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Digital Economy and Transformation of Working time: The Guarantee of Digital Labor Rights

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Abstract: This paper analyzes the transformations produced in working time from the perspective of the digital economy. This research work attempts to highlight the need to continue guaranteeing labor rights in the field of the digital economy. The current context is characterized by the progressive and incessant application of new resources and technological innovations in work activity. The new forms of productive organization are affected by the protective function of limiting the working day and compliance with minimum rest periods. This debate must lead to a new paradigm in the regulation of working time. The objective is that we continue to maintain the protective legal nature of working time. We are faced with a great challenge for society, in which Labor Law is called to deploy its protective function.

Keywords: Digital economy; working time; labor rights; Technological revolution; productive relocation

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1. Introduction

Traditionally, the limitation of working time has had a direct relationship with the protective function of Labor Law. The institutions of working time are the foundation of legal-labor intervention and are especially affected by trends related to the organization and management of work by companies. The organization of working time is a central and structural aspect of the employment contract itself. The working day has its regulatory foundation in industrial work itself and has been transformed and adapted to new work realities. Specifically, there is a growing need to address the complex transformations produced at work with respect to the classic model of organizing the day and rest times.

The current context presided over by the progressive and incessant application of new resources and technological innovations in work activity proposes a new treatment, as well as a new conception of the protective function of limiting the working day and observing minimum periods. Rest. This is a new conception of the organization of working time, which must address new budgets and new factors present in work activity. This debate must lead to a new paradigm in the regulation of working time so that it continues to maintain its traditional protective nature. Obviously, we are faced with a great challenge for society, to which Labor Law is called to deploy its protective function, in the face of new phenomena that are in an unstoppable process of transformation and that pose complex problems, requiring new legal-labor responses.¹

2. The application of working time in the field of the digital economy: budgets and legal keys or its regulatory treatment

The traditional legal conception of working time has been based on a clear distinction between effective working hours and non-working time. These interruptions in work provision are manifested in a series of periods of minimum rest, which guarantee disconnection from work and the psychophysical recovery of the worker. Hence, from a classical perspective, for the purposes of organizing working time, it has always been distinguished between the working day and rest, the latter in its

¹ The perspective of new challenges linked to the new economic reality has to face the challenge of guaranteeing the limitation of working hours and breaks. See S. Lee, D. McCaan y J. Messenger, *El tiempo de trabajo en el mundo. Tendencias en horas de trabajo, leyes y políticas en una perspectiva global comparativa*. Informes OIT, Ministerio de Trabajo e Inmigración, Madrid, 2008, pp. 220-ss.

manifestation as a period of interruption of work activity as expansive time oriented toward leisure and relaxation. necessary rest ². That is, we would be faced with the negative dimension of the working day, represented in non-working time or free time.

Working time is the necessary budget of labor subordination itself, to the extent that it is the strict time that links the worker to the company and that the company can organize and control. Once the work day is over, the rest period manifests itself in time of disconnection, but clearly oriented towards the development of the person in their private sphere. This is manifested in the interest in leisure time and, in general, free time ³. Without a doubt, this necessary guarantee of a minimum period of disengagement from work activity will be a necessary budget for digital disconnection, which is currently presented as a right of the greatest interest in the face of the weakening of the limits on working time ⁴. The diffuse nature of the limits of working time in the current forms of work activity linked to the digital economy is revealed by the application of different figures that are presented as intermediate zones between working and non-working time. This refers, for example, to the presence of so-called waiting times, availability periods, work guards, etc.

These periods of availability are presented as intermediate figures, which are considered non-working time, in that they are not effective workdays in the strict sense ⁵. However, these availability times imply a certain subjection of the worker, which entails the need for the company to pay or compensate for the application of said intermediate times. Indeed, these periods of non-work are moments of availability of the worker, and

² Regarding the distinction between work time and rest time, as necessary budgets in subordinate work. See M. R. Alarcón Caracuel, "La jornada ordinaria de trabajo y su distribución", en Aparicio Tovar, J. - López Gandía, J., *Tiempo de trabajo*, Bomarzo, Albacete, 2007, pp. 37-38. F. Pérez Amorós, "Tiempo y trabajo. Algunas consideraciones sobre el trabajo nocturno y a turnos", en Aparicio Tovar, J. - López Gandía, J., *Tiempo de trabajo*, Bomarzo, Albacete, 2007, pp. 95-96.

³ In this sense, a differentiation has been made between the so-called working time, as a manifestation of labor subordination, and non-working time, in which a social dimension linked to the person's own development in society is evidently present. See G. Ricci, *Tempi di lavoro e tempi social*, Giuffrè Editare, Milano, 2005, pp. 62-74.

⁴ In relation to the diffuse nature and the weakening of the limits to the workday and the virtuality of rest time. See Vv.Aa., *Trabajo y empleo: transformaciones del trabajo y futuro de Derecho del Trabajo en Europa*, Supiot, A. (Coord.), Tirant Lo Blanch, Valencia, 1999, pp. 24-25.

⁵ Regarding the consideration of effective working time and its effects in the field of new forms of work, we recommend the following research work. See J. Lahera Forteza, "Tiempo de trabajo efectivo europeo", *Trabajo y Derecho*, núm. 43, 2018, pp. 45-47.

are paid time, although they are not considered effective working hours. We are facing a certainly controversial aspect, in the sense in which a time of subordination and, therefore, of expansion of the work connection with the company can be considered as non-work time and can be confused with free time. In reality, we are faced with a phase of disposition on the part of the employer and, therefore, time that the worker gives up based on a subordinate legal relationship. The classic limits of the working day have been distorted by the impact of technological innovation and new organizational forms. New problems have arisen in the interpretation of working time, which is manifested in the existence of gray areas related to the time available to work for workers⁶.

