

SCIENTIFIC PAPERS
OF THE UNIVERSITY OF PARDUBICE
Series A
Faculty of Chemical Technology
18 (2012)

**RELATIONSHIP BETWEEN UNIVERSITIES
AND THEIR STAKEHOLDERS PERFORMED
THROUGH THE PUBLIC PRIVATE PARTNERSHIP**

Veronika SABOLOVÁ¹ and Liběna TETŘEVOVÁ
Department of Economics and Management of Chemical and Food Industry,
The University of Pardubice, CZ–532 10 Pardubice

Received January 16, 2012

The aim of this paper is to provide theoretical evidence that the university and enterprise entity integration through the public private partnership is applicable and appropriate. This applicability and appropriateness will be judged by qualitative proofs based on characteristic features of all the participants and the public private partnership itself. This theoretical argumentation result will serve as a basis for empirical research on usability of the PPP principles in integration of universities and business entities in the Czech Republic.

Introduction

Pursuant to the corporate social responsibility every company is obliged to reflect the society aims and values, thus those of its environment. The external participants of this enterprise environment are professionally referred to as stakeholders.

¹ To whom correspondence should be addressed.

Also the institutions of the public sector, where public universities belong, should observe the principles of the corporate social responsibility concept. However, this managerial approach to stakeholders within management of the public sector institutions has been understood as merely a recommended voluntary attitude so far. The Czech universities should take it as an obligatory concept, mandated by the law on tertiary education which will result from the tertiary education reform. The reform spirit should be in compliance with the philosophy of human resources being one of the main pillars of competitiveness in the current development of the Czech society. The main aim of the reform will rest in a change in management and funding principles of the tertiary education system.

White Paper on Tertiary Education and Stakeholders

The White Paper on Tertiary Education is a conceptual and strategic document setting the direction of the tertiary education in the Czech Republic for the horizon of 15-20 years. This White Paper, however, is not a technical manual for execution of the changes leading towards the set aim [1]. It serves merely as a concept for the reform of the tertiary education in the Czech Republic. Figure 1 describes fundamental principles of the tertiary education reform which is supposed to be executed by the new government appointed upon election results of the late May 2010. As late as after the elections the documentation will be compiled and will not only describe the aim of the reform but rather the instruments essential for its achievement (including the changes in legislation). That is why it currently subjects to various case studies and is being thoroughly discussed to determine tools for reaching the final desired condition of the tertiary education described in the White Paper.

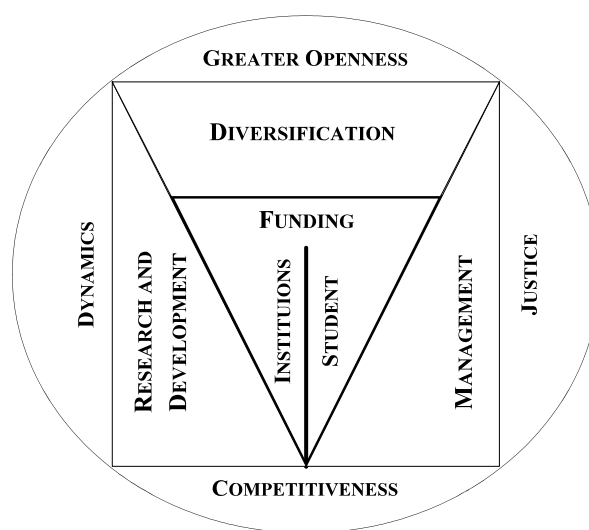


Fig. 1 Fundamental principles of the tertiary education [2]

According to the White Paper, the universities are supposed to engage stakeholders in their own activities and management, and thus should ensure a more effective feedback and support elements of management control. Meeting this target means the enhancement of accountability and efficiency exercised towards external environment. Scientific literature refers to the cooperation between universities and external environment as to outreach of the university activities. The merit of these activities rests in an extension of offered educational and research & development university activities to satisfy the needs of external entities. University activities outreach may, however, address also the problem issues of economic development [3].

