

**Microeconomics**

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**USING THE NEW FORMS
OF LABOUR ORGANIZATION TO INCREASE
EMPLOYMENT IN UKRAINE****Abstract**

In this article, the author analyses a complex of questions related to changes in the forms of labour organization preconditioned by the large-scale implementation of information and communication technologies. The author determines major tendencies in telework development and defines the most relevant problems in this sphere. Underscoring the importance of tele-employment at the labour markets of foreign countries, the author reviews the possibilities of their usage in Ukraine and analyses the consequences of using distant work giving consideration for their influence on different spheres of the country's economic activity.

Key words:

Flexible employment, teleemployment, telework, innovations.

JEL: J01; J21.

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Setting the Problem

The employment sphere undergoes substantial changes under the influence of the newest, especially information and telecommunication, technologies that enable the development of the new forms of interaction on the labour market, the dynamic modification of the innovative forms of employment, and the qualitative change in the methods of work, its geography and techniques of realization. Such a rapid development of information technologies brought forth the emergence of the new forms of flexible employment.

The new forms of employment – implemented where they take proper account of the real social needs of employees – noticeably increase productivity. In the branches where technology allows the labour process to be reorganized, a more efficient use of equipment and increased product quality can be observed. The production costs drop considerably, thus giving a chance to hire new employees, benefit from increased employee qualifications and reduce the staff of lower management (by 30–50%).

The urgency of research in this field is also stressed by the fact that developed countries have already been widely introducing the newest forms of employment to their labour markets, and we could use their experience to solve a set of socio-economic problems in Ukraine, in particular the problems of unemployment, optimization of labour use, etc.

Studies and Publications on the Problem

Quite a number of foreign scientists, for example N. T. Vyshnevskaya, H. M. Kostyunyna, A. A. Shlihter, dedicated their works to research of the new forms of employment. The detailed studies of these issues were performed in the frames of international organizations, in particular International Telework Association Council, European Telework Development Initiative, etc. In the Ukrainian literature, the attention paid to the new forms of employment is insufficient; however, we should note that separate issues of flexible employment were discussed in the works of A. Y. Achkasova, V. S. Vasylichenko and L. S. Lysohor.

The objective of this article is to discover the possibilities of using the newest forms of employment at the Ukrainian labour market taking into account the experience of other countries and to analyse their impact on the socio-economic development of the country.

Presentation of the Main Material

Most often the new forms of employment are being implemented in clerical and financial establishments, although they are also spreading to industrial enterprises. According to the data available, this system of work is used by nearly 17% of workers and employees in Germany, nearly 33% of workers in Switzerland and more than one million of workers in Great Britain and France [1]. According to the programmes of flexible working time, a working day is divided into two parts: the principal time, when all workers should be at their workplaces, and the time intervals, when they can set their working hours by themselves as long as they perform the required number of working hours. The system of flexible employment gives workers and employees an opportunity to plan their working day more effectively and to realize necessary business contacts. According to research results, the implementation of flexible employment at the technical centre of General Foods (American food producing company) increased labour effectiveness of the 3/4 of workers. The success of this experiment was also supported by the fact that 95% of workers were satisfied with it, 99% expressed their approval of the further development of the system, and 92% of managers also positively assessed the experiment [1]. In many US corporations, another version of innovation in this sphere is used – a 9 hours per day, 4 days per week working schedule that brought significant benefits to businesspeople.

Especially significant become the changes in the forms of labour organization connected with the implementation of information and communication technologies (ICT). One of the most socially meaningful innovations in this sphere is the work at a distance by means of using new technologies. This form of work is termed differently – virtual offices, virtual networks, «telecommuting job» – the term widely spread in the USA, or «telework» – in Europe.

There currently exist many interpretations of telework offered mostly by foreign authors. This term was initially introduced to academic language in 1972 by Jack Nilles, who was the main populariser of this concept in the USA. Later in 1987, the phenomenon of telework was investigated by the futurist Francis Kinsman in his book «The Telecommuters».