The employment contract is delimited by the labor provision throughout the workday. The quantitative dimension of working time is presented as an index of delimitation of the work to be carried out, as well as for determining the worker's remuneration. However, for the purposes of this work we are much more interested in the reference to the determination of the working day, regarding its duration and temporal distribution. Obviously, this working time will be a necessary index to determine the time in which the worker remains in the company, providing services in a predetermined place or work center, which is generally contemplated in the employment contract.

The permanent connection that technological innovations allow is manifested in the confusion between the connection and the disposition of workers. This reality gives rise to situations of extension of the working day without respecting legal limitations. This statement is even strengthened by the reality of work development on many occasions outside traditional workplaces. Indeed, remote workplaces workers in front of new specific risks, with an obvious connection with the non-observance of the limits relating to the application of working time.

In this sense, there are new psychosocial risk factors related to the inappropriate and unjustified use of information and communication technologies without respecting the limits of working time. This is a psychosocial risk factor due to the heightened expectation of availability

⁶ Regarding the problems of interpretation of the concept of working time and its distortion in the face of the existing gray areas in terms of worker availability times. See R. Aguilera Izquierdo – R. Cristobal Roncero, “Nuevas tecnológicas y tiempo de trabajo: el derecho a la desconexión tecnológica”, *El futuro del trabajo que queremos*. Conferencia Nacional Tripartita, 28 de marzo de 2017, Palacio de Zurbano, Madrid, Iniciativa del Centenario de la OIT (1919-2019), Vol. 2, 2017 (Volumen II), pp. 331-342.

and the need for a quasi-automatic response, which in practice entails the existence of a genuine duty to respond to the company's requirements outside of working hours. This circumstance is a reflection of the absence of a specific business policy regarding a responsible remote work model that guarantees work disconnection. The aim is to increase competitiveness, allowing the use of communication devices outside of the workday. In relation to these business practices that are respectful of work disconnection, it is important to draw attention to the need to promote protocols, instructions or guides of good practices in the management of information and communication technologies, in order to discourage their inappropriate use. at the end of the workday.

From the point of view of working time, one of the important problems arises in the extension of the working day, either before its start or beyond the end of the work provision. Likewise, conflictive situations arise when carrying out atypical or unusual jobs, which are carried out outside of hours, such as during the night or on weekends, and all based on a model of permanent connection with the activity. labor. Likewise, the extension of the working day occurs due to the succession of different tasks or activities that are not previously planned and that generate extraordinary situations that prolong the working day. This is a real dilemma, related to the presence of temporal asynchronism, which allows constant interconnection and affects the working day, prolonging or advancing the start of working time.

In these extensions of working time, the presence of the performance of functions or tasks in the so-called waiting periods or downtime also plays an important role. These temporary periods can be considered as downtime, when now due to the use of technology they are work activity. These situations occur, for example, in cases of travel or travel, with the possibility of connecting after hours and performing certain tasks without being present at the company facilities. The development of flexible work formulas without clear business disconnection policies allows for an increase in working hours, using digital technology outside of working hours.

Likewise, it should be noted that this confusion in the quantitative and qualitative determination of working time presents a great problem in practice. Working time ceases to have a sense of unit of measurement of due work. Traditionally, the organization of working time itself has been shaped taking into account the limits of the working day, due to the legal nature of the employment contract. Without a doubt, this limiting function of the working day has traditionally been an essential objective of Labor Law, which has been presented as a necessary budget for legal

intervention through the limitation of working time. In this sense, the control of the duration of working time has always been a key aspect, which has currently come to be relaxed by virtue of the elastic and diffuse nature of the application of the new working time, in contexts in which increasingly it is more difficult to achieve a true disconnection from work. From this classic perspective, the organization of working time has been based on weekly work periods of forty hours, daily breaks of twelve hours, with the possibility of reduction to ten hours occasionally in the case of special days, and weekly breaks of one day or a day and a half, in case of improvement. This is a clear reflection of the observance of international minimum standards and the ILO's own conventions in relation to working time. However, the current context has its own reason for being in the flexible conception of working time and in the possibilities of irregular and flexible distribution of working time. This allows the working day and breaks to be adapted to the needs of the companies. This effect has been clearly seen in periods of economic crisis. This trend is led by a qualitative and flexible management of working time, which has in turn been intensified by the new possibilities allowed by the digital work model. Without a doubt, this facilitates new possibilities for the worker's disposition, along with the transformation and sudden modification of the provision of workers' services.

The flexible conception of work and rest time had its origin in labor reforms clearly contextualized in periods of economic crisis. We especially refer to the 1994 reform, followed by other adjustments in terms of irregular distribution, present in the 2012 labor reform itself. All of this now allows this flexible and elastic conception of working time to be applied to the work activity carried out in the digital age. This legal regime allows new possibilities, which stimulates, on the other hand, the development of new forms of employment. There is a frontal opposition with respect to the classic limiting and protective purpose of working time. This statement forces us to critically analyze the traditional paradigm of work and rest time, which is currently in a situation of clear decline. The connection with new ways of working is evident. Legal limitations on working time made sense in the Fordist industrial work model. However, the crisis of industrial work itself and the emergence of new forms of work promote the dynamics of irregular and flexible working time. This new reality allows different models of working time, depending on the type of work, when in reality the legal limitations on the working day have a general and transversal nature for all subordinate and employed work.

