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HUMAN CAPITAL FORESIGHT IN PUBLIC ORGANIZATIONS STRATEGIC PLANNING IN UKRAINE AND POLAND

Abstract

The concept, specifics and methodology of foresight are defined in the article; also the necessity of applying foresight investigations for the strategic planning in public organizations development is outlined. Benchmarking analysis of such investigation results based on the human capital development scenarios in Ukraine and Poland is carried out, in particular for the higher education development perspective in both countries.

Keywords: foresight, human capital, strategic planning

Streszczenie

Foresight kapitału ludzkiego w planowaniu strategicznym organizacji publicznych na Ukrainie i w Polsce

W artykule zdefiniowano istotę, właściwości i metodykę foresightu, uzasadniono potrzebę wykorzystywania badań foresightingowych dla potrzeb planowania strategicznego rozwoju organizacji publicznych. Przeprowadzono analizę porównawczą wyników takiego badania na podstawie scenariuszy rozwoju kapitału ludzkiego w Ukrainie i w Polsce, w tym perspektyw rozwoju edukacji wyższej w obu krajach.

Słowa kluczowe: foresight, kapitał ludzki, planowanie strategiczne

Introduction

Foresight methodology is one of the most effective instruments of strategic development prospects determination for both state and public organizations, exposure of breaches capable to influence positively the economy and society in long-term prospect. Foresight was most actively used the last years in Europe for determination and description of feasible socio-economic progress trends on the protracted prospect, and also for achieving consensus between society, state and business in relation to strategic directions of national development.

The application of general foresight methodological concept became an adequate reaction to structural changes in society and economy, co-operations caused by strengthening interaction between science and production, which not only accelerated development of new technologies process but also stipulated the necessity of new views/approaches to management processes. According to I. Ansoff [1999], that can be identified as a strategic turning point. In the field of theoretical studies the turning point is appearance and establishment of new ideas, theories, concepts, methods and methodological instruments in science. In the practical area that would be distribution and implementation strengthening of the new decisions, that are characterized by complexity and changes radicalism, as well as growing importance/value of their consequences.

The aim of the article is determination of the possibility for improving strategic planning of public organizations development with the use of foresight research features. The results of foresight research shall be implemented for lining up the most feasible scenarios of human capital development basing on human capital transformation trends in Ukraine and taking into account the experience of Poland in the current conditions of economic and political development vagueness in Ukraine and in the world in general.

The concept of foresight

Development and use of the foresight concept are directly related to the modern requirements to strategic management. Methods applied in the projects and bearing the common name of foresight proved to be the most effective instruments for priorities setup in the field of science and technology, as well as for considerably wider range of problems related to social and economic development [Поплавська, 2014: 119].

The term foresight had been first used by J.F. Coates in 1985 in the context of the future strategic analysis [*Foresight technologiczny...*, 2005]. More advanced foresight research analysis may be found in the K. Cuhls [2003] and L. Georghiou [2001, 2007] papers. Currently foresight is becoming a more widely used method, which gives an opportunity to glance into the long-term future of science, technology, economy and society with the aim of authentication the strategic research

areas. According to European Foresight Monitoring Network [Gudanowska, 2012] – the network monitoring reports regarding the foresight initiatives in the world until recently – in 2010 the number of such projects has reached 2000. In Poland they exceeded 40 in 2012 [Kononiuk, 2002: 93], foresight projects are also being carried out in Ukraine.

In the wide context of the “strategic, cautionary thinking”, according to Gavigan and Skapolo, foresight is not something new or specially esoteric, but instead constitutes a natural and important characteristic of the activity, related to the strategic planning and development of politics, usually performed by corporations or state structures [Gavigan, Skapolo, 1999].

J.-A. Héraud and K. Cuhls [1999] present foresight as the process of developing general trends perception of in the protracted prospect, with inherent systematic character; according to the idea of B. Martin, one of the leading foresight ideologists, stating that foresight “involves systematic attempts to look into the future of science, technology, society and the economy, and their interactions, in order to promote social, economic and environmental benefit” [Martin, 1995: 139–168] and according to the fundamental UNIDO two-volumer [Unido Technology Foresight Manual, 2005] definition, foresight is a “systematic, participatory, future-intelligence-gathering and medium-to-long-term vision-building process aimed at present-day decisions and mobilizing joint actions”.

Summarizing the abovementioned definitions, we should state that foresight is a “systematic, general process of developing the future view aimed at improving the quality of decisions taken” [*International practical guide...*, 2001]. Therefore critical thinking in relation to long-term development, discussions in relation to such development for creating wide representative democracy and forming future by influence on the public decision policy [Schwarz, 2008] must be applied in strategic planning for public organizations.

