

**SOCIAL INNOVATIONS IN WORK ORGANIZING:
TELEWORK IN SLOVAKIA****SOCIÁLNE INOVÁCIE V ORGANIZÁCIÍ PRÁCE: TELEWORK NA
SLOVENSKU****MÁRIA MURRAY SVIDROŇOVÁ¹****BEÁTA MIKUŠOVÁ MERIČKOVÁ¹****JAN STEJSKAL²**

¹Katedra verejnej ekonomiky a reg. rozvoja ¹Dep. of Public Economics and Reg. Development
Ekonomická fakulta Faculty of Economics
Univerzita Mateja Bela v Banskej Bystrici Matej Bel University in Banska Bystrica
✉ Tajovského 10, 974 01 Banská Bystrica, Slovakia
E-mail: maria.murraysvidronova@umb.sk, beata.mikusovamerickova@umb.sk

²Ústav ekonomických vied ²Institute of Economic Sciences
Fakulta ekonomicko-správni Faculty of Economics and Administration,
Univerzita Pardubice University of Pardubice
✉ Studentská 95, 532 10 Pardubice, Czech Republic
E-mail: jan.stejskal@upce.cz

Annotation

The current knowledge economy is being further developed; main driving force is so-called information society. This society is characterized by the penetration of new information and communication technologies at all levels of the economy and social life. This allows introducing innovative forms of organizing work that enhance the performance and flexibility of both, employees and employers. Such forms include also telework which has the potential to be a tool for employment growth and ensuring the employability and adaptability of workers. Flexibility of telework is not only in eliminating commuting to the workplace but also in the possibility of integrating into the labour market risk groups such as the mentally challenged, mothers on and/or after maternity leave, residents of peripheral parts of cities or rural areas with high rates of unemployment etc. In this paper we analyse the use of telework in public sector in Slovakia. Methods are based on the methodology of international project Learning from Innovation in Public Sector Environments (LIPSE), we use mainly historical-logic and content-causal methods, the questionnaire and the basics of descriptive statistics. The main findings concern the rate of use of telework in municipalities in Slovakia is not very widespread, the main barriers are legislation, bureaucratic culture of public sector and individual scepticism and resistance shown by employees towards telework.

Key words

social innovation, telework, public sector, social inclusion

Anotace

V súčasnosti je ekonomika založená na poznatkoch, ktoré sú hybnou silou jej ďalšieho rozvoja. Pre tzv. informačnú spoločnosť je typické prenikanie nových informačných a komunikačných technológií do všetkých úrovní ekonomiky a spoločenského života. To umožňuje zavádzať inovatívne formy organizácie práce, ktoré zvyšujú výkonnosť a flexibilitu zamestnancov ako aj zamestnávateľov. Medzi takéto formy patrí aj telepráca, ktorý má potenciál byť nástrojom pre rast zamestnanosti a zabezpečenie prácenschopnosti a adaptability pracovníkov. Flexibilita telepráce okrem toho, že odpadá dochádzanie na pracovisko, spočíva aj v možnosti začleniť do pracovného procesu rizikové skupiny na

trhu práce ako napríklad zdravotne znevýhodnených, matky na/po materskej dovolenke, obyvateľov okrajových častí miest, resp. obyvateľov vidieka s vysokou mierou nezamestnanosti a pod. V príspevku analyzujeme využitie telepráce vo verejnom sektore v podmienkach Slovenska. Metódy vychádzajú z metodiky medzinárodného projektu Learning from Innovation in Public Sector Environments (LIPSE), využívame najmä historicko-logickú a obsahovo-kauzálnu metódu, dotazník a základy deskriptívnej štatistiky. Hlavným zistením je, že miera využívania telepráce v mestách a obciach Slovenskej republiky nie je veľmi rozšírená, za najvýraznejšie prekážky možno považovať legislatívu, byrokratické nastavenie verejného sektora a skepticizmus zamestnancov voči telepráci.

