of member states or their regions (Mildeová and Němcová 2009).

In addition to that there are other feed-backs within other markets and areas of national economies, like flows of capital in the opposite direction (delocation of jobs) etc. The international movement of labor forces has impacts in the social system of both countries. By "social system" we do not only mean social security systems, but also all the social and demographic structures of both countries which influence the individual behaviour coming out from labor force flows.

Balancing Loop with Delay

Let us take a broad view of labor migration at the EU Internal Market. If we emphasize flows of labor force as one of the relations balancing disparities on mutually linked labor markets of member states, and we take into account time-lags, we can identify the archetype "Balancing Loop with delay" (Figure 1).

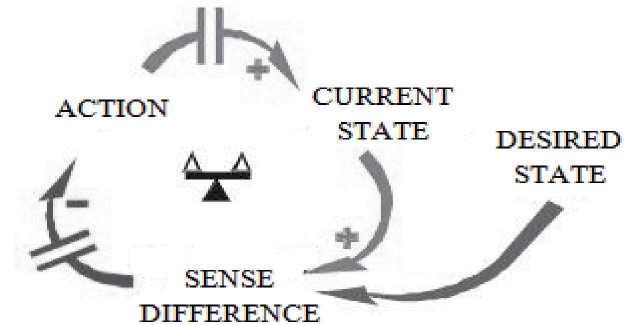
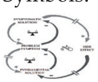
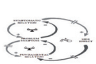


Figure 1: Balancing Loop with delay[1]

1 adapted from http://www.systems-thinking.org/arch/arch.htm

Symbols:

 Balancing loop  delay

"+" and "-" influence notation

This archetype has a negative feed-back which puts the system in equilibrium: labor forces are leaving regions with high unemployment for regions and countries where jobs are readily available. Similarly, labor forces will reflect differences in real wages, both overall and in particular segments of labor markets. "Starting" disparities are results of different factors, and some of them are from outside the labor market and economy. Different time-lags and ways of adjustment can create problems which motivate the countries regulations. The Internal market rules limit the regulations but temporary transitional periods show that postponement leads to a required disequilibrium.

Let us take as an example Poland - a new EU member states with a high emigration. Their transformation process passed in a slightly different way in the comparison with e.g. the Czech Republic. Polish privatization process was accompanied by high unemployment rates. This caused the economic emigration: high numbers of Poles were searching their jobs abroad. In 1990 it was about 18,5 thousands (who newly left the country), in 1995 26 thousands and in 2000 almost 27 thousands. They – contrary to Czechs – hit quotas for the immigration limit into the Western countries all the time. After the entering into the EU, the flow almost doubled: in 2006 it was the same, almost 47 thousands. In the same time we can observe the growth of FDI inflow reflecting EU membership and relatively low wages.

Table 1: Example Poland

Variable	2000	2001	2002	2003	2004	2005	2006	2007	2008
FDI inflow (EUR million)	10,334	6,372	4,371	4,067	10,237	8,330	15,741	16,674	10,970
Unemployment rate (%)	15.1	17.5	20.0	20.0	19.0	17.6	14.8	11.2	9.5

Source: PAliZ, http://www.paiz.gov.pl/poland_in_figures 20.10.2009

The decline of unemployment rates, the rise of vacant job numbers and the slight growth of labor costs followed by the time-lag. FIrstly in 2007 after the entering the EU, the number of Poles leaving country for jobs dropped to 35 thousands[2]. Note please that economic crisis hit the West European countries in 2008 and the decline of vacant job numbers has been observed since the second half of 2008. So we can say that after years of economic emigration the opposite flow of FDIs had started to change the behavior of Poles and cut the number of emigrants. The country started to seek a new balance. The very same historical picture was observed in Ireland when the break of the trend came in early 90s. Unfortunately statistical data of 2008 and 2009 are affected by economic crisis.

When working with behavior of this archetype it is important to clarify what is the required state of the system and if it is reachable under current conditions. If not, it is necessary to change the conditions or the definition of the desirable state. It is also important to find out if the required state could be reached from both sides or from one side only (dependencies). There is a danger of "over- shooting". In some cases we cannot get over certain states (values). This leads to another archetype – "Indecision" (Vojtko and Mildeová 2006).