One of the largest organizations in the field of telework research is the European Telework Development Initiative, which asserts that telework occurs when information and communication technologies are applied to enable work to be done at a distance from the place where the work results are needed or where the work would conventionally have been done [12].

Telework includes:

- 1) Home-based telework, when a full-time employee or contractor works at home instead of travelling to employer's office. We can conditionally divide such workers into 4 groups:

- Hired teleworkers (telecommuters), when labour agreement defines home as a permanent working place together with (or in stead of) the employer's office;
 - Self-employed or freelancers – workers who prefer to work at home, but can work in office when needed;
 - Informal (or illegal) teleworkers, who are hired by managers without agreement of top management or even in defiance of its interdiction. Thus in Great Britain, for example, according to research of the European Initiative on Telework Development, informal telework is more popular than formal programmes [12];
 - Teleemployed entrepreneurs – businesspeople who have just launched their business and work at home to avoid office expenses. At the present, ever more businesspeople decline the practice of formal office and develop their business by means of electronic networks and with the help of workers who work during the hours most convenient for them.
- 2) Mobile telework, when executives, experts or service staff use ICT to establish long-term relationship with customers and to deliver «on the road» the services that previously would have involved office-based staff or visits to the company offices. The so called "hot-desking" has recently started to spread as a variety of mobile telework. The idea behind it consists in that a worker – instead of working at his «own» desk – uses a free desk (working space) for the time he needs it. Each working place is equipped with a standard office system – PC and telephone. Taking into consideration the fact that most working spaces in traditional offices are used during only 20% of the working day, the savings on office expenses could be significant. For example, one of IBM's offices in New York has only 200 desks for 800 workers.
 - 3) Telecentres, which give workers an opportunity to use the office in vicinity of their homes in order to avoid transport expenditures and other inconveniences. This is a deviation from the practice when all business-functions are located in one office. Modern ICT enable locating different functional departments of one company in different cities or countries. The worker works in that office which is most convenient to reach. A company can have its own telecenters or lease office space in big corporate telecenters.
 - 4) Telecottages, which give workers access to skills development, high performance ICTs and networking, as well as the communication opportunities, that might be missed by a home-based worker. Telecottages are a sort of telecenters; they appeared in Switzerland as a tool for implementation of technologies and skills required for workers in rural areas. They later become wide-spread in Great Britain, – where nearly 200 telecottages existed, – France and Ireland. Telecottages

play an important role in reviving villages and solving their employment problems; in Ukraine, they could be used to support rural inhabitants in their search for telework or regular work both in local companies and in other regions. The idea of telecottages was further developed in Iceland, Wales and the USA, where televillages were created as inhabited localities, in which all houses were connected with each other through a single local telenetwork.

- 5) Functional relocation, when business functions, which have been earlier located close to the customer, are concentrated and delivered at a distance. An example can be the creation of «front office» and «back office». The "back office" provides access to work that have been previously done «on site» and now can be done anywhere in the world by means of remote access to systems. There exists also a reverse process: for example, Dell relocated its customer service offices from different European countries to several big centres in Ireland and Great Britain.

Certainly, telework can not be acceptable for workers of all professions in Ukraine. Telework can be applicable to such «new» professions as web-designers, programmers, as well as such «old» professions as journalists, interpreters, accountants. The system of telework can be implemented in the companies delivering financial, insurance, legal, consulting services, transportation companies, etc. The work away from office provides an opportunity to reduce expenses and save on time in transport; it allows workers to effectively use those time intervals when they work most productively.

Telework is most widely spread in Europe and the USA, but it is also sweepingly developing in Canada, New Zealand, and other countries. It is very hard to calculate the number of teleworkers in the world because a significant part of this sphere lies within the shadow economy. Additional complications for this analysis are brought in by the fact that European and American companies use several approaches to calculation of the number of teleworkers in their reports, in particular they calculate: 1) the number of workers who work at least one day per week at home (IVC defines them as telecommuters) [5]; 2) the number of workers who work at least one day per month at home; 3) the number of workers who work no less than 20% of the working time neither at home nor at office (mobile workers); 4) the number of workers who work full working week at home.

