Human Resource Dynamics in the Context of the Pandemic

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Abstract

The current pandemic has put pressure on the area of innovation so that telework can be as widespread as possible. Teleworking lead to more changes about human resources, such areas were in demographic decline may reverse their trend and congested areas that were expanding demographic and can also to reverse demographic trend. Also, teleworking leads to the restructuring of the qualification of human resources and to a polarization of them. Thus we are witnessing a whole chain of changes in the structure of the economic system due to the virtualization of activities. Some questions that are being asked at the moment: Can the development given by the urban agglomeration be replaced by the virtualization of activities? Can the phenomenon of polarization of human resources in large urban agglomerations be reversed? And if so, with what consequences? This paper attempts to outline the trend dynamics of human resources in the context of innovation imposed by the pandemic.

Key words: human resources, innovation, pandemic
J.E.L. classification: O15, O31

1. Introduction

Throughout history, the areas with large urban agglomerations have been developed areas and as the agglomeration grew the economic zone was more developed compared to the adjacent areas. The question that arises is whether telework can keep the economic system compact and behave as in the case of an urban agglomeration but with a much higher fluency. Telework can lead to changes in the concepts of industrial areas, but it is necessary to develop telecommunications infrastructures. Thus, in choosing the locations for the future factories, the location of the supply and sales chains will be important, to the detriment of the location of the human resource, which will lead to a higher efficiency and to the reduction of the pollution of the big cities.

2. Literature review

The COVID-19 pandemic caused many employees to work from home. A survey conducted in March 2020 showed that 88% of organizations encouraged or asked employees to work from home since the COVID-19 pandemic broke out (Gartner, 2020).

In 2019, Ernst &Young interviewed 500 managers and found that only 20% of them succeed in case of a high risk (EY, 2020).

Esfahani et al (2017) investigated the main characteristics of a sustainable HRM in innovative organization and found the relationship between psychological capital, HR flexibility and sustainable HRM in organizations.

Wang J.J. and Wang (2006) found the relationship between the HRM and the regional economic sustainable development.

Giovanis (2019) presented the relationship between job satisfaction, teleworking and flexible timing.

Anderson, Kaplan and Vega (2015) proved that the flexible scheduling of work and the work from home lead to the positive benefits for the lives of employees.

Banzei and Abdelnour (2010), De Cieri and Dowling (2012), Minbaeva and De Cieri (2015) rethought the key variable of organizational performance related to the shock events.

Our paper tried to answer some questions related to the COVID-19 crisis.

3. Research methodology

Methodological approach - The goal is to create scenarios regarding the evolution of the human resources distribution in time following the appearance of the pandemic. The dynamics of the evolution of human resources is accentuated at this moment and people are interested in this redistribution. It is a priority problem that everyone is trying to solve. Since the analyzed period is short and the statistical data are few, it is difficult to make mathematical models of the evolution of human resources, but one can identify the components involved in the dynamics of human resources and evolutionary trends. In this sense, qualitative variables were established as follows:

- Input variables described qualitatively (independent variables) - represented by physical distancing, the decision of employers to reconsider telework and hygiene rules imposed;
- Output variables described qualitatively (dependent variables) - representing the redistribution of human resources over time by activities and by types of geographical areas;
- Intermediate variables (state - dependent variables) - represented by the chain of intermediate implications (for example environmental variables).

All these variables are reflected in the diagrams that were made.

Methods of data collection - The data were taken by searching the internet and observing the demands and offers on the labor market. The evolution of the possibility of teleworking by categories of activities and types of geographical areas was followed. Information on intermediate variables was also collected by observing their citation in articles on the Internet.