This archetype is created by two cycles with negative feed-backs. Both relations tend towards to one state (value) but there are different time-lags. This causes the oscillation. The specific state of this behavior is called dynamic equilibrium. The occurrence of this special state of goal oriented behavior is

2 Rocznik demograficzny 2008, Glowny urzed statystyczny, Warszawa, http://www.stat.gov.pl/gus/5840_3697_ENG_HTML.htm?action=show_archive

frequent in economics. The functioning of labor markets is more complicated since there are more than two loops.

Another good example of Balancing Loop with delay could be a negotiation process on subsidies to pro-environmental projects. The important feature is an asymmetry of information in the sense that only applicants, who are mostly also authors of the projects, know more realistic data on their costs as well as the moment of reaching equilibrium and conditions of such a situation. (Šauer, Dvořák, Lisa and Fiala 2003). This example could be generalized for any number of projects in general if they are co-financed from different funds - private, local, national or from the EU budget under the EU schemes and rules.

Shifting the Burden

Taking into account political and legislative reaction towards the international movement of labor forces we can recognize the archetype "Shifting the burden" (Figure 2).

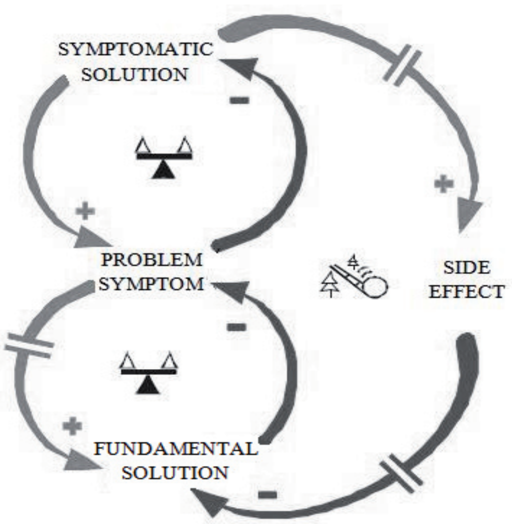
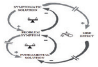


Figure 2: Shifting the burden[3]

In this situation, instead of solving causes of the problem like insufficient support of employment or an inadequate income policy - see the case of Czech and Slovak health care systems (Stričík 2003) - only the symptoms are cured. The real solution has been moved into the future. In the short-term horizon a symptomatic solution can have good effects (Ukrainian personnel), but the situation can suddenly deteriorate, since the cause remained unsolved and this can negatively influence the equilibrium of the system.

3 adapted from http://www.systems-thinking.org/arch/arch.htm



Reinforcing loop

Let us have an example linked with already mentioned problems regarding the Czech health system financing due to the migration processes. We focused on the high qualified labor migration –doctors and their staff. Although the number of newly graduated doctors is appropriate regarding the Czech health system needs, the higher and higher numbers of young doctors are moving westward (Germany, UK, Ireland) to get better salaries and perspectives in their careers (Vavrečková 2009). Following data are describing growing problems: an average age of practitioners was almost 53 years old and the share of practicing doctors over 65 years old was 25% in 2005[4]. For 2015 they estimate that 65 years old practitioners exceed 50%. The setback of this situation is evident. Younger generation moves out of the country and the inflow of doctors from abroad (Slovakia, Ukraine etc.) is not sufficient just for a simple reproduction. Already at the end of 90´s it was evident that Czech salaries of doctors were not competitive due to the free labor moving. After entering the Czech Republic into the EU the migration potential was growing but the shifting of the burden has been making the situation worse and worse.

Such behavior is common among politicians. They know sometimes that they are addressing only symptoms, but addressing the cause would be political suicide for them. So, they postpone it for future governments.

Other Archetypes

We can also identify an additional number of other archetypal behaviors (Bellinger 2009) among the participants and policy makers of different levels in the field of the free movement of labor forces. Definitively we can find archetypes like:

4 UZIS, http://www.praktikcz.eu/vekova_struktura.html

Escalation is an archetype describing the growing spiral of the competition lead with the fear of the loosing oneself position and the fear of competitors being better. Such a behavior is typical for the decrease in cost, production cost and also production price decrease. There is a specific example which we can observe: situations when immigrants take less qualified jobs and they are usually ready to sacrifice their qualification and also accept lower wages in comparison with the local domestic labor force. The protection of the domestic labor force is required and could be a response - the protection of present level of incomes. Wages in general tend to be non–elastic downturn. In this point the archetype seems not to be fully followed and this is valid for nominal wages. Incoming cheaper labor force usually slows down the nominal wage growth or even stops it. On the contrary real wages can especially decline in a long run. This confirms the archetype validity in these cases.

