European Research Area

EUROPEAN POLICY BRIEF

SPINTAN – Policy Brief No. 3

SPINTAN smartpublicintangibles

Depreciation of organizational capital: the team value*

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SUMMARY

Objectives of the research

Organizational capital (OC) is important for economic performance. To determine the impact on the economic development, it is necessary to measure investment in OC just as well as depreciation of OC. Here we take closer look on the team value as part of the intangibles in the field of organisation capital.

Scientific approach / methodology

Based on linked employer employee data for Germany we analyse the unit specific quit rates that describe the loss of the capital value of a team in private and public production units.

New knowledge and/or European added value

The results indicate large differences in the depreciation rates between private and public sector. The depreciation rate of the team value as part of the organisational capital is especially low in the public administration and human health activities.

Key messages for policy-makers, businesses, trade unions and civil society actors

Looking at the role of OC, a policy of fast economic adaptation as suggested by some economists implies also a policy of high depreciation rates. A policy directed to high depreciation rates is also a policy of high costs. Necessary for an optimal performance of the economy is a long term structural policy, which minimises the inefficient turnover of high quality employees with the aim to reduce the costs of mobility.

* This Policy Brief is based on the SPINTAN Working Paper No. 3: Görzig, B. and M. Gornig (2016): 'The assessment of depreciation in the case of intangible assets', available on the SPINTAN website http://www.spintan.net/c/working-papers/.

Objectives of the research

Contrary to the multitude of measurement issues related to quantify the increase of intangible assets, here we concentrate on the decrease of the value of capital stock, the depreciation of intangibles in the public sector. In particular, we take closer look on the team value as part of the intangibles in the field of organisation capital. We assume a capital value for a team, which is determined by the knowledge on the behaviour of the other members of the team as part of the societal knowledge in public and private units. The interaction between the team members creates a capital value that develops from the match between employees working in teams. If such a team value exists, it is related to the employees who constitute the team. We understand that the capital value of a team is more than the sum of capital values of the individuals in the team. For instance, the team value of a soccer team is not the sum of the individual transfer values of the players. Moreover, the team value is part of the organisational power of a production unit, which resides in the people who constitute the team that is governing the unit in question. Our objective is to find empirical indicators for the loss of the capital value of a team.

Scientific approach / methodology

We follow the basic idea that a loss in the team value of a production unit will occur if members of the management team are leaving it. In this case, the capital value of the team will be reduced twofold. First, the societal knowledge of the quitting team member gets lost. Second, the societal knowledge of the other members of the team with respect to the leaving member becomes obsolete.

We calculate unit specific quit rates that describe the loss of the capital value of a team. Hence, these quit rates can be taken as proxies for the depreciation rate of the team value. In the simplest model, the quit rate is calculated as number of employees leaving the unit related to the stock of employees in the unit. In more demanding models we use wage weighted quit rates.

To measure the quite rates we use a comprehensive integrated micro data set on employment, investment, and output for about 1.6 million German establishments, with around 40 million employment cases per year. The database has originally been applied in the INNODRIVE EU-project to assess organisational capital for the market sector. Here, the analysis is extended to cover also the units of the SPINTAN related industries, which consist to a great extent of public units. Its panel structure of our

data allows that for every unit the exact entry and exit days for each individual employee is available. The main source for the database is a linked employer employee data set (LEED) derived from the German social insurance system (SIS).

The management employees (basic staff) as defined in the INNODRIVE project are taken as a starting definition for the team. We define additional constellations of the management team. Only those „basic“ staff members that earn an income per day above the average daily income (High wage staff) and only those „basic“ staff members that work for more than one year in an establishment (High tenure staff) are considered. Assuming, that employees with higher income contribute more to the team value we also investigated whether the results change if the team is defined either by employment or by income shares.