The proof of that is that lately foresight began to be widely used in the European countries in the decision making process concerning not only political but also corporate and public decisions. The network of Forsociety, that unites the specialists of the most European countries, is functioning for this particular purpose. The European Foresight Monitoring Project has been launched for data collection on foresight-activity. This methodology is being applied for regional planning and corporate forecasting with ever increasing frequency.

Foresight methodology

With regards to methods and tools of foresight, within their wide and diverse range it is possible to distinguish certain quantitative approaches to discovering and estimation of tendencies and their consequences by means of special models and computer applications, as well as a group of methods, that are based on developing special procedures and receptions of work with experts. The set of methods applied in particular project can be distinguished taking into account

various factors: time and resource limitations, presence of sufficient amount of highly skilled experts, access to the informational sources, etc.

The Russian school (of foresight) holds to an opinion that foresight is scenario forecasting of the economy, industry or society's social and economic development within 10–20 years prospect [<http://foresight.hse.ru/whatforesight/>]. Such an opinion may be accepted partly in the sense of the scenario methods application, but determination of foresight as the variety of forecasting shall not be acknowledged, as its basic assignments is not forecasting, but understanding.

The backbone of foresight is formed by expert estimates. The methodology of foresight has embodied a full range of both traditional and contemporary expert estimation methods. Usually combinations of different methods are used in each foresight project is used, including expert panels, Delphi, SWOT-analysis, brainstorming, scenarios and road-maps construction, relevance tree, matrix of inter-correlation analysis and other; however the basic vector is directed towards more active and purposeful use of knowledge of the experts involved into the project. Thus, the Japanese projects aiming at long-term prospects determination of scientific and technical development, that are being held every 5 years, involve up to 2 thousand experts, representing all major scientific directions, techniques and technologies, and one of the recent Korean projects has involved over 10 thousand experts.

The system of foresight methods is constantly developing and improving, as well the efficiency of the combined application of different methods and approaches has been supported. Therefore, the idea of the foresight triangle, developed at the beginning (of the concept development), has undergone certain changes. The demand for creativity, examination and co-operation was replenished with the evidence-based approach that starts to play an all greater role in course of time [Popper, 2007]. Practically all successful projects of the last years were based on complex approaches with a tendency to permanent complication of the system of the used methods.

The foresight ideology can turn into a method of construction and creation of desirable vision for the future, as well as an instrument for strategic management democratization and limitation of rationality barriers and adaptation of strategic management to the environment requirements. According to R.A. Slaughter, foresight is the ability to create and maintain a high-quality, coherent and functional forward view and to use the insights arising in organizationally useful ways for example: to detect adverse conditions, guide policy, shape strategy; to explore new markets, products and services [Miles *et al.*, 2008].

Foresight and human capital in Ukraine

In Ukraine the first program of prognosis-analytical researches was ratified by the Cabinet of Ministers of Ukraine in 2004 the Government program of scientific and technical development forecasting for 2004–2006. The Ukrainian institute of

scientific and technical and economic information had been appointed the primary organization providing organizational accompaniment of the Programs. Swinging majority of such Programs relate to prognostication of scientific and technical development and innovative prospects of Ukraine often enough taking into account an ecological constituent, in particular, the resolution of Cabinet of Ministers of Ukraine dated 11.09.2007, No. 1118 was adopted to approve the *Government program of forecasting scientific and technological development for the years 2008–2012*. As the result of the conducted foresight-investigations the priority directions were set as “Sciences about life, new technologies of prophylaxis and treatment of the most widespread diseases”, “Energy industry and energy efficiency”, “New substances and materials”, “Rational nature resource management”, “Information and communication technologies”, as well as the first List of crucial technologies has been defined for each priority development direction in Ukraine [Форсайт в Україні..., 2016]. It should be mentioned that unfortunately in course of time the range of research-and-developments narrowed considerably, and instead of full-scale foresight projects, some marketing researches were conducted.

However, both scientists and practices confirm the urgent necessity for foresight researches implementation. In June 2011, a National center of forecasting has been created on the basis of Kyiv Polytechnic University (Foresight-center). Organization of complex measures for elaboration and introduction of scientific foresight technologies aiming at development of national economy, its separate industries and enterprises has been defined as the primary objective of its activity in Ukraine [Форсайт-центр для України..., 2016]. As analysis testifies, most researches are concentrated around social and economic trends and contradictions of the present time. Among them the foresight research *Human capital of Ukraine 2025* should be mentioned [Пекар, 2016], which had been executed by the experts of WikiCityNomics, by the organizational committee of Human Capital Forum and Kyiv Business School in June–October 2012.