Nevertheless, the comparison of multiple studies in this sphere gives us the opportunity to estimate major tendencies in the development of the market for telework. Gartner Inc., the company dealing with technology development, informs that the number of the employed who work at least one day per month at home was 82.5 ml in the late 2005, which was twice more than in 2000 [2]. According to estimates of European experts, there are more than 60 ml people in Europe today involved in remote work, which equals nearly 8.2% of total employed population. According to forecasts, there will be almost 100 ml teleworkers in the European Union by 2010 [10]. Among the European countries, the

largest share of teleemployed is in Great Britain – it made 921 thousand persons in 1997 (4% of total employed population) and already 4 million persons – in 2006 (15%), 62% of them are self-employed [6]. According to calculations of the Census Bureau, in the USA 4.9 million persons worked at home in 2003, whereas in 2003 this number reached already 12 million Americans (which is 41% more than 2003), of which 2.5 million persons received tax privileges for working at home [9]. The International Telecommunications Advisory Committee (ITAC) informs that at least 23.5 million of employed Americans work at least one day a month at home and predicts that this number will reach 40 million persons by 2010 [5]. More than 50% of American companies have telework development programmes and more than 75% of them plan to expand them. In Canada, the number of workers who work at least one day a month at home in 2005 was 1.39 million persons against 0.77 million persons in 1998.

As noted before, the varying approaches to definition and estimation of teleemployed in different countries complicate their comparison. A scientific institution that tried to carry out such an analysis was the German Economic Institute, which compared the number of teleworkers and their share in total employed population of the European countries, USA and Canada (Table 1).

As seen from the table, the largest share of teleworkers is found in the country with the most flexible labour market – Great Britain, whereas the smallest shares of teleworkers are in the countries with high levels of state control – Germany and France.

Apart from increase in the number of teleworkers, we should also mark an increase in the number of organizations offering their workers different types of flexible employed. This is proven by the data in Table 2.

Table 1.

The share of teleemployed in the total employed population

Position	Country	Number of teleemployed, ml persons	Share in total employed population, %
1.	Great Britain	4	15
2.	Finland	0.3	13.6
3.	Norway	0.05	11.4
4.	Switzerland	0.4	10.3
5.	USA	11	8.5
6.	Canada	1	7.1
7.	Ireland	0.04	2.9
8.	Germany	0.8	2.4
9.	France	0.3	1.3

Source: www.ivc.ca/studies/European.html.

Table 2.

Growth dynamics of the companies offering flexible employment

Companies that offer:	1996 % of total	2006 % of total
Flexible time	32	71
Telecommuting	9	50
Compressed working week	16	44
Part-time employment (less than 1000 hours per year)	50	86
Sick leave payment	42	54
Benefits and insurance for workers and their families, official and civil	6	35
Compensation of study fees		88
Employment and job search and placement services		55

Source: www.ivc.ca/studies/usa.html.

It should be noted that the level of telecommunications development and the availability of virtual offices and teleemployed directly corresponds to living standards. Thus, the list of countries having the highest living standards almost fully corresponds with the list of countries leading in the communications sphere. They include Australia, Belgium, Great Britain, Canada, the Netherlands, New Zealand, the Scandinavian countries, France, Japan, and the USA.