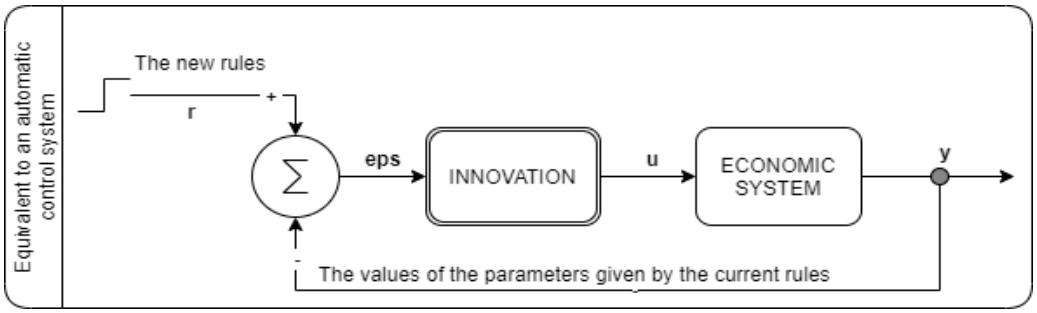
Methods of analysis - Qualitative methods, based on language and observations, were used to identify the elements involved. The identified elements were put together in diagrams. Arrows were used to highlight the relationship between the elements and the cause-effect direction.

Justification of the chosen methodology - These methods were chosen due to the type of problem treated.

4. Pandemic - a disturbance of the economic system

Pandemic appeared as a step disturbance type from entering the economic system is typically step because suddenly appeared through the imposed rules that tend to be maintained also after the pandemic.

Figure no. 1. Equivalent to an automatic control system



Source: Own sources

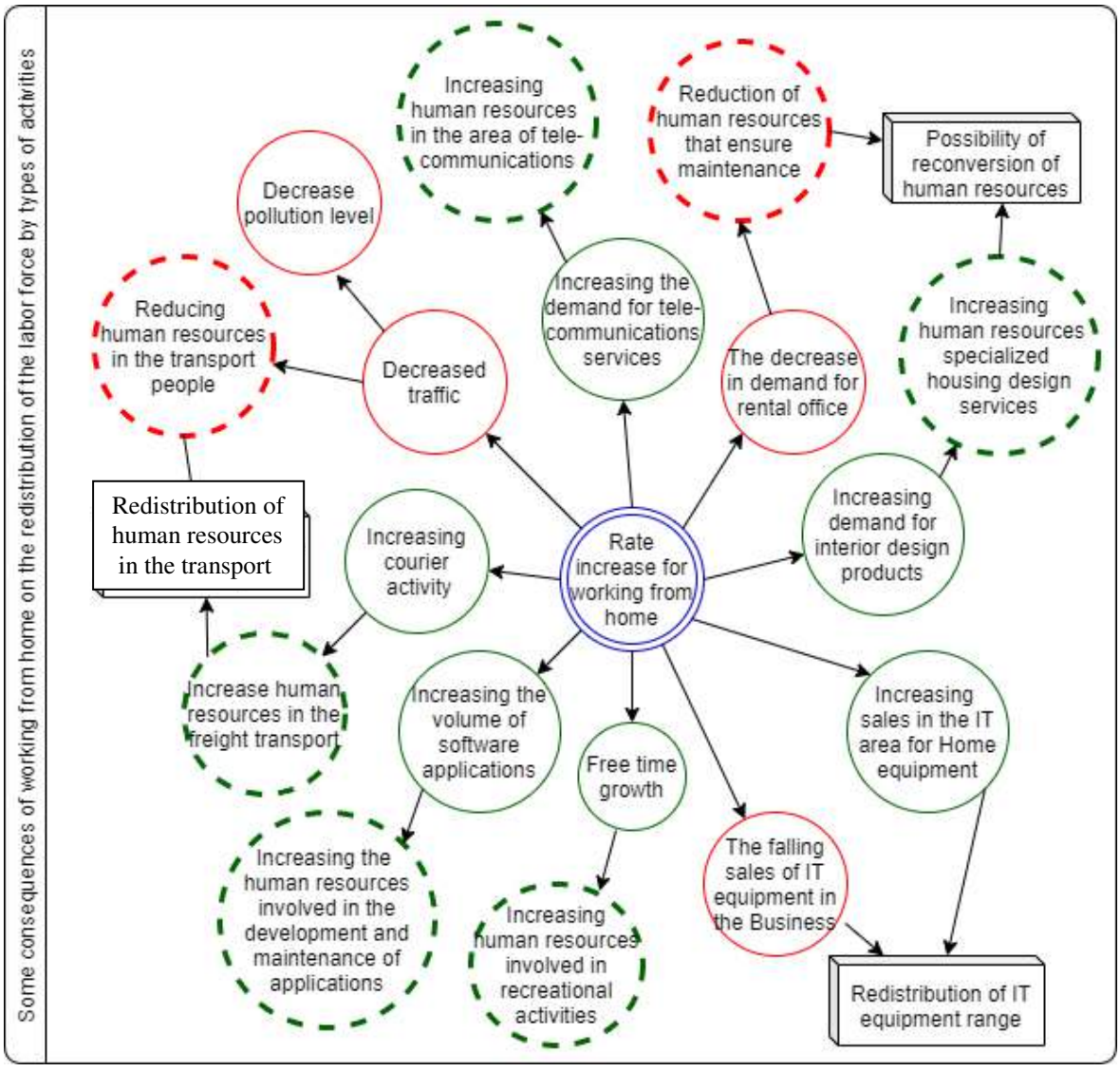
The adjustment of this system can be done with the help of innovation (Fig.1), innovation takes over the difference eps (see Fig.1). The eps variable represents the difference between the values of the parameters of the previous rules and the values of the parameters of the current rules.