It is worthwhile to say that in 2015 Ukraine has occupied the 31st position among 124 countries of the world by rating estimation of development of human capital, promulgated by the World economic forum. Poland occupies the 28th position in that rating [<http://edclub.com.ua/analitika/riven-rozvytku-lyudskogo-kapitalu-ur>]. For determination of the rating the index of human capital had been applied, which takes into account the level of education in the country, professional qualification, employment and lifespan. According to experts estimates, there are 31.3 million people belonging to workforce in Ukraine, the share of employed constitutes 55%, the level of unemployment reaches 7.2%. The average age of population in Ukraine is 39, in Poland – 38 years.

Strong positions of Ukraine are related to the area of education. In particular, 100% of the population in Ukraine gets primary education, which allows the country to reach the worlds' precedence in this area in all age-related groups. Ukraine holds the 10th place in the world in receiving secondary education.

Higher education in Ukraine has quite problematic forecasting background. This is shown by the country underrun along the human capital disposal. It is known that a key trend in the developed countries the satiation of activity with knowledge,

mass plugging of people into cognitive activity. Important development patterns of the educational system in the developed countries include increasing role of science as a factor of quality of education and exceeding of rates of educational expenses growth compared to the rates of the economy growth. While the Ukrainian educational system is characterized by totally different, rather negative processes.

The foresight research *Human Capital of Ukraine 2025* contains 4 scenarios of the social and economic development of Ukraine, basing on the 2 basic assumptions: (1) big business dominance versus mass entrepreneurship extension; (2) civic freedom enhancement versus civic freedom reduction [Пекap, 2016]. As the country is currently at a split-up (bifurcation) point, all potential scenarios are possible with higher or lower probability. The high level of vagueness testifies the absence of explicit development priorities and well-shaped vision.

The scenarios developers foresee the following possibilities in the area of education. Scenario *Mafia*, or *Family* (big business domination and enhancement of civic freedom): education becomes “a caste system”, presuming different opportunities for “elite”, “average” and “lower social class”. The educational programs are projected in such a way that the critical thinking elaborations minimized for those, who is not in focus (and do not “have that luxury”), in order to prevent forming holistic view of the world for the majority of population. Effectively built and functioning system of early professional orientation for children, aimed at early shaping of the willingness and readiness for realization within the framework of the scenario of professional development, is a consistent part of the scenario.

Scenario *Totalitarian corporation* (big business domination and restriction of civic freedom): education, science and culture become an internal matter for corporations and are oriented fully to their interests.

Scenario *Kaleidoscope*, or *Pastoral* (mass entrepreneurship extension and enhancement of civic freedom): the educational system is fully reformed and commercialized, while science coagulates as the scientists emigrate massively, in fact the national science is being integrated into the world science. Healthy well-educated population advocates individualistic values. The conflict between the demand of industrial business for cheap labour force and hard physical work, and the desire of new generation for living and working under different conditions – with orientation at creativity, free labour mode and low degree of regulation – escalates. Openness of geographical and cultural borders and absence of limitations result in the increase of cosmopolitan values.

Scenario *Transgenic society*, or *Bondman earnings* (mass entrepreneurship extension, civic freedom reduction, in some sense – return to the “soviet past” – centralized planned economy, state control in all spheres of life: education becomes state, low-quality and free of charge. The system of education continues to degrade, and although civic rights have to be welcomed by the general system of education, in this scenario it is only providing the function of supervision over children until achieving the working age. Public positions, leading positions at state enterprises get extraordinarily high status, there is the powerful system of preparation of officials like “schools of party reserve”. Socially active part of the population does not see any prospects of development and abandons a country.

The analysis of present situation in the educational sphere of Ukraine gives an opportunity to find facts in support of almost each of the scenarios. Reduction of the state higher education financing level, strengthening of commercialization and limitation of availability of higher education for considerable part of young people, “ebb of brains” of teachers, scientists and students abroad, deepening of break with the front-rank systems of formation of the world became realities of the present time. Internal threats of development of the higher education institutions in Ukraine increase, namely: dilution of the material and technical base of majority of the higher education institutions, low level of remuneration of teachers’ labour, isolation of on-line tutorials and educational process, became antiquated from the necessities of practice, loss of educator function of education.