3. The necessary response to a new working time model

A new, certainly complex working time model is developed, which is characterized by its heterogeneous nature and its diffuse and fragmented application. Without a doubt, this is a certainly dangerous trend, as a new conception of working time develops, which moves away from the traditional parameters of limiting the working day and compliance with the necessary work rest. The adaptation of working time to the needs of the company and to the wide application possibilities allowed by new technological innovations applied to work activity occurs. It is true that in many cases these systems have been developed through collective bargaining, and in some cases, there has even been a reduction in working time⁷. This idea directs us to the problem of legally moving towards the reduction of working time, this being a debate of a global nature⁸.

Many of these formal reductions in working time have been compensated in practice with a greater possibility of adapting working time to the needs of the company. From this perspective, there has been an extension of working time compared to the formally permitted day. On many occasions, this allows extensions of working hours based on flexible hours and the adaptation of working time based on the needs of the productive activity. This greater margin of availability of working time has inevitably had a direct consequence on workers' rest from work, especially affecting the private sphere of workers, as well as the interest in reconciling personal, family and work life.

This type of situation has occurred in especially qualified jobs, with technical-professional content, which generally have greater autonomy in

⁷ Indeed, in this area we must highlight the presence of an important modification in the sources that regulate working time. It is necessary to highlight the great role that collective bargaining has in the organization of working time, which deeply enriches the regime for the application of the working day and breaks. The use of collective bargaining has an absolutely essential function and is presented as a predominant factor in determining the limits that apply to working time.

⁸ From the perspective of reducing working time in economic terms and its application in the field of digital work. See D. Cairós Barreto, *Una nueva concepción del tiempo de trabajo en la era digital*, Editorial Bomarzo, Albacete, 2021, pp. 65-ss. G. Matías Clavera, "El trabajo en el espacio y en el tiempo digital", *Revista del Ministerio de Trabajo e Inmigración*, núm. 11, 1998, pp. 39-78. M^a. C. Salcedo Beltrán, "Tiempo de trabajo en la sociedad digital: jornada de trabajo y "conexión" en los períodos de guardia localizada", *Relaciones contractuales en la economía colaborativa y en la sociedad digital*, coord. Guillermo García González, María Regina Redinha, María Raquel Guimaraes, Beatriz Sáenz de Jubera Higuero, Dykinson, Madrid, 2019, pp. 149-172.

terms of working hours. This situation is combined with the workload, which gives rise to the distortion of the formal working day to the detriment of a working day that materially expands the permitted margins of the limitation of working time. That is to say, what a priori would mean a value, which is the possibility of self-managing work time by employees, actually becomes a double-edged sword. In fact, in this management, professional interest generally prevails over individual or personal interest, aimed at complying with vacation periods and developing free time ⁹.

The traditional argument for delimiting working time is found in the industrial model. Legal intervention in the regulation of the working day occurred in the first laws, addressing a working day model based on eight hours of daily work, in order to limit the effects of the development of long working hours. These days have a negative effect on the physical and mental health of workers. In turn, these limitations have direct effects on the reduction of workplace accidents, combating the high number of work accidents. Likewise, this model of working time in industrial companies established a standard application parameter, which came to normalize an application practice in companies and served as a model for collective bargaining at a sectoral level.

This first debate raised around the duration of working time has subsequently undergone a profound transformation, especially in times of crisis. Working time has been used as a tool that allows the adaptation of work activity to the needs of the company and market circumstances ¹⁰. The improvements produced in the reduction of working time and the need to adapt it to the situation of the company and the market context have moved the debate from the quantitative dimension to the qualitative or distributive one ¹¹. This is, therefore, a new approach to working time.

⁹ This peculiarity regarding the management of working time itself and its adverse consequences has fostered the need to rethink the traditional limits on working time. The application of these legal limits has occurred in a current context marked by the loss of specific weight of legal intervention in matters of working hours. See Vv.Aa., *Trabajo y empleo: transformaciones del trabajo y futuro de Derecho del Trabajo en Europa*, Supiot, A. (Coord.), Tirant Lo Blanch, Valencia, 1999, pp. 114-115. Vv.Aa., *Working time and workers' preferences in industrialized countries. Finding the balance*, Messenger, J. Routledge, London, 2004, p. 2.

¹⁰ In this context, the fluctuating trend of the economy has had a direct influence. Recurrent imbalances and, with it, the realization of economic growth have traditionally had a strong impact on working time. We could go back to the first oil crisis, in the early 1970s, to see how, especially in Europe, there was an intense debate about the possible reduction of unemployment through a general reduction in working time.

¹¹ See I. García-Perrote Escartín – J. Mercader Uguina, “El permanente debate sobre la jornada laboral: una cuestión clásica (reducción del tiempo de trabajo) y otra reciente (el

The debate is on the distribution and compensation of working time in the face of increases or decreases in productivity and the trend of economic growth. The technologies applied to work are promoting productivity, but they are also modifying the traditional parameters of interpretation of working time. It is easier to carry out work at any time and in any place by virtue of the location and permanent connection facilities¹². Without a doubt, in this context, working time has been directed towards flexibility and the irregular distribution of the working day, as a means of stimulating economic growth and the consequent creation of employment.

These are the reference budgets that have founded and encouraged the constant debate on labor flexibility. These reflections have been dominating legislative policies and negotiable practices regarding working time. This orientation developed after the oil economic crisis of the 1970s and has been maintained cyclically in the crises of the 1980s and 1990s. This context has been equally crucial in the economic and financial crisis of the years 2008 to 2014, as well as during the pandemic caused by the coronavirus crisis¹³. Working time distribution techniques are presented as a management tool linked to the economic situation and that can turn against working people. The specific option to apply working time is not neutral but has a direct impact on the management of the company and its adaptation to the market. It has been highlighted that technology, in general, can be considered neutral, but its use is certainly not. This statement has a special impact in the workplace from the point of view of disproportionate, unjustified and invasive behaviors of the private lives of workers¹⁴.

derecho a la desconexión del trabajo), *Revista de Información Laboral*, nº 10, 2016, Aranzadi Insignis, BIB 2016/80442.