Fixes that Fail – Illegal immigration causes problems not only at a labor market but it is usually associated with the shadow economy and even organized crime. Any oppressive measure aims to limit or even stop this illegal immigration usually leads to growth of costs of illegal immigration. And relation with an organized crime will be stronger.

Eroding Goals - The observation of the behavior following this archetype is generally very frequent in economic policy. The political opposition usually proclaims very strong goals. If politicians from opposition manage to win elections and start to rule, their goals are usually eroded or even forgotten. This is also valid for any policy towards free production factor moving including labor force. Our comment to this behavior asks the careful goal evaluation in time and the requirement or pregnant and realistic set of goals for the governing period. Goals from opposition time could lead to extremism but the public who elect the new government should insist on following latter ones.

Accidental Adversaries - Many incoming workers use an assistance of other people coming from their home country, speaking their language. On the labor market of the target country these partners compete with their employers. Similar archetype can be observed also in a case when highly qualified workers come to get a job as employees. This is the cooperative part of the archetype. But after a certain time and under certain circumstances they can set up their own company which will be a competitor to their former employers.

Tragedy of the Commons describes a situation when a source is commonly used and it is not renewed. Such a situation can be observed in case of the brain drain in the source country: the most qualified labor force is leaving the country and the gain of its performance will be acquired by the target economy. This contribution to the growth is missing in the source economy and influence conditions of education of the next generations for both the countries.

But similar situations can follow after decision of not sufficient investments into education in general. These insufficient investments are going to be a limit to economic growth. The typical situation is with the erosion of the technical education in the EU. We can describe it as an archetype **Growth and Underinvestment**.

The solution of such a situation can be already mentioned as a brain drain following archetypes called **Success to the Successful**.

Limits to growth archetype might be observed also in cases of the brain drain. The recent experience with the migration of IT persons into original EU15 countries from new member states (and third countries, too). IT specialists were attracted by higher wages but these incomes were stopped in relation to the meeting of supply and demand on this specific segment of the labor market. The decline of real wages which came after, led them to return this labor force back to home country. We can observe this archetype in general in cases of territorial enlargement of regional integration areas.

Furthermore, there are many ways in which the archetypes can interact with each other (Braun 2009).

Next Research

System thinking has many connections to various schools of thought. At the same time it is necessary to say that the schools of thought and the main ideas of these schools which influenced the systems approach were developed in relative isolation and used different arguments (Umpleby and Dent 1999). We are among the supporters of the process whereby many system thinking protagonists in the nineties developed bridges between two strands of systems theory: system thinking and system dynamics towards a multimethodology concept (Ossimitz 1996) and (Mingers 1997).

To understand the definition of system dynamics and systems thinking you can use the official website of The System Dynamics Society, as an international organization devoted to encouraging the development and use of system dynamics around the world. This site defines system dynamics as follows: [5]

"System dynamics is a methodology for studying and managing complex feedback systems, such as one finds in

5 http://www.albany.edu/cpr/sds/

business and other social systems. In fact, it has been used to address practically every sort of feedback system. While the word system has been applied to all sorts of situations, feedback is the differentiating descriptor here".

And the relationship of systems thinking to system dynamics is defined as follows:

"System thinking looks at exactly the same kind of systems from the same perspective. It constructs the same causal loop diagrams, but it rarely takes the additional steps of constructing and testing a computer simulation model, and testing alternative policies in the model".

For more details see (Forrester 1961) and (Sterman 2000).

Our next research should be aimed at these additional steps of constructing a system dynamics model, and testing various policies with the model according to (Yamaguchi 1997), (Schwaninger and Groesser 2008) and (Mildeová 2005). We suppose that the understanding of the archetypes together with the application of system dynamics principles could provide the decision makers with a powerful tool for integration policy. It also could help to "widen the horizons" for possible variants of solutions and to point out the key areas of decision-making, while keeping a global view on the strategy process. It also probably contributes to getting over mental barriers and to stimulating the system thinking of a politician.

Conclusions

In the introduction of this paper we formulated a hypothesis - although the original (and traditional) approach to system archetypes has been primary focused on companies, archetypal behavior could be detected also in economic integration – which was confirmed.

Production factor movements on the EU Internal Market are intermediated with market mechanisms and could be limited with a particularly focused state regulation at all levels - starting with the local government, via member state government and finishing at an international (community) level. Feedback reflects these measures that the factors' movement begins in the very complicated social economic system of a country.

