KNOWLEDGE TRANSFER THROUGH NETWORKS

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Abstract: Knowledge is a vital intangible asset for any organization and cannot be valued exactly due its special form of materialization. Although we have this drawback, a scientifically established value should be used in order to measure the performance of knowledge holders. A correct valuation helps to know the worth of assets offered in exploitation. Exploitation of this resource could be done in several different ways, but integration in knowledge networks seems to generate best efficiency ratio. Networks offer the possibility to change information, to obtain new information, to build further ideas arose from network partners or to develop together new ideas. Thus, networks assure conditions to optimize the members’ knowledge portfolios. Optimization of knowledge usage creates benefits for network members. These benefits could be profits (if members are private companies) or social welfare (if members are looking after collective purposes). Taxonomy of knowledge networks is diverse, permitting an adaptation to the needs of members. Networks permit a large scale of heterogeneity. Since an important part of new knowledge creating costs is covered from public budgetary resources, a special development is recorded at those networks which are exclusively or partly organized in the public sector or benefit by participation from the public sector.

Key-words: Knowledge, Knowledge Transfer, Knowledge Networks

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1. Introduction

The new coordinates of nowadays economy require knowledge and information sharing enhancement. The best form to do this is networking between all the participants in this filed, regardless they are private or public. The role and place of private and public entities differ, but they remain in a strong interdependency. Castells [4] considered that: individual innovators, counter-cultural communities, and business firms have done their job at inventing a new society and diffusing it around the world. The shaping and guiding of this society is, as has always been the case in other societies, in the hands of the public sector, regardless of ideological discourses hiding this reality.

Synthetizing the relevant literature, Argote et al. [3] noticed that knowledge transfer was analyzed from several points of view: via interfirm networks and personnel mobility, and between communities of practice via boundary spanners; in relation with the internalization of activities, whether by merger or vertical integration; under the effects of informal social structure and stratification, such as status and prestige, on knowledge transfer; search and information seeking, training, the “organizing moves” used to solve problems, and interruptions to team activities; external environment, including the intensity of competition, the composition of customer market segments, and the turbulence of the environment.

2. Economic Value of Knowledge

The economic value of knowledge is related to its quality of asset. This value is depending on numerous factors and is subject of revaluation. Price is established on the market, being closely linked by the supply, demand of other producers and perisability. Dynamic valuation is required because each moment could generate a new price which takes into account the parameters of the whole market.
Knowledge is generally seen as one of the most, if not the most, important asset in organizations that should be carefully managed [24]. Accounting standards are not very explicit regarding the recommended methods for valuing this asset items. Values included in balance sheets are mainly not representative due the lack of guidance in valuation process [22].

Knowledge is an intangible asset and has a privileged position on the market. It is one of the most interchangeable commodities: it can be “traded” for more knowledge; it can be traded for another form of intangible value, such as a favor or benefit; or it can be packaged and sold for profit as a tangible form of negotiable value [2].

The issue of trading value and transfer of intangible assets in general, and knowledge in particular, is reviewed in more detail in the context of multinational corporations due to fiscal impact of these operations [8]. From this point of view, the special character of knowledge make difficult to define precisely the place of production and the value. Lipsey [14] uses nominal location established after the tax domicile of the manufacturer. Each fiscal jurisdiction requires certain norms. Thus, economic value of knowledge is established separately in each case depending the advantages are looking for by the participants at the transaction and the restrictions imposed by the fiscal authorities.

3. Knowledge Networks

Knowledge is created in an individual basis or in a collective basis. Collectivist approach requires several individuals, the result being not strictly equal with the sum of individual performances. Felin and Hesterly [11] argued that knowledge based theory and research must begin with individuals rather than the collective level in understanding new value creation. He thinks that collectivist approaches which do not account for individual-level heterogeneity simply cannot rule out heterogeneous individuals as an alternative explanation in explaining new value and knowledge creation. Although we partly accept these conclusions, we think that performance is exponentially higher when more resources are put together.

The main role of knowledge networks is related to the transfer. A network allows a better sharing of newest findings in order to reuse in during new knowledge creation. Inkpen and Tsang [13] resumed the main conditions which could facilitate the knowledge transfer: structural conditions (network ties, network configuration and network stability), cognitive conditions (shared goals and shared culture) and relational conditions (trust).