¹² From this perspective, said discrimination in working time based on new technologies presents an important “alienating potential”, as well as the presence of new generation occupational risks due to technological innovations linked to work. See M. Serrano Argüeso, “Digitalización, tiempo de trabajo y salud laboral”, en *IUSLabor 2/2019*, pp. 9-10. J. A. Fernández Avilés, “NTC y riesgos psicosociales en el trabajo: estado de situación y propuestas de mejora”, *DSL*, núm. 2, 2017, pp. 70-72.

¹³ In relation to the presence of the crisis factor in the concept of labor flexibility and, specifically, in the flexible organization of working time. See A. Baylos Grau, “Gobernanza laboral, crisis y cambio tecnológico en la acción colectiva”, *Documentación Laboral*, núm. 117, 2019, pp. 100-101.

¹⁴ In general, it has been indicated that technology, as noted, is impartial, its use is not, and the consequences of incorrect use also extend to the workplace. See M. Serrano Argüeso, “Digitalización, tiempo de trabajo y salud laboral”, en *IUSLabor 2/2019*, pp. 8-9. G. Cedrola Spremolla, “El trabajo en la era digital: reflexiones sobre el impacto de la

We could say that the economic trend and the organization of the company lead to flexibility and heterogeneity in the application of working time ¹⁵. The introduction of technological innovations and the development of digital work increase the trend towards differentiated workdays. The traditional trend achieved in the field of industrial work, relating to the normalization and unification of the working time statute, would be abandoned. The current trend and the intensified trend focus on diversification, greater decentralization in the field of application of working time and in a context clearly marked by the individualization of working hours. It is true that there has been a significant increase in the importance of collective bargaining, but labor flexibility itself has also been introduced into the collective notion, which does not prevent the development of individualization of working time. Furthermore, especially in terms of working time, decentralization itself becomes more acute. Along with the law, the application of the collective agreement itself can be used, as generally sectoral, together with company collective agreements and subsequent company agreements, aimed at the application of working time to the reference business context ¹⁶.

4. The current trend towards diversification and individualization of working time

The tendency towards individualization of working time is especially dangerous, since it has a direct impact on the application of the principle of equality and leads to the existence of differentiated labor statutes. These disparate treatments can occur without there being an objective cause for differentiation. We are facing one of the new manifestations of job insecurity and the introduction of poverty in the working and

digitalización en el trabajo, la regulación laboral y las relaciones laborales”, *Revista Internacional y Comparada de Relaciones Laborales y Derecho del Empleo*, vol. 5, núm. 1, 2017, pp. 1-30.

¹⁵ The regulation of working time has been characterized in recent times by the development of the notion of labor flexibility, as a parameter linked to the development of the company and new production models. This is a context that has greatly encouraged the flexible application of work time, discouraging the interventionist function of limits on working time.

¹⁶ In relation to the challenges that this digitalization process presents from the perspective of union action in the field of collective bargaining. See J. M. Díaz Rodríguez, "La innovación tecnológica en la acción sindical ante las nuevas realidades empresariales", en Sanguinetti Raymond, W. - Vivero Serrano, J. (coord.), *La construcción del Derecho del Trabajo de las redes empresariales*, Comares, Granada, 2019, p. 334.

employment conditions of working people. This is a situation that especially affects the protective action of Labor Law, as its own regulatory function has traditionally been conceived¹⁷.

The current trend towards diversification and individualization of working time in the field of digital work must not lose sight of the essential purpose of the limits of the working day. The reason for the legal limits on the working day is to promote the health and safety of workers, ensuring the necessary rest and leisure time for the personal development of workers. It is a social challenge, to the extent that it aims to promote health and the demanded balance between work and personal life¹⁸.

The development of working time in the context of the digital economy means abandoning the notion of predetermined time in general terms. This means losing knowledge of the calculation of the beginning and end of the work day, which would have to be carried out in a regular and uniform manner, and which is applied periodically, observing minimum periods of work rest. This is a job developed in the digital economy, which is characterized by its flexible, changing nature, constant sequence and fully connected conditions, and all of this in a highly competitive environment, which has productivity and efficiency as its special reference. of the business project. This flexible work model of the digital economy leads to a considerable increase in irregularity and the heterogeneous component in the application of working time. In turn, this situation worsens to the extent that this working time develops in an indeterminate and unpredictable manner,

This situation is reproduced in the so-called distance or remote work time, which is more prone to this application inertia of work time. However, this situation also affects face-to-face work, when there are significant doses of work autonomy in its development. Indeed, this context is also

¹⁷ The phenomenon of job insecurity, together with the development of digital work, has been especially addressed from the perspective of European Social Law. MERCADER UGUINA, J., "Los "tiempos" de la Directiva (UE) 2019/1152: transparencia y lucha contra la precariedad laboral como objetivos", *Documentación Laboral*, núm. 122, 2021, p. 21.