The efficient stakeholder management, or as the case may be, relations with primary stakeholders (customers, employees, suppliers, community residents and the environment) may mean for a private sector entity the increase in firms' ability to outperform competitors in terms of long-term value creation [4]. The stakeholder management in enterprising environment is being carried out *via* the concept of the so/called "corporate social responsibility". A reason for engaging this principle into the company management is often endeavour after the rise of company performance [5]. Some of the authors, nevertheless, think there is a neutral relation between the company performance and the corporate social responsibility concept which is only one of the attributes of a company offer [6]. Generally speaking, though, the companies should follow this concept in a communication with their environment to influence positively the development of the environment, fundraising and extra-financial benefits for all entities involved. The company responsibility should primarily concern economic, legal, ethical and philanthropic areas [7]. A similar principle could be applied to institutions of higher education, i.e., also universities [8]. A modified model of the "university social responsibility" is then represented by behaviour of the university (managers, employees) contributing to the fulfilment of the intentions and aims of all the involved entities, thus not only of their own.

The stakeholders of the university are either those who contribute to the university operation or demand the university outcome. The university operation is indirectly supported by every taxpayer, i.e., the public. Other stakeholders are the companies, first, from the position of employers demanding university graduates, second, from the position of research & development clients. Last but not least, the stakeholders include students demanding education as the essential university outcome. In the case of a particular university, the stakeholders involve also representatives of regional governments and enterprisers. This group, however, may be extended with representatives of research and cultural institutions, non-profit sector and naturally alumni. The White Paper on Tertiary Education sets the partial target in terms of creating more favourable conditions for a cooperation with these stakeholders by deeper engagement of both sides in particular.

Scientific literature refers to the cooperation (interconnection) of universities, government (public administration) and industry (enterprisers) as to the “triple helix” which is considered an evolutionary model of innovations [9,10]. The merit of this three-entity cooperation model, which top opposing vertices, is relatively simple, nevertheless efficient. The role of universities rests in provision of scientific, expert and partly also technical and material capital. This model counts on industry to be a main guarantor of financial capital and imaginary university customer. The government then facilitates necessary conditions (particularly legislative) for this kind of cooperation (or eliminates obstacles in cooperation between universities and companies).

The White Paper suggests the engagement of the stakeholders into strategic decision-making of universities should be reached by extending the operation of the board of trustees. The White Papers authors’ intention was to make the universities more open to their external environment from both the institutional and strategic points of view. This openness to the external environment should be thus ensured by boards of trustees which can meet this aim by attracting significant representatives of enterprise, arts, science and non-profit sectors (also prominent alumni) to participate in unbiased work for the benefit of the given university. The Czech Republic environment suffers from apprehension that the board of trustees members might tend to abuse their positions for pushing their commercial or political interests through. Thus, the concept of the board of trustees should possess mechanisms of mutual control and balance between internal and external participants.

The stakeholders’ engagement into university operation and management should not be limited to the decision-making power but they should also bring private funding into the sector which is traditionally financed from public money. Meeting this aim will mean enhancement of multiple-source funding university operations. The core idea rests in the concept, where the power to express oneself freely in terms of university problem issues is only fair if it is counterbalanced by their financial involvement in tertiary education. This model is based on students paying tuition fees (deferred tuition fees), which means students’ financial engagement raising their responsibility for quality of their education, and at the same time, it increases the university interest in its graduates’ future employability. Companies and external research institutions should financially participate in research & development of universities in particular. Tertiary education funding should be thus more closely tied with competitiveness and responsibility of universities and students for their results, which is to bring about reinforced engagement of both the participants.