Transfer throughout networks can be between organizations or between employees and their employers.
In the second approach, employers pay wages to their employees to benefit from their potential, including the knowledge stock accumulated till that moment. It is obvious that firm’s employees must share their knowledge [5]. An other vision of this issue is proposed by Maier et al. [15] which consider that knowledge networks are instruments in knowledge management alongside other numerous instruments in supporting organizations, persons and products (as presented in the figure below).

**Figure 2: Knowledge management instruments**

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<tr>
<th>Knowledge development/application maps</th>
<th>Communities/knowledge networks</th>
<th>Knowledge process reengineering</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge source map</td>
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<td></td>
</tr>
<tr>
<td>Competence management</td>
<td></td>
<td></td>
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<tr>
<td>Personal experience management</td>
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<td></td>
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<td></td>
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<tr>
<td></td>
<td>Knowledge structure map</td>
<td>Lessons learned</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Good/best practices</td>
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<td></td>
<td></td>
<td>Semantic content management</td>
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The necessity of creating and developing networks can be explained due the better results obtained in this organizational framework. Innovation is strongly influenced by the technology partnership formations in private sector [12]. Companies operating in an R&D/skill intensive sector enjoy between 2% and 5% higher productivity growth, approximately 40% of the direct impact of R&D [16]. Stuart [21] confirms the prevalent assumption that strategic alliances lead to superior performance: in both the patent rate and the sales growth rate analyses, the results demonstrated that the important determinants of the strength of the alliance-performance link are the attribute profiles of the firms that an organization is affiliated with— not the mere fact that it is affiliated.

Networks’ efficiency varies depending on several factors. The most important is the geographic one. Owen-Smith and Powell [18] pointed out geographic propinquity and the institutional characteristics of key members in a network. O’Shea et al. [17] reveal evidence of history dependence for successful technology transfer to occur although faculty quality, size and orientation of science and engineering funding and commercial capability were also found to be predictors of university spin-off activity.

To evaluate correctly the efficiency of networks, Ahuja [1] proposes a clear distinction between direct and indirect ties. Indirect ties serve as a mechanism for knowledge spillover and contribute positively and significantly to the innovation output. Direct ties are costly, but are providing high level resource-sharing and information-spillover benefits.

The power of a knowledge network consists from the accumulated knowledge and the possibilities of using it inside the network. Usually, knowledge teams are set up based on affinities and common interest points. But, project teams are temporary and therefore a lot of learning may be lost when they disband [20].

The parties which participate in building a knowledge network constitute a knowledge community. This includes communities of scientists, free software developers, “wiki” contributors and webbloggers [19].

Each knowledge network has a well-defined purpose. From this point of view, private and public networks differ. These purposes could be grouped in strategic and social [10]. In case of public networks, these should achieve a collective public purpose [7].

Public sector knowledge network is defined as the voluntary combination of interorganizational relationships, policies, information content, professional knowledge, processes, and technologies brought together to achieve a collective public purpose [9]. Public sector knowledge networks constitute communication channels that give participants access to others’ information and knowledge, with the expectation that better quality, more timely, and more complete information will be available to those who need it at the time that it is most useful [6]. A special type of public sector networks are spin-offs created by universities (mainly public), public laboratories and private firms.
4. Conclusions

Knowledge should be managed as a special intangible asset in any organization and should be rate at its real value, not necessary in monetary form. Creation of new knowledge helps firms to raise profits and consolidate their position on the market, while public bodies will be able to offer more and better socially valuable outputs.

Organizing in networks, knowledge can be transferred more easily, rapidly and beneficial. Knowledge transfer will contribute suppliers to optimize their results. This optimization will generate positive benefits in different ways: profits for private bodies and new knowledge for those bodies which are looking for collective purposes.

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6. Bibliography


[12]. Hagedoorn John and Jos Schakenraad (1994) The effect of strategic technology alliances on company performance, Strategic Management Journal vol. 15,


[19]. Roth Camille and Jean-Philippe Cointet (2010) Social and semantic coevolution in knowledge networks, Social Networks vol. 32