¹⁸ The balance between work and personal life is shown as a central objective that must guide the application of the working day and the consequent distribution of working time. In this sense, this balance is shown as a direct limit to one's own flexibility in the management of working time. See M. A. Ballester Pastor, "La flexibilidad en la gestión del tiempo de trabajo: jornada y distribución del tiempo de trabajo", *Revista de Derecho Social*, núm. 62, 2013, pp. 53-54. Igualmente, se recomienda el análisis del siguiente informe institucional. See Vv.Aa., "Transformación digital y vida laboral: las propuestas del informe Mettling", *Actualidad Internacional Sociolaboral*, n° 194, 2019.

linked to the very nature of business activity, which in these areas has significant instability in the development of business projects. The uncertainty of productive activity evidently has a direct impact on the application of working time¹⁹. For this reason, the possibility of redirecting working time to business needs takes on special value and special importance is given to the worker's time availability. From this perspective, the possible recourse to the development of sporadic or marginal jobs takes on greater significance, as well as the possibility of expanding work activity atypically on weekends, the development of on-call tasks or the claim or provision of bags of indeterminate hours²⁰.

This reference context has been stimulated by the application of digital technologies. It is a situation that has encouraged the development of flexibility in working time, even going so far as to denature its own limiting function. This directly affects the right of workers to safety and health at work. Without a doubt, this situation has been intensified by the application of new digital technologies, which are in an unstoppable process of development and whose effects constantly surpass labor legislation and force jurisprudence to constantly adapt the application of the Law. from Work to new forms of digital work development. As we say, this situation has been extraordinarily favored by new forms of work organization, which have been promoting the flexible and denatured application of working time.

This situation requires a new conception of work time in a limiting way. That is, a new intervention in the organization of working time, which responds to the challenges posed by the development of digital work. It is about, once again, using the protective nature of legal-labor regulations, directing its action towards the effective protection of the rights of workers. These are necessary changes if we want to continue to effectively address and protect the right to limit the working day and guarantee the necessary rest. The protection of the worker must prevail over any other assessments or considerations of an economic nature or adaptation of working time to the context of the reference market. Otherwise, there

¹⁹ Certainly, the instability of business activity is shown as an aspect that favors the heterogeneous nature of working time. It is a factor that directly promotes the various types of working hours that can be applied based on the irregularity of business activity flows. Work activity adapts to each moment depending on the production process.

²⁰ We are faced with a series of resources that can be applied as a disincentive to hiring itself. That is, the use of specific reinforcements of the workforce through short-term temporary employment contracts is prevented.

would be an effective devaluation of labor rights, favoring socially unsustainable economic development.

The use of digital work implies a devaluation of the traditional factor of working time. However, at the same time, digitalization processes, automated procedures and, in general, the modernization of work activity by virtue of technological innovations lead to an increase in productivity and growth of the company itself. Without a doubt, this situation demands a correct solidarity application of working time, recognizing workers' contribution to the continuity of the company and the maintenance of employment thanks to their work. Therefore, there is no vision more supportive than guaranteeing an effective limitation of the working day and an absolute guarantee of rest and disconnection of the worker from his work activity ²¹. We are faced with an important reflection that should mark the development of the digitalization of the economy and its application to production processes.

Currently, the debate on working time must focus on the protection of the different interests at stake. Obviously, the need to maintain daily, weekly and annual limits in relation to due working time ²² and limit the use of extraordinary and atypical work that can be carried out in the field of productive activities remains a priority. Increases in working hours must continue to be developed through overtime, including effective compensation measures. Maintaining the principle of necessary rest is key, with the observance of daily rest taking on special significance, together with the psychophysical recovery of the worker. This task consists of maintaining a direct limit to indeterminate and elastic work, as well as uninterrupted weekly rest, which is an essential factor from the point of view of the balance between work and the personal and family life of

²¹ It is important to achieve adequate solidarity indices, which focus on achieving a fair and balanced distribution of the benefits derived from the application of work technology and the digitalization of production processes. This debate must promote a process of improving working conditions, which has a direct translation into an improvement in living conditions, as well as its reflection in a fairer society.

²² We are dealing with central aspects of the organization of working time, which have been specially identified and analysed by the ILO on different occasions. These are necessary budgets, which must be considered when taking into account the application of the working day itself. From the point of view of the ILO, these elements of judgment are taken into consideration for the monitoring and review of international instruments related to the organization of working time. In that sense, we recommend the analysis of the following institutional report of the institution. See ILO, *The time of job in the 21st century. Report for the debate of the Tripartite Meeting of Experts on the Organization of Working Time*. (October 17-21, 2011), pp. 37-ff.

workers. We must also highlight the essential nature of the right to paid annual leave. The annual leave also ensures the necessary and uninterrupted rest and is shown as a necessary disconnection, without mechanisms of substitution or economic compensation being possible.

Along with this, attention to the needs of the company makes sense, which can favor the introduction of more flexible ways of organizing work time. However, these practices cannot disfigure the limiting function of the working day. Likewise, the introduction of dialogue and negotiation in the application of working time itself is very important. It is necessary to maintain the trend of collective management of working time, encouraging consultations and intervention of worker representatives in the application of working and rest time.

It is necessary to highlight the relevance of the balanced protection of the different antagonistic and legitimate interests that arise in the application of working time. Without a doubt, the best way to address these legitimate interests is based on the intervention of legislation and the consequent deployment of its protective action. In particular, said intervention must be effective, broad and rigorous, in order to achieve the unification of the legal regime of working time, which is being especially affected by the era of digitalization. This intervention must continue to be maintained in the face of labor flexibility. The presence of norms that establish limits of necessary rights must be reaffirmed. As we have indicated, said regulatory intervention is not the only resource, but, in turn, it requires the promotion of social dialogue and the development of collective bargaining.

From the point of view of collective bargaining, the rationalization of the different working time systems has special significance. The application of working time must be coordinated taking into account the structure itself and the levels of negotiation in each sector, these systems for applying working time reaching the companies themselves. We are, indeed, facing an essential issue to achieve the objective of standardization of working time and the development of uniform formulas for the application of working hours²³.