The Czech experts from academic environment do not agree with some of the White Paper regulations and wish to make legislators lead a dialogue about the particular text of the reform, thus the Act on Tertiary Education in which it will result. They consider cooperation with stakeholders in terms of their participation

in boards of trustees as limiting university autonomy and self-management. On top of it, they denote this engagement harmful for the quality of university education, not beneficial as the White Papers claim. Besides others, the representatives of the Czech universities do not like co-financing of the research & development by enterprising sector. The engagement of practice into the funding of research & development is frequently opposed as it does not solve the underestimated funding of tertiary education and this financial interconnection is highly questionable. In the light of it, the cooperation of universities and practice should be approached very carefully. Providing the university and the enterprising sector relations were developed unnaturally, it could really negatively affect the university operations [11]. From the point of view of a company, the integration would not be too complex as it would belong to the category of conglomerate integration [12].

The university and enterprising entity integration based on decision-making and control, or as the case may be, finance, could be carried out *via* the public private partnership (PPP) which, in general, is to interlink private finance and public needs. The most often PPPs are vast financial infrastructure projects, however, meeting the aim of advancing the research & development through the interconnection between universities and industry is also extremely financially demanding, so the PPP principle seems to be efficient even in this case.

Public Private Partnerships

The public private partnership is a mergence of public needs and private finance (for other meanings of the public private partnership, see Ref. [13]). It is desired to implement organizational and expert knowledge, experience and skills (or as the case may be — capacities) of a private sector body. Though at the first sight the partnership looks advantageous for one party only, it brings advantages and securities to both parties. The public sector gets a better quality for equal costs or equal quality for lower costs and the private sector gets a long-term (and to a large extent very stable) income security.

The PPP projects focus mostly on the public infrastructure, which is highly demanding in terms of both time and finance, and so it often exceeds the capacities of public administration bodies limited by their budgets (state, regional, municipal). They can be saved by the private partner who first (and foremost financially) ensures the construction of the public infrastructure and after its completion is allowed to operate, administer and maintain it in return for payment. The operation is usually tied with the possibility of collecting the charges from the infrastructure users, which then creates the above mentioned long-term stable income of the private body. The right to collect the charges may be alternatively substituted by the public partner payment. The ownership of the built infrastructure is mostly based on an agreement that the owner is the private body, however, only

for the period of the partnership. After the partnership agreement expires, the infrastructure ownership is transferred to the public body.

Of course, building the infrastructure of such a volume is connected with numerous risks. Another advantage of public private partnerships is in distributing the risks between the two partners according to a very simple and efficient formula — “each partner bears the risk they can control best”. This formula is also a basis for the introductory definition of the PPP. The private sector controls finance as, thanks to its experience, it is more versed in it than the public sector. The public sector controls ensuring public services, as it is entitled to it and in addition, it bears also in mind the social aspects which might not be taken as the success indicators by the private partner.

The public private partnership, in spite of its substantial advantages, is not a remedy to everything. The prerequisites for an effective partnership are primarily need; political, legislative and administrative environment and communication [16]. These two subjects, with completely opposite interests and goals, should join only if there is no option for the public partner to meet the public needs at lower costs and more efficiently. The expert literature labels this requirement as the need to gain a higher value for money. In principle, it is a comparison between situations when the public sector is to ensure the public needs’ fulfilment from its own sources and when a private partner merger is used. In practice, this comparison is carried out by the public sector comparator.

University Industry Partnership

The interconnection of university and industry representatives is by experts referred to as “university industry partnership” [15,16]. It is a two-way and feedback-based cooperation, which is a significant characteristic feature of this interconnection [17]. Experts most often try to determine a particular form (concept) of the university industry partnership and specify then the characteristic features of every such form. The scientific articles say the university industry partnership may exercise various forms of business incubators, research and technological parks, clusters, *etc.* [18]. The problem issue of the basis for building all forms of the university industry partnership is, however, rather neglected. The following text will examine principles of the public private partnership and whether they are applicable in a form of grounds to the university industry partnership. In other words, the essential elements of the public private partnership and their suitability for the interconnection of universities and practice (industry) representatives will be considered.