Klíčová slova

sociálna inovácia, telepráca, verejný sektor, sociálna inklúzia

JEL classification: H11, H83, J45

Introduction

Since the raise of the New Public Management (NPM) paradigm, growing attention has been paid to public sector innovation, both as a political priority and as a fully-fledged field of study. A vast and well-established literature exists with respect to the determinants and the adoption of social innovation in the public sector (Nemec, J, Spacek, D., Suwaj, P., 2012, Nemec & Svidroňová, 2015). Public sector innovation is defined by Osborne and Brown (2005) as the introduction of new elements into a public service – in the form of new knowledge, a new organization, and/or new management or processual skills, which represent discontinuity with the past. Yet, little attention is paid to the ICT-driven social innovations within the public sector, i.e. those innovations characterized by a social content and that are simultaneously driven by ICT, and in particular those ones that assist human executed process and thus have an organizational impact. ICT-driven innovation in the public sector is defined by the European Union as the use of Information and Communication Technologies (ICT) for the creation and implementation of new processes, products, services and methods of delivery which result in significant improvements in the efficiency, effectiveness and quality of public services as well as the wider operations of the public sector. It also refers to the ability of the public sector, as appropriate to its mandate and resources, to become more innovative in the way it operates and to itself support innovation in society. One such a type of ICT social innovations refers to new media technologies that are focused on the creation of new ways of working (so-called telework), which provide civil servants with instruments to work at home, while making use of the ICT and data infrastructure of their organization. Especially the penetration of new social media offers new possibilities to public employees to co-create a working environment that is compatible with their work/life balance. This is also important for the attractiveness of public sector as an employer.

1. Telework and influential factors of its adoption and upscaling

Telework can be described as a form of organizing and/or performing work, using information technology, in the context of an employment contract/relationship, where work, which could also be performed at the employer's premises, is carried out away from those premises on a regular basis (EFAT, 2002). Telework seeks to increase benefits for the employers - higher productivity, lower staff turnover, growth of employees' work ethics and responsibility for their job performance, greater flexibility of the employer as an organization in response to consumer demands and to changes in the market situation or in the industry, computerisation of the organization (Sullivan & Lewis, 1998, Lonti & Verma 2003). As for the employees telework can be seen as an opportunity to help disadvantaged groups such as disabled citizens or those who take care of other household members (e.g. parents on maternity leave); or residents of regions with a high unemployment rate (rural areas, suburbs) in order to gainfully find a work on the labour market (Hamilton, 2002). However, these opportunities are more commonly used in third sector as in public sector (Nemec, 2008, Kozuň – Cieślak, 2013, Vaceková & Škarabelová, 2013).

In Slovakia, the telework was implemented by an amendment of the Labour Code (Act no. 348/2007 of Statutes valid since 1st September 2007). This amendment was done in the effort to harmonise the Slovak labour legislation with the EU legislation, which brought some new elements into the new version of the Labour Code including home work and telework. The use of telework is supported in several documents and strategies, e.g. The National Employment Strategy of the Slovak Republic or the National Reform Programme of the Slovak Republic (especially the fields of Employment and social inclusion). At the local level, there are also initiatives of various NGOs who try to promote telework and increase its popularity among the employers and employees. Still, the method of telework is used in Slovakia by 3.7% of workers (Inštitút zamestnanosti, 2013), i.e. less than 2% of the EU average. Telework in Slovakia is governed in the Labour Code (§ 52) as follows: the employment relationship of an employee who performs work for an employer at home or at another agreed place, pursuant to conditions agreed in the employment contract, using information technology (hereinafter referred to as "telework") within the working time arranged by himself/herself, shall be governed by this Act, with the following deviations:

- a. provisions on the arrangement of determined weekly working time, continuous daily rest, continuous weekly rest and on stoppage shall not apply to such employee,
- b. in cases of substantive personal obstacles to work, the employee shall not be entitled to wage compensation from the employer, except in case of death of a family member,
- c. such employee shall not be entitled to wage for overtime work, to wage surcharge for a period of work on a public holiday, to wage surcharge for the period of night work and to wage compensation for work in constrained working environments, unless the employee agrees otherwise with the employer.

The Labour Code also deals with the measures on providing hardware and software necessary for the performance of telework by employer, protection for data processed and used in telework or prevention from isolation of teleworkers from other employees.