²³ This unifying trend in the organization of working time has been understood to respond to an evident social interest. The general and transversal nature of working time is especially affected by the transformations that work is experiencing in the field of the digital economy. See Vv.Aa., *Trabajo y empleo: transformaciones del trabajo y futuro de Derecho del Trabajo en Europa*, Supiot, A. (Coord.), Tirant Lo Blanch, Valencia, 1999, pp. 144-146. On the need to advance in the standardization of working time versus the individualization of working hours. See S. Lee, D. McCaan and J. Messenger, *El tiempo*

The interest in the regulation of working time currently has a special significance. We are faced with an important instrument that can alleviate the risks derived from the development of new forms of work in the digital age. In this sense, the fight against job insecurity continues to be of special importance, thereby guaranteeing the desired objective of decent work, which is currently conditioned by the drift of the application of working time in labor digitalization processes. All of this calls for an adaptation of the limitation of maximum working time, together with the necessary application of the right to daily and weekly rest, as well as paid annual vacations.

5. The labor digitalization process and its impact from a global perspective

Globalization has an obvious impact on the world of work and, specifically, it affects the quality of work, as well as its development conditions and its typical forms of execution²⁴. We must indicate that we are experiencing a process marked by polarization in the world of work, which will have effects on the formation of the future of work itself. Important social transformations that have occurred can be highlighted, such as the fact of a marked trend towards the reduction of the so-called middle class and a significant increase in the number of workers with very low incomes, who have been called poor workers. Correlatively, there has been an increase in a privileged segment of the active salaried population, which is identified as a small social minority, which has seen its economic situation improve. This gives rise to an unfair distribution of income and generates obvious problems in the future from the point of view of justice and social cohesion.

In general, the debate on the digitalization of work presents new challenges and opportunities. This is an issue of a global and transversal nature, which raises problems that transcend the borders of the countries themselves. The physical space for the development of work and the geographical location of work activity disappears. Obviously, many of these processes are contextualized in the use of connection platforms,

de trabajo en el mundo. Tendencias en horas de trabajo, leyes y políticas en una perspectiva global comparativa. Informes OIT, Ministerio de Trabajo e Inmigración, Madrid, 2008, pp. 221-222.

²⁴ For a study of the impact of globalization and the development of globalization of markets in the world of work. See B. Hepple, *Labor Laws and Global Trade*, Hart Publishing, Oxford, 2005, pp. 13-14.

whose operation is carried out on a global scale²⁵. The development of the digital economy is producing important consequences from the point of view of the geographical relocation of work. In this topic, the development of so-called transnational teleworking and its promotion from the perspective of production chains fostered by the development of multinational companies takes on special significance.

This telematic process generates important consequences from the point of view of a global labor market, which is digitalized and constantly interconnected²⁶. This situation allows the proliferation of workers, whose working and employment conditions have been considerably reduced. New forms of employment allow you to work anywhere in the world. This affects the protection itself that in principle must be provided by national States. Likewise, this situation generates important effects from the point of view of the organization of national labor markets, if this process continues its unstoppable inertia of development. This conditions the national regulations themselves and affects the guarantee of social rights, which are financed by public income derived from taxes and contributions to public Social Security systems. We can point out that this process accused of digitalization on a global scale, promoted without controls, carries with it a certain risk of inequality. This situation especially affects low-income salaried workers, which can even lead to a transfer of productive activity from the formal economy to informal work.

The spread of digital work introduces new problems linked to relocation and its transformations from the point of view of the globalization of the economy. The process of globalization and its development has given rise to an increase in the mobility and displacement of workers, phenomena that are different from the traditional processes of labor migration. There is no doubt that trade liberalization and the promotion of foreign investments have direct consequences on labor markets, giving rise to a transfer of labor offers and demands transnationally. This situation develops in an increasingly globalized market for goods and services²⁷.

²⁵ It has been highlighted that the problem of the digitalization of production processes has become a phenomenon specific to transnational law, which requires a new consensus from the point of view of its governance. See C. Degryse, *Digitalisation of the economy and its impact on labor markets*, Working Paper 2016.02, Brussels, ETUI, 2016, p. 52-53.

²⁶ In relation to the development of the concept of a global labor market, we recommend the following reference studies. See K. D. Ewing, "International regulations: the ILO and other agencies", in Frege, C. - Kelly, J., *Comparative Employment Relations in the Global Economy*, Routledge, Abingdon, 2013 p. 439.

²⁷ The digitalization and telematic transmission of production processes has direct consequences in the removal of barriers in the exchange of services in the international

This consequence is widely known and developed, for example, within the European Union through the development of the freedom of movement of people and workers, which is linked to the free provision of services, as well as the free professional establishment. In these free market manifestations, the development of transnational services means that work must adapt and develop in response to the needs of the market. The encouragement of these transnational activities is a driver of the development of the free-market economy²⁸.

Based on these arguments, the development of the digital economy affects the world of work, offering new possibilities for relocation and internationalization. This process of globalization of work is generated by a significant reduction in production costs and by the provision of services valued at lower costs. In many cases, these activities are relocated to developing economies, with basic social protection models and highly flexible labor systems, precisely to attract foreign investment in the form of social *dumping*. There is no doubt that economic globalization and the internationalization of markets cannot be understood without the development of the computer telecommunications revolution.