The public private partnership represents a contract of a long-term character (most often 15-40 years). The university industry partnership is also an interconnection of a long-term nature and could be, in a model situation, even permanent. Only sufficiently long partnerships set the grounds for interconnections

comparable to friendships of people in which one part may rely on another as they are able to predict the other partner's reaction in any situation.

The public private partnership is an interconnection of public needs and private finance. Within the university industry partnership, the public need is the need for education, research & development and the private funding for ensuring this need is provided by the industry representatives. The public private partnership is applicable only unless there is a cheaper and more efficient alternative of acquiring the outcome of public services. In funding education, research & development universities depend primarily on finance of the state budget. Pursuant to the effort of reducing the Czech Republic state budget deficit, the money allocated to tertiary education is getting lower and, *vice versa*, the demand for education, research & development in competitive environment is getting higher. There is probably no other cheaper and more efficient option of funding education, research & development (than the university industry partnership) in the area of public universities.

The public private partnership enables distribution of risks between both the partners according to a very simple and efficient formula "each of them bears such a risk they are able to control best". Such a distribution of risks is typical also of the university industry partnership. The industrial entity bears a risk of ensuring sufficient amount of finance as, thanks to its experience, it masters it better than an institution financed from public money, which a university is. The university controls risks related to education, research and development, e.g., a small number of students or brain-drain which are not familiar to the industrial entity.

Within the public private partnership, the partners share not only the risk but understandably also the benefits generated by the partnership. The public entity ensures public needs outcome of a higher quality and the private entity dispose of a long-term source (collecting fees from users or charging a public partner). The university industry partnership brings about a better quality provision of education, science and research for the university and an opportunity to use the outcome of this activity for the representatives of industry. Thus, the industrial entity does not profit from a long-term financial income but from an opportunity to use the research & development results and quality educated graduates for a long time. This opportunity may bring them a competitive advantage, cost savings or rise in a market share.

The ownership within the public private partnership most often means what the owner of created infrastructure (partnership outcome) according to a drawn agreement is a private entity, however, only for the period of partnership. After finishing the agreed contract-based partnership, the infrastructure ownership is transferred to a public entity. This pre-set ownership system would also be efficient in the case of the university industry partnership. The ownership of research & development results (the outcome of education, i.e., the graduates cannot be owned) would belong to the industrial entity as an investor for the period of a contract-based partnership. They could control, e.g., a patent, software, verified

technologies or a certified methodology on their own, which includes also collecting opportune fees for using them by a third party. Unless the university industry partnership has a permanent character, after expiring the contract the ownership of research & development outcome would have to be transferred to the university as an original author of the results.

Pursuant to the principles of the public private partnership and their suitability for the interconnection of universities and practice representatives, there is a problem issue to be dealt with — what might be possibly the subject of cooperation within the university industry partnership. The White Paper on Tertiary Education (as it was already stated above) stipulates only the obligation to include the practice entities into boards of trustees (decision-making power and control power) and involve them in a multi-source funding of education, research & development (responsibility for finance). The subject of partnership may relate either to education or to research & development.

In the area of education, the university should cooperate with industrial enterprises when preparing curriculum. Not only the list of study subjects within the study field but also the contents of these subjects should reflect the requirements of practice. Students can gain the awareness of practice requirements during their working practice, or as the case may be, during their study visit organised by the partner industrial entity in its facilities. Students may also learn at field trips in the company. Based on their experience acquired in the environment of an industrial company, students may produce their theses. The results contained in the theses may serve as grounds for further research at the university or be used directly by the partner industrial entity for its own benefit.

The industrial company may also organise both for the students and university staff training sessions in various areas, where indeed, also the company staff attend. On the other hand, the university may also train the company staff or create individual study plans for their staff if they are interested in studying an accredited subject field. Both the partners of the university industry partnership may hold conferences where both a scientific (theoretical) and application (practical) points of view are presented. They might also utilize their infrastructures, e.g., lecture halls, accommodation, catering, leisure time facilities, special laboratories or computers. The main benefit of the university and industrial company interconnection would, indeed, rest in creating job opportunities for university graduates in the industrial company.