The main factors influencing the telework use can be divided into 2 groups: factors of outer and factors of inner context. In the analysis of the outer context IT data security emerge (Hamilton, 2002). Connected to this, the study of Ungurean (2007) pinpoints that technological factors like telephone net capacity, connection and transfer speed, telecom liberalization and the ease of use may be conducive to telework innovations. Another determinant has been identified in the perceived external pressure exerted by the public opinion towards higher levels of quality and quantity of services which, in turn, may result in more flexible forms of work (Lonti and Verma 2003). From the society point of view, on the long run it will see reduced traffic congestion and emissions, emergency preparedness (i.e. pandemic response) and reduced infrastructure impact in urban areas. With regard to the inner context, the Georgetown University Law Center (2009) distinguishes among three actors: the company, the employees and the society. For the company, telework is a tool for recruiting and retaining talented employees and to increase productivity. Through this innovation, the business can ensure continuity of business operations during an emergency and decreasing costs for office rent. The employees see benefit from a better work/life balance, improved morale, and reduced commuting and transportation costs. Additional benefit is for example the autonomy and flexibility over work schedule (Hamilton, 2002). Yet, the barriers to the successful upscaling and adoption of this ICT innovation are numerous, e.g. Hamilton (2002) reveals technological barriers such system performance and teleworkers' access to equipment, services and technical support. In addition, teleworkers receive little or no training for telework. Since telework imply a significant reshaping of organizational settings, the lack of formal job definition and the importance of the group are mentioned as barriers to its adoption (Mokhtarian & Sato 1994). There are also economic barriers as funding issues and the fact that successful program requires regular and frequent telework in order to consolidate office space and reduce costs. If an agency uses telework only sporadically, the agency cannot reduce its office expenses reliably (Georgetown University Law Center, 2009). Also, human capital can play a relevant role. Ungurean (2007) as possible obstacles related to the company identifies the company culture. In the upscaling of this innovation there can be difficulties in foster team synergy, difficulty in employee performance monitoring and possible negative effects on workplace social network (Hamilton, 2002). The literature review revealed several factors with respect to the types of adopters (i.e. pioneers, followers, late adopters, laggards). Mulgan & Albury (2003) identify that with respect to earlier adopters, the specific (positive) determinants emerged are: (1) city size; (2) economic development capacity; (3) the

manager-council form of government; (4) involvement with business partners; (5) professionalism of public officials; (6) use of computer IT. With respect to late adopters, the main influential factors are: (1) the mayor-council form of government; (2) isomorphism. Definitions of each type of adopter provides Rogers (2003):

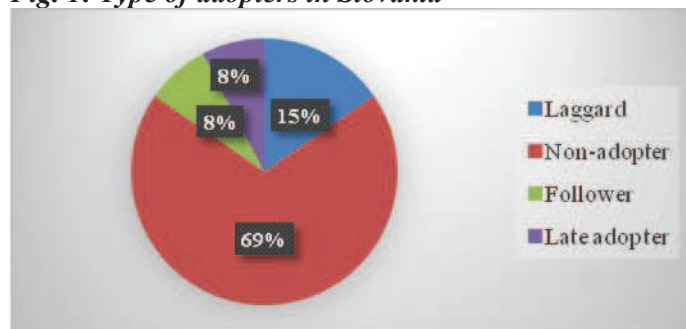
- Pioneers are characterized by the willingness to take risks, the abundance of financial liquidity and their close contacts with similar organizations. A high risk-tolerance is the basis for accepting the possible failure, whose impacts would be absorbed by the high amounts of resources. The pioneer has the critical role of introducing new ideas into the social system.
- Followers have a remarkable degree of opinion leadership among adopters: they are change-agents with relevant financial liquidity and contacts, and they are perceived as role models. However, they adopt innovation after a varying degree of time in comparison with pioneers, because of their greater caution. Sometimes they adopt innovation for economic necessity and/or network pressures.
- Late adopters adopt an innovation after the majority of their peers. They perceive innovation with great caution and even scepticism. They have scarce financial resources, few contacts with similar organizations and poor opinion leadership.
- Laggards are the last to adopt innovation: they typically have an aversion to risk, to change-agents and to change in general. They are focused on traditions and the past, and they lack of both financial resources and opinion leadership. They have virtually no contacts with their peers.