From the point of view of Labor Law, there is no doubt that this model has important consequences, since the valuation of the service prevails over the figure of the worker and the employer. The position of the parties to the employment contract, especially the employer party, is devalued in a transnational employment relationship and in many cases is impersonalized by the digital work itself. The development of telecommunications and the liberalization of economic borders generate new possibilities for relocating companies and, consequently, the provision of services. It is a process that opens new business opportunities due to the generalization of digital applications to production processes. All of this means that the place of provision of services is no longer relevant, since a significant portion of the work can be provided from places other than the company's own establishment, without requiring control and surveillance of the work. Digital technology

market. See J. Mercader Uguina, *El futuro del trabajo en la era de la digitalización y la robótica*, Tirant Lo Blanch, Valencia, 2017, pp. 4-5. The digitization process has an impact on the simplification of work processes, with the reduction of exchanges and, in turn, allows for a marked reduction in labor costs.

²⁸ In these contexts, any type of work, whether autonomous or subordinate, shows an important development and encourages, on the other hand, the mobility of workers. Work moves wherever the demand for capital demands the need to hire labor.

and the Internet facilitate this work indirectly, allowing workers' performance to be assessed by other means.

There has been a generalization of the use of electronic devices and applications, which allow working without limitations in relation to space or time conditions. These factors allow the development of the physical relocation of work, moving towards a virtual location. These processes allow the development of phenomena related to mobile work and remote work, with important consequences from the point of view of guaranteeing labor rights in the digital sphere. It has been recognized that the use of digital technological innovations allows greater productive performance, thanks to the integration of the transmission of data and information in the work activity itself. A large system of constant communication is produced, which affects the structures and methods of production and work.

In the European case, the European Commission itself warned of the important effects of the digital transformation process. Specifically, the evident acceleration of relocation and the transfer of some activities to other countries with lower wage costs stood out. Especially, this situation would have repercussions on the services sector, given the wide possibility of transfer of transnational services linked to consumption in commercial, cultural and leisure areas. Indeed, we are faced with an important source of employment, which the European Union insists on the need to promote in the European context. The objective is to avoid a transfer of services abroad. This is evident proof that the technological and information revolution has incredible potential to improve people's quality of life. It is essential to adequately control said application process, taking into account the centrality of the worker's position for protective purposes. From this perspective, the European Commission tries to strengthen the community role in order to increase the effectiveness of the economic and social organization ²⁹. We are referring to a true mechanism to reinforce social cohesion itself, given the serious problem that the alarming unemployment rates represent in the future.

²⁹ In relation to this problem, we recommend monitoring the following reports that analyze the consequences of the digitalization process of the economy. These studies are carried out keeping in mind the terms of competitiveness, highlighting its direct effects on employment. European Commission, *Growth, Competitiveness and Employment. Challenges and clues to enter the 21st century. White Paper*, Communities Bulletin European, Supplement 6/93, Luxembourg, 1993, pp. 24-25. Likewise, we recommend the analysis of the 30th *Report on Europe and the global information society. Book Tracking White Growth, Competitiveness, Employment*, Bulletin of the European Union, Supplement 2/94, Luxembourg, 1994, pp. eleven.

From a purely economic perspective, technological globalization is destined to also increase job opportunities. However, one of the problems that this process represents is manifested in the possibility of generating employment that is different from the traditional model of self-employment. We are referring to unstable, cyclical employment that develops discontinuously, which has an impact on job insecurity. Precisely, this fight for the lowest labor cost is what opens the doors to the so-called social *dumping*, facilitating the search for those systems of labor relations and social protection with lower labor costs and, therefore, with less legal-labor protection. This context opens the possibility that less developed countries will be forced to downwardly reform their labor relations and social protection systems, in order to attract foreign investment and combat the competitiveness inherent to the process of transnational relocation present in the globalization of the economy ³⁰.

6. Technological revolution and productive relocation

This process of technological revolution generates a marked effect of productive relocation. The use of digital and computer technologies transcends the reality of work and affects both the work and non-work spheres, transforming people's living conditions. For this reason, there has been talk of a new system of intangible economy, which is based on the development of mobile computing technologies. This has been the triggering factor for a new resort to remote work and teleworking, which began to develop at the beginning of this century. This is a formula to overcome homework. This remote work model has been transformed towards a much more flexible type of work, where working time conditions are evidently distorted. Precisely, under these models the determination of time and the way in which work is done loses meaning, especially affecting employed and subordinate work.

Information technologies and the use of telematic work devices allow a new form of control and compliance with company guidelines. Indeed, we

³⁰ The problem is especially accentuated in economic contexts that are characterized by market instability and economic volatility. Obviously, economic and social instability is closely related to the globalization process. This situation can generate important imbalances, which have a special impact in the field of labor and social protection. These contexts worsen and intensify depending on the economic cycles, in line with the productive changes to which companies are subjected.

are faced with new forms of worker insertion into a business organization, which raises new conflicts linked to permanent and real-time interconnection. The presence of constant and continuous flexibility is especially evident in working time. Without a doubt, one of the most relevant consequences related to digital work occurs with respect to the international perspective of the development of the work relationship. We are faced with another decisive factor, which demonstrates the loss of specific weight that the conditions of work and rest time have in the development of work performance.

For all these reasons, it is still necessary to face the challenge of controlling working time, especially from the perspective of the transnational projection of services. This has especially repercussions in the field of remote work and teleworking, whose precautions are necessary to guarantee decent working conditions, regardless of the place in which the services are provided. Along with this phenomenon of remote work and transnational teleworking, another important action gap occurs in relation to the development of transnational digital platforms. In this sense, we can highlight the joint application of teleworking with productive crowdsourcing, which certainly manifests itself as a real challenge to work standards. Labor legislation does not contemplate these realities, which in a limited way are projected on the geographical and individual relocation of workers. In short, a new area of international labor contracting is developing, which can occur with and without displacement of workers.