New knowledge and European added value

Calculations are made for all 300 thousand units that are covered by the SPINTAN related industries (industries with high public control), applying the same methodology as for the 1.5 mill. units of the Non-SPINTAN related industries. We assume that the share of public sector units is above average in the SPINTAN related industries, thus the results can be seen as a proxy for the public sector.

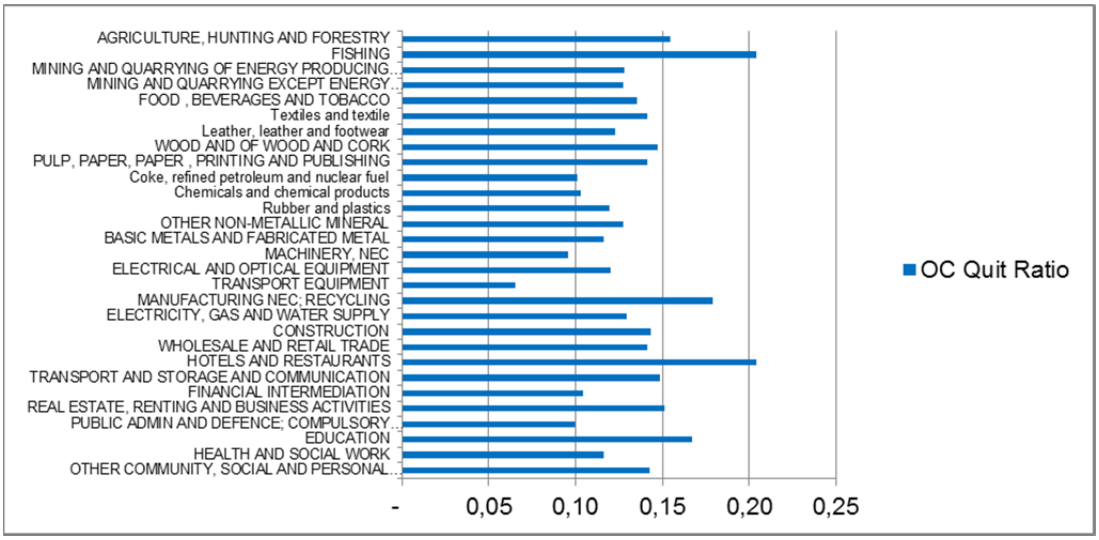
The average employment number in the units in the SPINTAN related industries is 19, which is more than 50% higher than in the Non-SPINTAN related industries. The share of management employees on the other hand is with 8% only 2/3 of the value in the Non-SPINTAN related industries.

In the average, the (employment-) weighted quit rate of the team value for the units of the SPINTAN related industries results in 13%. This is the same magnitude as for the Non-SPINTAN related industries. With 18%, the non-weighted quit rate is higher since in general smaller firms have higher quit rates.

Figure 1 displays the quit rates by all Nace 1 industries, including also non-public units. Significant differences between the industries can be observed. High quit rates in hotel and restaurants and low rates in transport equipment can be identified. In the SPINTAN related industries the quit ratio reach between 10% (Public administration) und 17% (Education).