The cases demonstrated in this article can help us to understand the context of economic integration processes, and support our system thinking. System archetypes allow the transferral of the complexity of economic integration processes into simpler schemes that help us find the correct solution for a present situation. The schemes can show principles of adverse situations in cooperation and demonstrate the symptoms of problems. The number of archetypes can negatively influence economic integration development, especially if the core problems of their manifestation are not correctly interpreted. The proper use of system archetypes is the first step towards the practice of system perspectives, but no way the only one possible.

We do not take system archetypes as an unchangeable truth, and we do not mechanically find examples of such a truth in the development and performance of integration. Use of the system archetypes described in this article is to change the process of our perceptions. It can also work towards a learning process based on adaptation to changes in our environment - when we are using feedback to change our own mental models of the surrounding world.

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References

Adda, J., Cooper, R. (2003) "Dynamic Economics Quantitative Method and Application" Cambridge, MIT Press.

Balassa, B. (1961) "The Theory of Economic Integration", Irwin, Homewood , Illinois.

Baldwin, R., Wyplosz, Ch. (2008) "Ekonomie evropské integrace", Grada Publishing, Praha.

Bellinger, G. (2009). "Systems Thinking: An Operational Perspective of the Universe", [online], http://www.systems-thinking.org/systhink/systhink.htm.

Bertalanffy, L. von. (1968). "General System theory: Foundations, Development, Applications" New York: George Braziller.

Braun, W. (2009). "The System Archetypes". [online], http://wwwu.uniklu.ac.at/gossimit/pap/sd/wb_sysarch.pdf.

Breierova, L. (1997) "Generic Structures: Overshoot and Collapse". Cambridge, Massachusetts, USA: Massachusetts Institute of Technology, [online], http://sysdyn.clexchange.org/sdep/Roadmaps/RM9/D-4480.pdf.

Cecchini, P. (1988) "The European Challenge: 1992. The Benefits of the Single Market", Wildwood House, Aldershot.

Čančer, V., Mulej, M. (2008) "Informal Systems Thinking in the Form of Operations Research", In: Chroust, G., Doucek, P., Klas, J.(eds.), IDIMT-2008, Schriftenreihe Informatik 25, Trauner Verlag, Johannes-Kepler-Universität, Linz.

Doucek, P. (2005) “European Integration: Viribus Unitis – Back to Ideas of the „K & K” Traditions in New Dimensions”. In: Hoyer, Ch., Chroust, G. (eds.), *IDIMT-2005.* Linz : Trauner verlag universitat, pp 13–29.

European Commission, “DG Finantial Affairs: Five years of an enlarged EU”, European Economy1/2009, [online],http://ec.europa.eu/economy_finance/publications/publication14078_en.pdf.

Forrester, J. W. (1961) “Industrial Dynamics”. Productivity Press, Portland.

Kahneman, D. (2003) “Maps of bounded rationality: psychology for behavioral economics”. The American Economic Review. 93(5). pp 1449–1475.

Mildeová,S. (1994) “Možnosti tvorby modelového systému v prognostických postupech”. Politická ekonomie, Vol. 52, No. 1, pp 100–107.

Mildeová, S., Němcová, I. (2009) “Building knowledge about strategy for growth: System dynamics approach”. *European integration studies*, 2009, Vol. 3, No. 3, pp 107–111.

Mildeová, S. (2005) “The principles of system dynamics towards balanced scorecard implementation”, In: Hoyer, Ch., Chroust, G. (eds.). *IDIMT-2005.* Linz : Trauner Verlag universitat, pp. 119–127.

Mingers, J., (1997) “Multimethodology: Towards a Framework for Mixing Methodologies”. Omega: International Journal of Management Science 25 (5), pp 489-509.

Mulej, M. (2006) “The Contemporary School and Knowledge Management”. Journal on Efficiency and Responsibility in Education and Science, Vol. 1, Issue 1, pp 1-19, [online], http://www.eriesjournal.com/_papers/article_1.pdf.

Mulej, M. (2007) “Systems theory: a worldview and/or a methodology aimed at requisite holism/realism of humans’ thinking, decisions and action, System Research and Behavioral Science, 24 (3). pp 347-357.