Scenarios and strategies for higher education development in Poland

Scenarios and strategies for higher education development in Poland were created on the basis of results of Panels of the research fields and thematic panels, where 335 experts have participated [*Scenariusze i strategie...*, 2010]. Creation of scenario envisaged positive interrelation between at least three groups of key factors: environment, internal reforms, knowledge based economy, development policy legitimization. The result was creation of three scenarios, namely:

1. Civilizational leap scenario with the vision that Poland is a country of balanced development and slowly increasing quality of life.
2. Stable adaptation scenario, with the vision that Poland is a country of balanced development and increasing quality of life.
3. Heavy modernization scenario with the vision that Poland is a country of balanced development and systematically increasing quality of life.
4. Weakening development scenario with the vision that Poland tries to reach balanced development and increase in quality of life.
5. Failure scenario – the vision is absent.

The results of the implemented foresight projects create proof for the fact that the system of higher education of Poland requires additional financing and strengthening of mechanisms that would assist the effective use of resources available. One of such mechanisms is the increase of competitiveness of higher education. It may become possible under the condition of public expenses on higher education at the level of 1% GDP, increase of financing from private sources to the same level, collaboration between science and business and development of competitive edges, development of international cooperation on the basis of innovations and lineation of scientific development priority directions.

It is also worth mentioning that the index of intellectual capital of the Polish students is estimated at the 13 position among 16 European countries [*Scenariusze i strategie...*, 2010].

Conclusions of the implemented foresight projects in both countries are supporting the opinion that development of the system of knowledge on the basis of positive changes of human capital upgrading, capital of intellectual and research potential should be the key factor of development policy. For achievement of this aim reforms of the system of science and education in both countries are necessary. Implementation of the effective development oriented policy is possible taking into account the results of social, economic and cultural researches. Support of the set/desirable strategic reflections is possible via integration and systematic implementation of foresight projects.

In the authors' opinion, the specially valuable results of the foresight-approach application are the public inspection processes of the public organizations development planning and application of road-maps, that form a fundamentally new valuable instrument for state administration, which in turn assists in construction of effective policy model for planning and adjusting development of public organizations based on principles of transparency, flexibility, variability, and harmonization of co-operation of interests and co-operation of agents of national interests.

Technology of developing the roadmaps that is based on the method PERT and describes alternative ways from which it is possible to distinguish one critical (optimal) way, is modified considering the methodology of time series analysis (TSA), necessary for reaching the goals. A roadmap visualizes the future including some basic trends, events, technologies, strategic decisions and points of the decision making, plan of legislative measures and methods of their lobbying. Relying on the abovementioned foresight features, the authors consider as expedient to use problem-oriented roadmaps, where technology is being described as one of the stages of work, related to a problem solution. Application of the roadmaps forms the new valuable and meaningful instrument of state administration, aimed at the model of development of human capital. The expected effects from the use of roadmaps as the instrument of human capital development in Ukraine include:

- increase of the share of declared and attained results;
- optimization of the budget expenses;
- filling in the blank pages in human capital development strategies;
- providing internal accordance of the declared results at different levels, based on concordance and synchronization of the actions aimed at the human capital development, and envisaged within the framework of different program documents with regards to the Ukrainian economy prospects;
- providing the possibility of monitoring elaboration of instruments and mechanisms of public organizations influence on the human capital development.

Besides that, taking into account requirements to strategic management and possibilities of foresight, it is feasible to set potential areas of change in strategic planning of public organizations as a result of bringing in foresight research, namely:

- providing equivalent role for both communication and participation;
- orientation at the desirable public strategies;
- involving many interested stakeholders into the researches;

- confrontation of ascending and descending approaches, taking into account of expectations of end-user;
- socialization of the strategy development process, bringing in bigger quantity of interested stakeholders;
- creating a team enthusiasts for introduction of changes;
- strategy development via a continuous process that is subject to permanent actualization;
- concentrating on the key factors of changes, taking into account the environment volatility;
- lower formalization of the strategy development process due to application of creative methods;
- creating multiple strategies depending on the key factors of changes [Ejdys, Kononiuk, 2013].

Conclusions

Foresight is a methodology, the principle/essence of which consists not so much in the future forecasting, as in the concerted decision making in relation to the future. Actually foresight solves the problem of achieving consensus in relation to the future, activating publicity and taking on enormous significance with regards to planning the development of public organizations in particular.

The aim of the foresight methods application is support of strategic decisions and creating a complete view of the current and future status. Foresight can turn into the method of construction and creation of desirable vision for the future, as well as the instrument of strategic management democratization and limiting the barriers of rationality, adaptation of strategic management to the requirements of the environment.

Extensive use of the researches foresight testifies the increase of their value as the instrument of the future anticipation. Besides the pragmatic implication, their intrinsic characteristics are the corresponding terminology and research tools.

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