Innovation is what gives correction commands to the system. The step-type reference is represented by the new rule. Innovation as any regulator, is what will determine system response to this perturbation

5. Possible evolutions

A higher share of work at home leads to a decrease in car traffic and implicitly to a reduction in pollution. Also, a reduced traffic implies a reduction of the human resources involved in the transport activity. At the same time, teleworking leads to the increase of the courier activity which leads to an increase of the human resources involved in this activity. Considering the increase of human resources in the transport of goods and the decrease of human resources in the activity of passenger transport, a compensation of the two resources can be tried (Fig.2).

Figure no. 2. Some consequences of working from home on the redistribution of the labor force



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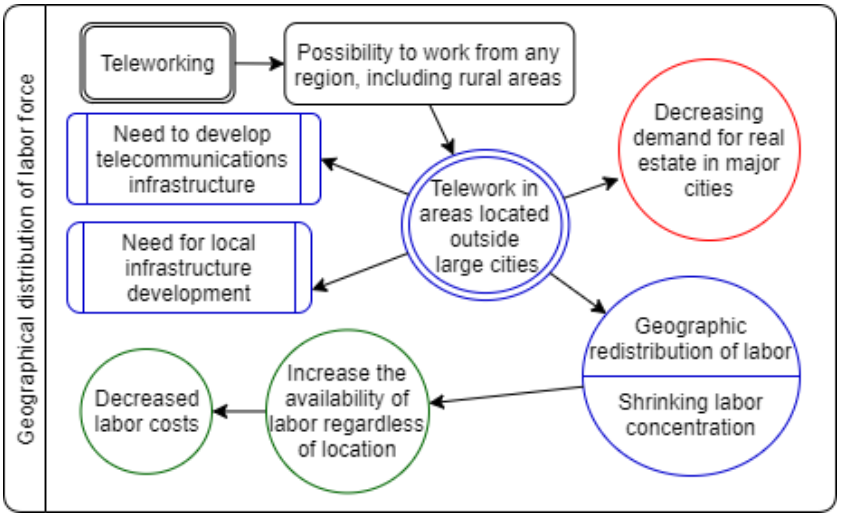
Due to telework, after a migration of labor from rural areas to urban areas we can witness a reversal of the phenomenon, many will seek to be able to work right in the middle of nature. This requires the existence of a developed infrastructure, including telecommunications, in addition, health, education or cultural services cannot be ignored. Due to this migration of labor will be a pressure for the development of these services, which implies an even greater need for human resources (Fig. 3). The availability of human resources, regardless of location will lead to greater competition in the labor market and thus to lower costs with human resources. More and more activities will be virtualized, these can be performed remotely and the results of work will be similar to those performed with labor concentrated in locations.