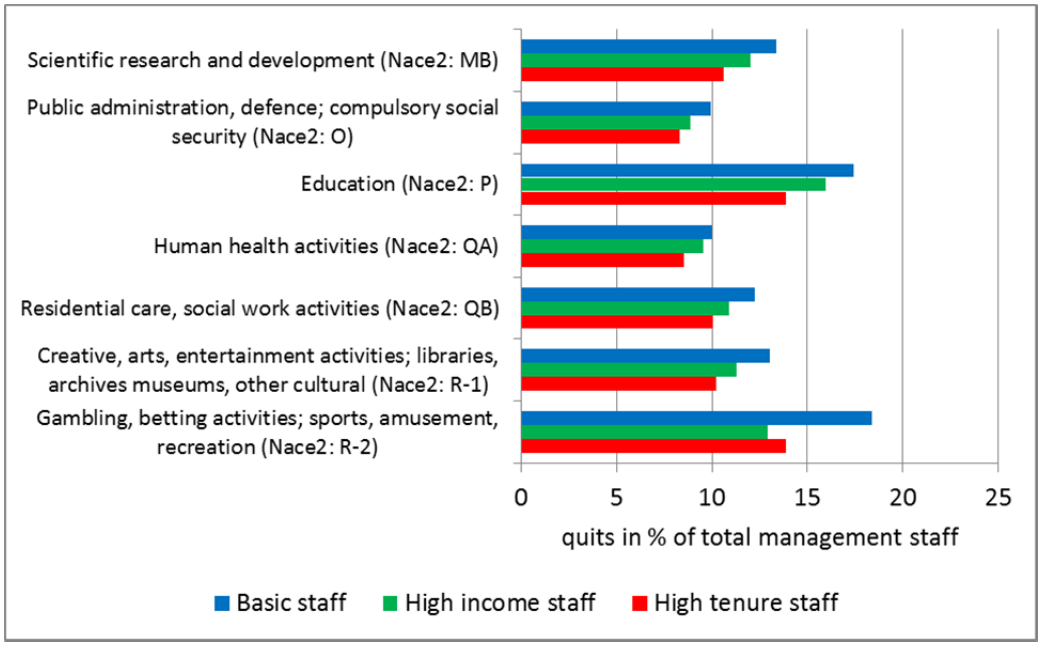
The impact from alternative team definitions on the average quit rate is rather small (see figure 2). Defining the management staff to consist only by those employees who have an above average wage rate will reduce the quit rate from 13% to 12%. The same

Figure 1. Quit rates for Nace 1 industries



happens if the employees are weighted with their income. Including only those employees in the management team, who have stayed more than a year in the team results in a stronger reduction of the quit ratio (10%) in the average. There are distinct differences in the results if we look at the SPINTAN related industries. Both alternative team definitions result in a strong effect in the industry of gambling, sports, etc., an industry where one can expect a higher share of private sector units

Figure 2: Quit rates for high tenure and high income staff



Key messages for policy-makers, businesses, trade unions and civil society actors

If we want to transfer the experience collected for tangible assets on intangible assets we have to consider that according to most researchers many types of intangible assets are much more unit specific than tangible assets are assumed to be. From this, we would expect an even bigger variation of the service lives for intangible assets, because of the unit-specific influences. Therefore, the assumed service lives for intangible assets can only be understood as a mean value of the factual values. Still, the results found in this study let hypnotise that depreciation rates of organisational capital might be lower than currently assumed.

Depreciation is costs. Looking at the role of OC, a policy of fast economic adaptation as suggested by some economists implies also a policy of high depreciation rates. A policy directed to high depreciation rates is also a policy of high costs. Necessary is a long term structural policy which minimises the inefficient exchange of high quality employees with the aim to reduce the costs of mobility.

SPINTAN – Smart public intangibles

Coordinator	Instituto Valenciano de Investigaciones Económicas (Ivie), Spain
Consortium	Instituto Valenciano de Investigaciones Económicas (Ivie), Spain National Institute of Economic and Social Research (NIESR), United Kingdom LUISS Libera Universita Internazionale Degli Studi Sociali Guido Carli (LUISS), Italy Istituto nazionale di statistica (Istat), Italy Imperial College of Science, Technology and Medicine, (IC),United Kingdom The Conference Board Europe (TCBE), Belgium Organisation for Economic Co-operation and Development (OECD), France Zentrum für Europäische Wirtschaftsforschung (ZEW), Germany Deutsches Institut für Wirtschaftsforschung (DIW), Germany Wiener Institut für Interntionale Wirtschaftsvergleiche (wiiw), Austria Forum för reformer och entreprenörskap, (FORES), Sweden Kopint-tarki Konjunkturakutato Intezet (Kopint), Hungary
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For more information	info@spintan.net or matilde.mas@ivie.es