2. Goal and methodology

The goal of this paper is to analyse the use of telework in municipalities with a population over 40,000 in Slovakia altogether with drivers and barriers that account for the telework adoption in these public sector organizations. The methodology of study is fully consistent to the project methodology of the research supported by the 7th Framework Programme of the European Union under the contract No 320090 LIPSE. We admit the fact, that the research methodology can affect the research impacts (Nemec, Merickova & Fantova Sumpikova, 2011). We used historical-logic and content-causal methods for literature review and identification of the factors influencing telework adoption and use as an ICT-driven innovation. To analyse the use of telework and drivers and barriers that account for its adoption in Slovak municipalities we used a quantitative method of questionnaire and basic descriptive statistics. The sample consisted of 13 municipalities with a population over 40.000 inhabitants, out of which 8 municipalities were head of region (regional level was chosen based on work of Petříková, Vaňová & Borseková, 2012)

3. Results

After we clustered the municipalities according to geographical area we can state that the North has one follower (1 municipality, 50%). One municipality in the West is a late adopter (17%), one is a laggard (17%) and 4 municipalities are non-adopters (66%). In the East there are three municipalities, two are non-adopters (67%) and one is a laggard (33%). The south with one region is a non-adopter (100%). Most of the municipalities are non-adopters, there is no pioneer in telework adoption in Slovakia. Percentage values are in Figure 1. In average the use of telework at the local level is at 30.8%. Out of 13 local HR managers 4 are favourable to adoption of telework, two HR managers chose "No", i.e. they are not favourable to adoption of telework and seven HR managers did not respond.

Fig. 1: Type of adopters in Slovakia

Source: authors

We tried to find out any connections between these findings with the specific context of Slovakia. Bratislava as the wealthiest region with lowest unemployment rate is a non-adopter of telework, i.e. the need for innovative and flexible way for work organization is not necessary. The West region which contains three Higher Territorial Units (Trenčiansky, Trnavský and Nitriansky) and in total 5 municipalities as respondents also has higher GDP per capita than the other NUTS2 region, but it has only 40% adoption rate of telework (1 laggard and 1 late adopter, other three municipalities are non-adopters). The Middle region with two Higher Territorial Units (Žilinský and Banskobystrický) and 4 respondents, is the largest region from the geographical point of view and has 25% rate of telework adoption (1 follower, other three municipalities are non-adopters). The East region with two Higher Territorial Units (Košický and Prešovský) has one late adopter (municipality of Prešov), the other two municipalities are non-adopters. Municipalities who adopted telework are of size between 56,000 and 91,000 inhabitants. None of the municipalities is a pioneer, but the follower has population of 56,526 and the late adopter has 78,351 inhabitants which might mean that municipalities of this size are optimal for telework adoption and creating job opportunities for risk groups.

3.1 Descriptive statistics on determinants and barriers of the outer context

Based on the average rating (tab. 1), the strongest driver is the citizens' familiarity with ICTs (3.46 out of 5 points). Some level of agreement is also with factors of territorial ICT infrastructures (3.15), the improvements of environmental conditions that telework can ensure, the citizens' need of achieving a better balance between their personal and professional life and the degree of autonomy in governing organizational processes (all with the average rating of 3.08). For the barriers, there was only one factor to be rated and that is legislation (Law frustrates the adoption of telework in public sector organizations because of its regulatory restrictions). It was the only one factor rated but on the other hand it had the highest average agreement from the respondents (3.69). Generally, the level of agreement with the determinants of outer context is rather low, only 2.93 in average. One might say this means that the respondents disagree with the statements on determinants, i.e. they do not perceive there are much drivers for telework adoption in Slovakia and the barrier seen in the legislation is more important.

Tab. 1: Average rating of determinants and barriers of the outer context

The imitation of other telework experiences drives its adoption by public sector organizations.	2.92
Law frustrates the adoption of telework in public sector organizations because of its regulatory restrictions (e.g. limits established by the privacy law in sharing personal data).	3.69
The degree of autonomy in governing organizational processes facilitates the adoption of telework in public sector organizations.	3.08
Political vision for telework facilitates its adoption in public sector organizations.	2.31
The consensual relationship between public sector organizations and their external stakeholders, such as trade unions, facilitates the adoption of telework.	2.54
The citizens' need of achieving a better balance between their personal and professional life drives public sector organizations to adopt telework.	3.08