Figure no. 3. Geographical distribution of labor force



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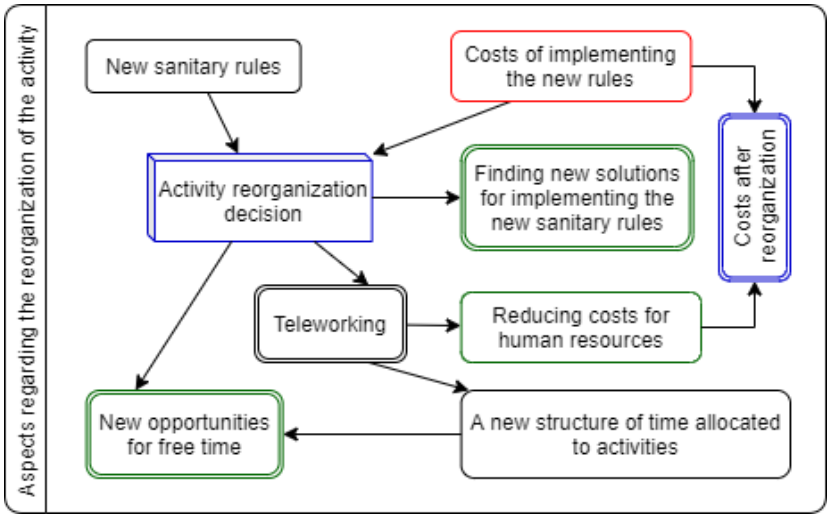
The need to reorganize the activities leads to finding new solutions for implementing the sanitary rules (Fig.4).

Figure no. 4. Aspects regarding the reorganization of the activity



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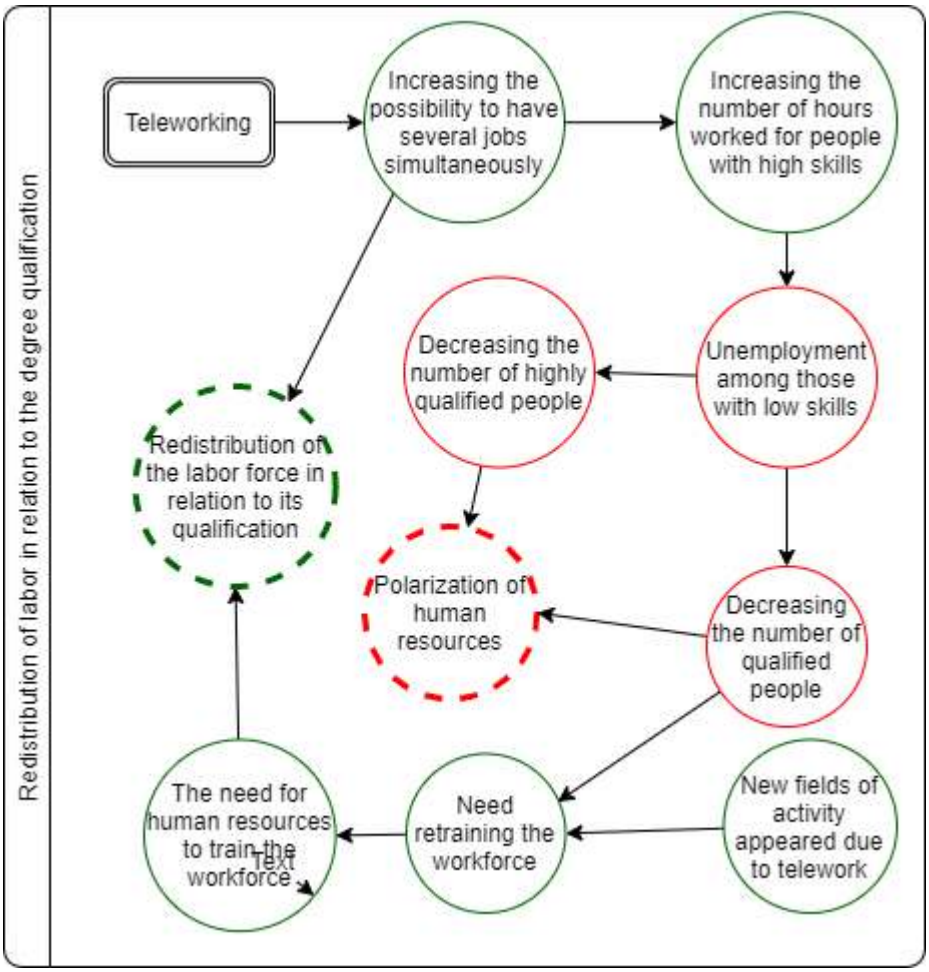
Changing the structure of human resources through possible remote collaborations and allocated time resources requires the reorganization of activities. Through these reorganizations in many sectors, the costs can be reduced in the conditions of high costs for the sanitary measures, which will have the effect of increasing the competition on the market.