The situation with telework in Ukraine can hardly be assessed as it is almost completely a matter of shadow economy. When in the USA, Canada and the EU large-scale telework studies are realized almost every year to assess its impact on the countries' economies at both state and non-governmental levels, in Ukraine this research is non-existent. An approximate number of teleworkers acknowledged by experts today is balancing between 0.5–0.8% of all the Ukrainians employed [10]. To develop in Ukraine, telework needs state and employer support, which today remains insignificant. During the recent times, certain changes have started to take place in the social package provided to employees, which includes social and pension insurance, paid vacation, paid maternity leave, etc – but all this only for regular employees. Moreover, regular employees have more stable and higher wages and bonus payments, whereas free-lancers are paid according to the work performed. Truly speaking, the workers' labour productivity could be significantly higher should they be given proper rights and working conditions. Independent workers are the most unprotected of all employees. At the same time, experts view telework as a «zone of legal vacuum» [11] because state regulation in this area is almost absent due to the fact that the state considers most of teleworkers as unemployed, thus provid-

ing them with no due protection in the event of job loss in result of lay-off or sickness.

In fact, as shows the experience of other countries, it does not pay to avoid the recognition of telework as a competent part of business life for the state itself in the first place – potential teleworkers could come from the regions with high unemployment, and thanks to the Internet, they can have a chance to get access to work in the more developed regions of the country or even abroad. Moreover, the state could provide work to the most socially vulnerable sectors of population – the disabled people, single mothers who cannot leave children and those taking care of the aged or sick relatives. All these people belong to the categories receiving low retirement pensions, and their employment would contribute to economic development as a whole and to growth of their personal living standard in particular.

For effective involvement teleemployed in the work, needed are a full-fledged legislative basis for their activity and social guarantees. One problem in this sphere is the protection of teleworkers' authorship. Since teleworkers must report about their work as regular employees, their authorship and responsibility for mistakes should be proven by a personal signature. The EU has already passed the laws that simplify these formalities for everyone. In particular, the term «electronic signature» has been defined as a special encoded file that contains all required and authentic information about the author. To prove its authenticity, it is certified.

At the moment, similar decisions are being implemented in Ukraine – the Laws «About Electronic Document Turnover» and «About Electronic Digital Signature». These laws are not identical to the model European laws, but they do have much in common. Besides, the additional two important draft laws have been prepared for parliamentary consideration – the Law «About Activity in the Sphere of Informatization» (which introduces such fundamental terms as «information source», «information source owner», «information source manager») and the Law «About Personal Data Protection».

In order to determine the perspectives of telework as an organizational innovation in the employment system of Ukraine, it is reasonable to analyze the consequences of implementing remote work, which can be divided into economic, social and ecologic, depending on their impact on different spheres of economic activity of the country.

Economic consequences include:

- savings on costs of office lease, office equipment, computers and other appliances, and office maintenance, since the office is necessary only for corporate management and does not entail significant expenditures. Thus, by switching to telework, the branches of IBM in the USA reduced its leased office space from 44 000 sq feet to 15 000 sq feet; savings on lease made \$400 thousands per year [4];

- changes in labour productivity: according to calculations of American specialists, the work at home office produces a positive impact on labour productivity, which increases by 15% and keeps at this level for three months, after which it decreases by 5% throughout another three months, and after a similar period of time it drops by additional 2%; by the end of the year, it remains either at the initial level or at the increased by 5% level. When the at-home work and in-office work are combined in proportion 30:70, labour productivity will be maintained at 110% [5]. In the USA, the option when a worker works 1-3 times per week at home is spread. However, taking into consideration the Ukrainian mentality, the productivity of a teleworker may be lower than that of an office employee due to absence of permanent managerial supervision and the inability to plan the workday by the worker himself;
- time savings on the time spent in transport: time losses on the way from home to office in the USA make 180-360 hours per year; that is why already in 1994 the «Flexiplace» (flexible working place) programme has been launched, at the initial stage of which 1000 federal servants have been transferred to work via an electronic network [4];
- generating additional revenues from extended client servicing time (not limited to 8-hour working day) by introducing flexible telework schedule, which enables workers to choose the working time that is most productive for them;
- broad opportunities for seasonal work – for activities with changing intensity, telework provides an opportunity to quickly increase or decrease the staff depending on the needed intensity level.