In research & development the university and industrial entity interconnection might mean, e.g., joint projects. The results of projects could be then theoretically modelled in academic environment and consequently tested in practice of the industrial company. The university could also provide various studies, reviews or expertise reports. The last but not least comes the university expert consulting provided to the company.

Conclusion

Applicability and suitability of the university and industrial company interconnection was theoretically verified by the public private partnership. By the qualitative argumentation drawing on the characteristic features of all the involved participants of the university industry partnership and the institute of the public private partnership itself, the interconnection of these concepts was evaluated as ideal and efficient. The overview of characteristics and their particular interpretation within the public private partnership and the university industry partnership are presented in Table I. As it is obvious from the individual lines, the characteristics of the public private partnership are very similar to the ones of the university industry partnership. In conclusion, we may thus state that the university and industrial enterprise (practice) interconnection may be, or as the case may be, should be carried out *via* the principles of the public private partnership.

Table I Characteristics of the public private partnership and the university industry partnership

Characteristics of partnership	Public private partnership	University industry partnership
Period	15-40 yrs	permanent partnership
Reason	public needs and private finance	need for education, research & development; and finance of industrial company
Applicability	no better option available	no other source of finance for university financed from public sources
Risk distribution	each party controls the risk they understand best	industrial company bears financial risk; university bears educational risk
Sharing benefits	public entity is satisfied in its public needs, private entity acquires a long-term income	university provides more quality education; industrial company uses results of research & development
Ownership	private partner owns infrastructure, after partnership expiration the ownership is transferred to the public partner	industrial partner owns research & development results, in the case of partnership expiration the ownership is transferred to university

References

- [1] Matějů P., Ježek F., Münich D., Slovák J., Straková J., Václavík D., Weidnerová S., Zrzavý J.: available at URL: <http://www.msmt.cz/uploads/bila_kniha/schvalena_bktv/White_Paper_on_Tertiary_Education_fin.pdf>, [cit. 2010-09-01].
- [2] Matějů P., Václavík D., Münich D.: available at URL: <http://www.asociacevos.cz/zapisy/BK_koncept_VOS.ppt>, [cit. 2010-09-01].
- [3] Fatzinger G.B.: *J. Small Busin. Manage.* **17**, 59 (1979).
- [4] Hillman A.J., Keim G.D.: *Strat. Manage. J.* **22**, 125 (2001).
- [5] McGuire J.B., Sundgren A., Schneeweis T.: *Acad. Manage. J.* **31**, 854 (1988).
- [6] McWilliams A., Siegel D.: *Acad. Manage. Rev.* **26**, 117 (2001).
- [7] Schwartz M.S., Carroll A.B.: *Busin. Ethics Quart.* **13**, 503 (2003).
- [8] Muijen H.S.C.A.: *J. Busin. Ethics* **53**, 235 (2004).
- [9] Etzkowitz H., Leydesdorff L.: *Res. Policy* **29**, 109 (2000).
- [10] Leydesdorff L.: *Res. Policy* **29**, 243 (2000).
- [11] Gassol J.H.: *J. Techn. Transfer* **32**, 489 (2007).
- [12] Tetřevová L.: *Ekon. Casopis* **52**, 669 (2004).
- [13] Linder S.H.: *Amer. Behav. Scientist* **43**, 35 (1999).
- [14] Skietrys E., Raipa A., Bartkus E. V.: *Engin. Economics* **58**, 45 (2008).
- [15] Hall Z.W., Scott C.: *Science* **291**, 553 (2001).
- [16] Tetřevová L.: *Economics Manage.* **15**, 807 (2010).
- [17] Meyer-Krahmer F., Schmoch U.: *Res. Policy* **27**, 835 (1998).
- [18] Ručinská S., Ručinský R.: *Proceed. of the Scient. Conf. with the Int. Partic. Theory and Practice of Public Admin.*, **43** (2009).