By reducing the travel between home and work will increase the free time available, which can be used for another job. Therefore, the supply of skilled labor and implicitly the competition on the labor market will increase. This will have the immediate effect of fading or even reducing human resources costs, but over time, the trend will be reversed due to their involvement in as many projects as possible (Fig. 5). The polarization of skilled human resources will have the effect of increasing unemployment for the low-skilled. Consequently, it will be necessary to reconvert the workforce so that to adapts to the new realities. The reconversion of the labor force requires new human resources, taken over by specialists, which will lead to an even greater demand for specialists.

Figure no. 5. Redistribution of labor in relation to the degree qualification



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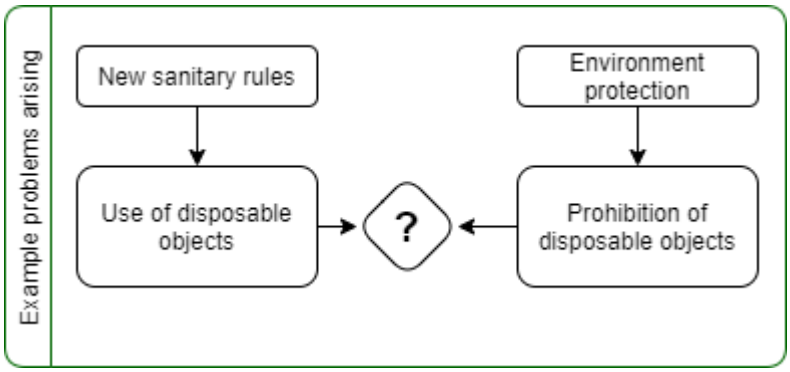
6. Conclusions

As a result of the pandemic, telework will be reconsidered, many employers will prefer telework to reduce costs. The orientation towards teleworking has existed before but the pandemic has accelerated this process, many employers not having the courage to test teleworking before This reorientation produces important changes in many areas but also brings even more questions. For example, the new sanitary rules require in various situations the use of disposable objects in environmental regulations that tend to prohibit them (Fig. 6).

Figure no. 6. Example problems arising



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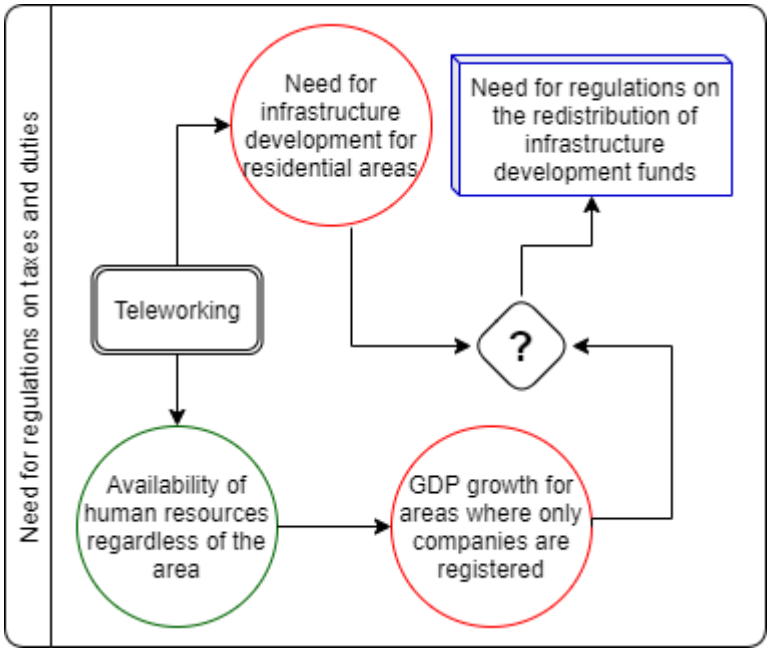
The change in the geographical distribution of human resources, change due to the virtualization of activities, leads to a series of problems related to the way of taxation and distribution of infrastructure costs. A person can live and work from home but the company that pays the taxes can be located in another region (Fig.7).

Figure no. 7. Need for regulations on taxes and duties



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Finally, it will be necessary to adopt laws, in order to regulate the new aspects that have appeared in the new context.

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