Social consequences include:

- decreasing social tension in the regions with high unemployment level, as well as an opportunity to use the resources of different regions more evenly; for example, the work in Kyiv is remunerated better than the same work in Ivano-Frankivsk, – telework could provide the possibility of employing the resources of distant regions, which would generate benefits for both employers, who can significantly save on wages, and employees, who can generate higher income or get a job if unemployed.

Ecological consequences include:

- reducing the environmental pollution – according to the research held by Hague Consulting Group together with other organizations (The Home Office Partnership, Cambridgeshire County Council), the vast introduction of telework, at least where it is possible, will give the opportunity to reduce the time spent in transport by 40–75 thousand

hours per year and curtail gas emissions to 26.2 thousand kilograms of CO and 323 thousand kilograms of CO₂ [12];

- mitigating the problem of effective land usage, especially in such huge cities as Kyiv, Kharkiv, Dnipropetrovsk, and Donetsk, where large spaces are used for parking.

Certainly, while producing positive effects on the country's economy, telework has its own disadvantages for both employees and employers. An attempt to define all potential advantages and disadvantages of telework is made in Table 3.

Table 3.

Potential advantages and disadvantages of telework

	Advantages of Telework	Disadvantages of Telework
For teleem- ployed	<ul style="list-style-type: none"> • reduced stress in result of improved moral state, pleasure from work and motivation; • increased labour productivity; • money savings (on food, clothes, transport, parking, fuel); • time savings (by saving 1 hour per day on the way to office, a worker can save 6 full working weeks per year); • no need to move to a new place of residence because of the changed working place; • employment for unemployed from distant regions; • balance between work and family; • better comfort during work; • a chance to improve relations between a subordinate and his boss; • reduced impact of the «office policy»; • reduced occurrence of road accidents; • a chance for disabled people to work. 	<ul style="list-style-type: none"> • reduced communications, which can cause social and professional isolation; • absence of organizational culture; • reduced opportunities for promotion and career development; • complexity of supervision; • potential for increased working time; • decreased level of IT support; • decreased access to resources located only in office; • possibility of being disturbed while working at home; • the «refrigerator factor».

	Advantages of Telework	Disadvantages of Telework
For employers	<ul style="list-style-type: none"> • savings on office space and parking area (up to \$2000 per year per one worker in the USA); • increased labour productivity (by 20% on average according to different estimates); • reduced breaks in work time from sick leaves or other factors excluding the possibility of worker's presence in office; • decreased need to reduce staff thanks to significant savings; • the possibility of recruiting highly qualified workers who have health problems or are disabled; • simplified hiring procedure and retention of key workers; • potential for tax concessions and other stimuli. 	<ul style="list-style-type: none"> • costs of transition to telework; • traditional scepticism of managers and top managers; • costs of acquisition and maintenance of IT equipment; • information safety; • possibility of deteriorated team work and organizational culture; • difficulties for some managers with remote personnel supervision.
For society as a whole	<ul style="list-style-type: none"> • economic development and stable growth; • reduced problems with transport; • reduced fuel usage and environmental pollution; • possibility for economic growth of distant regions and rural areas; • reduced «brain drain». 	<ul style="list-style-type: none"> • the problems related to social isolation of the workers.

Conclusions

The proliferation of the newest technologies creates great opportunities for expansion of the individual and flexible employment. One of the most important innovations in this sphere is working by using the newest technologies – telework. The experience of the foreign countries shows that in societies with developed teleemployment, a number of socio-economic, ecological and other problems are getting solved. Ukraine should recognize teleemployment as a fully legitimate part of the socio-economic life of the country and create an appropri-

ate mechanism of its regulation, in particular the legislative base and social guarantees to teleworkers. The development of teleemployment can potentially be realized in the regions with high unemployment rate. It can provide work to the most socially vulnerable population layers – disabled people, single mothers who cannot leave their children and people taking care after their aged or sick relatives, – thus softening the social tension in the country.

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The article was received on July 5, 2007.