Mulej, M, Kajzer, S. (1998) “Ethics of Interdependence and The Law of Requisite Holism”, In: Rebernik, M., Mulej, M., eds. (1998): STIQE ‘98. Proceedings of the 4th International Conference on Linking Systems Thinking, Innovation, Quality, Entrepreneurship and Environment. Institute of Systems Research Maribor et al., Maribor, Slovenia.

Němcová, I., Mildeová, S. (2007) “Systémové archetypy v procesech ekonomické integrace”. In: *Systémové přístupy 2007.* Praha : Oeconomica, 2007, pp 71–79.

Němcová, I., Mildeová, S. (2009) “Czech national anti-crisis plan in a Europe of knowledge context”. *European integration studies*, 2009, Vol. 3, No. 3, pp 48–52.

Ossimitz, G. (1996) “The Development Of Systems Thinking Skills Using System Dynamics Modeling Tools”, [online], http://wwwu.uni-klu.ac.at/gossimit/sdyn/gdm_eng.htm.

Pelkmans, J. (1997) “European Integration – methods and economic analysis”, Addison Wesley Longman Ltd., Harlow, Essex.

“Program vnitřního trhu odpovídající 21.století”, KOM(2007)724, [online], http://eur-lex.europa.eu/LexUriServ/site/cs/com/2007/com2007_0724cs01.pdf.

Ragsdell, G., Wilby, J. (eds). (2001) “Understanding Complexity”, Kluwer Academic/Plenum Publishers, New York.

Richardson, G. P. (1991) “Feedback Though in Social Science and Systems Theory”. Pegasus Communications, Waltham, Massachusetts.

Richardson, K. A. (2005) "To Be or Not to Be? That is [NOT] the Question: Complexity Theory and the Need for Critical Thinking", in Richardson, K. A. (ed), Managing organizational complexity: Philosophy, theory, and application, Greenwich, CT: Information Age Publishing.

Richmond, B. (1993) "Systems thinking: critical thinking skills for the 1990s and beyond", System Dynamics Review, Vol. 9, no. 2, Summer 1993. New York, USA: John Wiley & Sons, Ltd.

Růst, konkurenceschopnost a zaměstnanost - Growth, Competitiveness, Employment: The Challenges and Ways Forward into the 21st Century - White Paper COM(93) 700 December 1993.

Senge, P. (1990) "The Fifth Discipline". Doubleday/Currency: New York.

Schwaninger, M., Groesser, S.N. (2008) "System Dynamics as Model-Based Theory Building", System Research and Behavioral Science, 25 (4). pp 447-465.

Sterman, J. D. (2000) "Business Dynamics. Systems Thinking and Modeling for a Complex World", USA: McGraw-Hill Higher Education.

Stričík, M., Nawka, P., Hura, J., Očvár, L. (2003) "Economic analysis of current state of mental health care in Slovakia and possibility of its transformation. Theory and practice of transition towards market relations: Economic and legal, international, informational and technological, educational and legal aspects". In: Uzgorod State Institute of Information Sciences, Economic and Law (Ed.), pp 39–44.

"Systemic Thinking". (2009). [online], http://lamspeople.epfl.ch/balabko/Professional/Systemic_Thinking/Index.htm.

"Systems Thinking. Focusing On the Whole, Not the Parts, of a Complex System". (2009). [online], http://www.1000ventures.com/business_guide/crosscuttings/thinking_systems.html.

Šauer, P., Dvořák, A., Lisa, A., Fiala, P. A (2003) "Procedure for Negotiating Pollution Reduction under Information Asymmentry" Environmental and Resouce Economics, Vol. No. 24, pp 103–119.

Umpleby, S., Dent, E. B. (1999) "The origins and purposes of several traditions in systems theory and cybernetics". Cybernetics and Systems: An International Journal, 30:79-103., [online],http://www.gwu.edu/~umpleby/recent_papers/1998_origins_purposes_several_traditions_systems_theory_cybernetic_1.htm.

Vavrečková, J. (2009) "Migrace českých lékařů a studentů medicíny", Zdravotnictví v České republice" , 2009, Vol. 12, No. 2, pp 54-59.

Vojtko, V., Mildeová, S. (2006) "*Dynamika trhu*". Praha : Profess Consulting.

Yamaguchi, K. (2006) "Integration of Real and Monetary Sectors with Labor Market: SD Macroeconomic Modeling (3)". In Proceedings of the 24th International Conference of the System Dynamics Society, Nijmegen, The Netherlands, The System Dynamics Society. pp 1-30.

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