The improvements of environmental conditions that telework can ensure (e.g. lower CO2 emissions) drive its adoption in public sector organizations.	3.08
Local geo-morphological contexts (e.g. relevant distances between urban and rural areas) are a driver of telework adoption in public sector organizations.	2.77
Territorial ICT infrastructures, such as the broadband connection, facilitate the adoption of telework in public sector organizations.	3.15
Citizens' familiarity with ICTs facilitates the adoption of telework in public sector organizations.	3.46

Source: authors

3.2 Descriptive statistics on determinants and barriers of the inner context

The highest average rating from determinants of the inner context that facilitates the adoption of telework has the factor of possibility of managing in-house the ICT facilities that support telework (average score of 3.46). It is closely followed with the items “The cost savings that telework can ensure drive its adoption in public sector organizations” and “The possibility of experimenting the use of telework through a pilot project”, which both scored 3.38 points out of 5. Some level of agreement (3.23) is also with factors of top managers' support for telework and coaching, mentoring and other training activities. Slightly less agreement has determinant of employees' technological skills (3.15). There were two barriers for telework adoption explored and respondents agree that bureaucratic culture of public sector organizations is a barrier to the adoption of telework (in average 3.46). The second barrier, individual scepticism and resistance shown by employees towards telework, scored 2.69 in average, which indicated that respondents rather disagree with this item (tab. 2).

Tab. 2: Average rating of determinants and barriers of the inner context

The increased economic efficiency that telework can ensure drives its adoption in public sector organizations.	3.08
The cost savings that telework can ensure drive its adoption in public sector organizations.	3.38
Employees' bottom-up initiatives for telework drive its adoption in public sector organizations.	2.69
The top managers' support for telework facilitates its adoption in public sector organizations.	3.23
Coaching, mentoring and other training activities facilitate the adoption of telework in public sector organizations.	3.23
The possibility of experimenting the use of telework through a pilot project facilitates its adoption in public sector organizations.	3.38
The bureaucratic culture of public sector organizations is a barrier to the adoption of telework (e.g. focus on processes, culture of physical presence).	3.46
The employees' autonomy in achieving the expected results facilitates the adoption of telework in public sector organizations.	2.77
Employees' technological skills facilitate the adoption of telework in public sector organizations.	3.15
The employees' perception of relative advantage and benefit in using telework is a driver of its adoption in public sector organizations.	3.08
Individual scepticism and resistance shown by employees towards telework are a barrier to its adoption in public sector organizations.	2.69
Personal characteristics of employees (e.g. their age and educational qualifications) facilitate the adoption of telework in public sector organizations.	3.08
The possibility of managing in-house the ICT facilities that support telework (e.g. software for group chat and video conferences) facilitate its adoption in public sector organization.	3.46

Source: authors

Conclusion

Slovakia legalised telework as a possible work contract in the Labour Code (§ 52) in 2007. Since then it has spread in several fields like the IT (programmers, technicians), as well as marketing consultants, purchasing agents, brokers, journalists, financial analysts, accountants, but that is mostly in private sector. In public sector telework at local level in Slovakia is not very widespread. As our research has shown, among 13 biggest municipalities, only 4 of them implemented telework, which is less than 1/3 of the sample. Nevertheless, the Labour Code give the possibility to employ teleworkers also in municipalities and therefore we would recommend to the municipalities as employers to develop internal guidelines on conditions and rules for teleworking employees, especially concerning the issues relating to working hours, overtimes and other allowance for work during holidays and nights to ensure the teleworkers will have the same conditions as regular employees and thus telework might become more motivational for employees and they might start demanding more teleworking positions, i.e. they might start employees' bottom-up initiatives for telework in the public sector organisations at the local level. Based on these results, we would recommend general steps such as increase citizens' education in ICT use in order to increase the familiarity of citizens with ICT. Another step would be to strengthen territorial ICT infrastructure, to secure broadband connection. Telework is probably little known and therefore an information campaign could promote its benefits, e.g. that telework can improve environmental conditions (lower CO₂ emission due to less traffic) or that it can help to achieve better work/life balance. We believe that the autonomy in governing organizational processes at the local level is sufficient and should remain like this, as this factor was quite influential in telework adoption.

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