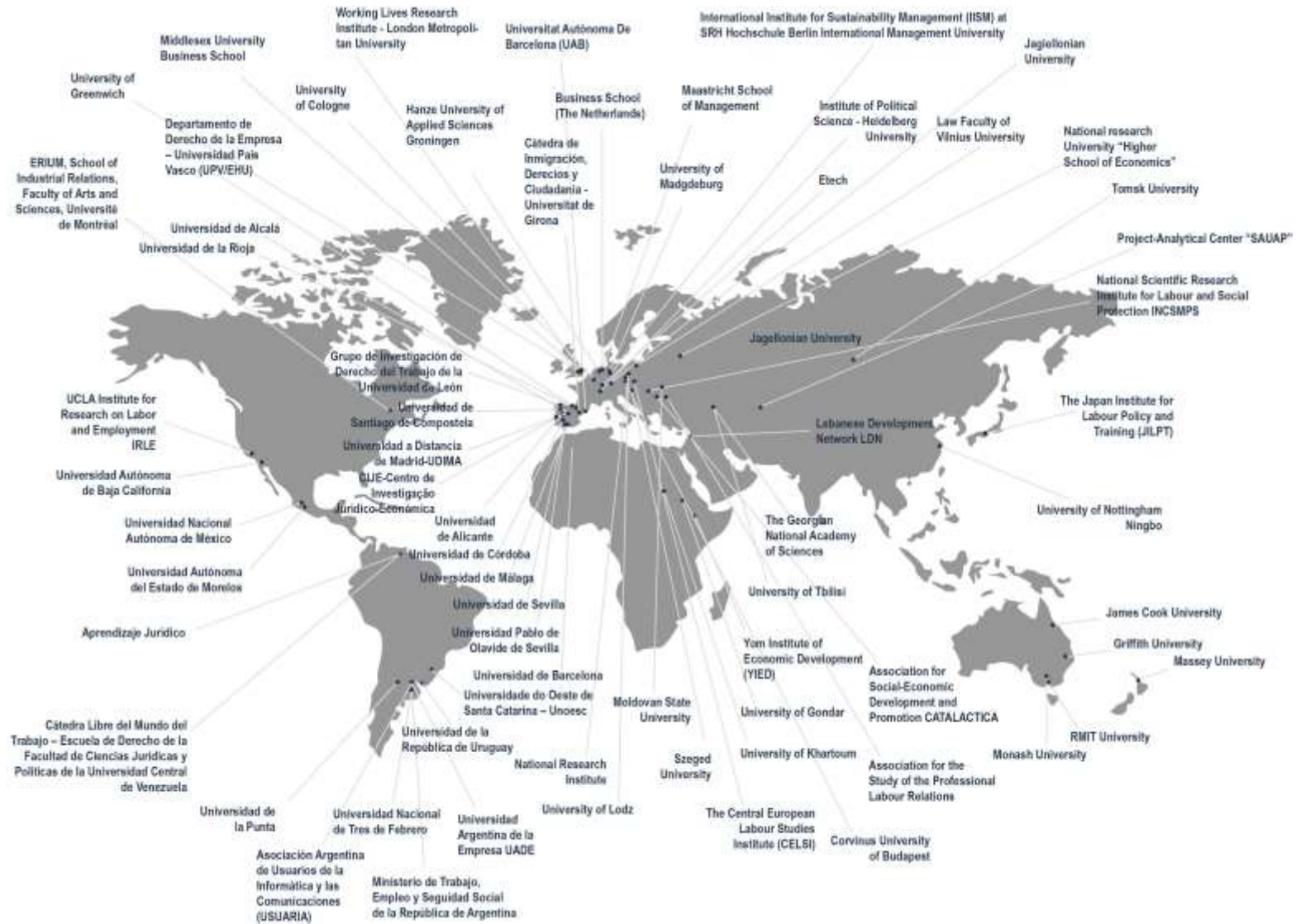
This process requires a new response from Labor Law. This implies the need to adapt labor standards to this unstoppable reality and all of this in the key of guaranteeing the rights of workers. One of the problems is the important drift that international *soft law* has had and the relaxation of State action from the perspective of intervention in labor. Therefore, the necessary development of transnational collective bargaining plays an especially important role. Without a doubt, this can be an effective tool in the work of regulating working conditions and can also serve as a way to refer and promote international regulatory action.

This objective also allows the possibility of developing the notion of decent work and recovering the projection of important international labor instruments, especially with regard to the ILO international conventions relating to working hours and the promotion of occupational health. Likewise, it is important to highlight the action of the international commitments derived from the ILO declarations regarding multinational companies, especially in the face of the insufficiency or lack of capacity to apply the standards when it comes to guaranteeing the rights of people.

workers. This situation occurs especially in situations of labor abuse derived from the relocation and internationalization of labor relations³¹. It is a problem of social projection, which also transcends the scope of action of Labor Law. Of course, in this entire process, civil society and especially national and international trade union and business organizations have an essential role to play. Without a doubt, this work of support and decisive commitment to the protection of work is an essential factor for the guarantee of our social and democratic State of Law. This work contributes to the development of a framework of minimum working conditions, which not only benefits the society of each country, but also has a role aimed at promoting decent working conditions in less developed countries.

³¹ Likewise, we can highlight the projection that the socio-labor clauses inserted in free trade agreements have in this matter. These are important instruments derived from Public International Law, which, in counterbalance to free trade, guarantee the observance of fundamental international rights at work.

ADAPT International Network



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