

Available online at www.sciencedirect.com

ScienceDirect

Procedia - Social and Behavioral Sciences 150 (2014) 1157 – 1166

Procedia
Social and Behavioral Sciences

10th International Strategic Management Conference

Managing absenteeism in the workplace: the case of an Italian multiutility company

Federica Cucchiella^{a*}, Massimo Gastaldi^a, Luigi Ranieri^b^a*Department of Industrial and Information Engineering and Economics, L'Aquila, 67100, Italy*^b*Hera Group, Bologna, 40127, Italy*

Abstract

Absenteeism is an employee's intentional or habitual absence from work. While employers expect workers to miss a certain number of workdays each year, excessive absences can equate to decreased productivity and can have a major effect on company strategies, finances, morale and other factors. The main aim of this paper is to take a broad view of the causes of workplace absenteeism in the Hera Group, an Italian multiutility leader in environmental, water and energy services, and to describe various facets of its assessment and management. It is intended to provide both an overview on absenteeism data and then progress to exploring solutions and discussions on absenteeism problems, connecting strategic goals with human resource related issues.

© 2014 The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/3.0/>).

Peer-review under responsibility of the International Strategic Management Conference.

Keywords: Absenteeism, Multiutility, Organization performance, Strategic human resource management

1. Introduction

Absenteeism has been traditionally considered a relevant problem of human resource management (HRM) in a wide sectors and organizations (Bycio, 1992; Harrison and Martocchio, 1998). HRM can be separated in three major subfields (Boxall, Purcell and Wright, 2007): micro HRM (MHRM), strategic HRM (SHRM), and international HRM (IHRM). Micro HRM covers the subfunctions of HR policy and consists of two main categories: one with managing individuals and small groups (e.g. recruitment, selections, induction, training, performance management and remuneration) and the other with managing work organization and employee voice systems. Strategic HRM covers the overall HR strategies adopted by business units and companies and tries to measure the impact on performance. International HRM covers HRM in companies operating across national boundaries. The overall goal of strategic

* Corresponding author. Tel. +39-862-434464 fax. +39-862-434403

Email address: federica.cucchiella@univaq.it

HMR for an organization is to link HR activities and actions (deploy and allocate human resources) in order to obtain competitive advantages and performance (Ahmad and Schroeder, 2003; Green *et al.* 2006; Aktar, Ding and Ge, 2008; Lengnick-Hall *et al.*, 2009; Harpaz and Meshoulam, 2010). The management of absenteeism is one of the main strategic actions in HRM that an organization may pursue in order to assure company performance and success (Goetzel *et al.*, 2004; Halbesleben, Whitman and Crawford, 2014).

Absenteeism is a relevant and strategic problem in HRM for private and public sectors of many countries. Many papers show that public employees are more prone of taking sick leaves compared to similar employees working in the private sectors. This phenomenon has reached in Italy very important proportions: according to data from the Italian Economic Minister, in year 2009 the Italian public sector employees took a quote of days off due to sick-leaves 30% more than their private sector counterparts. These absences produces direct costs, in terms of continued wage payments to absent workers, and indirect costs due to the adverse effects on the quality of services offered. It is well known that absenteeism may generate positive and negative consequences on the individual, co-workers, work-group, the organization, the community and the society (Goodman and Atkin, 1984). The aim of this work is to look into the responses of easy implementation that the companies can use to reduce the absenteeism to an admissible level. First of all we examined benchmarks by taking into account the data on the absenteeism of the Hera Group and we compared them with the main international and national competitors analysing the geographic differences which are present within the territorial areas where the Group works. Then the main characteristics of the absenteeism in the Hera Group are analysed, based on personal, organisational and job employers' features. Finally we present the key actions that the company can use to efficaciously face the absenteeism. These proposals clearly show that the *quick win* solutions that operate on especially "soft" aspects, can have good effects. In particular, our analysis shows that the main interventions may be concentrated in initiatives oriented towards the communication, proposals focused on the motivation and initiatives for the health protection. This paper is organized as follows. After this introduction a brief literature review on absenteeism and a concise presentation of the Hera Group are outlined in section 2 and 3. In section 4 the absenteeism concept is analysed while in section 5 a benchmark analysis is presented to compare absenteeism data between Hera Group and its competitors. Section 6 is devoted to outline a quantitative analysis able to underline specific characteristics of absenteeism related to personal, organizational and job features. In section 7 actions to mitigate absenteeism negative consequences and to assure performance are presented. Concluding remarks close the paper.

2. Absenteeism Literature Review

A growing economic literature is devoting attention to absenteeism analysing the effects on worker behaviour of a large number of variables (see, among others, Dionne and Dostie, 2007; Barmby, Ercolani, and Treble, 2002). Some of these variables are related to individual characteristics (gender, age, education, health status, etc.), while others are related to contractual and institutional aspects (such as the generosity of sickness benefits, the degree of employment protection, firm size, type of job, labour market conditions, etc.). Since the worker's effective state of health is typically costly to observe for the employer or for public authorities (and even for qualified physicians), sickness insurance creates a classical moral hazard problem for workers, who, given the prospect of gaining a wage without providing any effort are induced to take days off work. This opportunistic behaviour tends to be encouraged by employment protection measures. A number of works have focused their attention on the relationship between firing costs and absence behaviour showing that workers on fixed term contracts or on probation, for which contractual arrangements are characterized by less severe firing restrictions, present lower absence rates (Arai and Thoursie, 2005; Ichino and Riphahn, 2005; Scoppa, 2009). Other works have highlighted a positive relationship between firm size and absence rates, which can be explained in relation to the higher monitoring costs faced by larger firms (Winkelman, 1999). Moreover, absence behaviour has also been shown to be negatively related to unemployment, since the threat of termination to prevent shirking tends to be related to labour market conditions (Leigh, 1985, Hesselius, 2007). Curington (1994) and Meyer *et al.* (1995) examine the effects of several legislative changes in benefit levels on absence using US data. They show that increases in these benefits produce an increase of employees' opportunistic behaviour. Cucchiella and Gastaldi (2006) and Cucchiella *et al.* (2010) analyse the relation between workforce and risks in supply chain management while Campisi and Gastaldi (1996) show the role of workforce in I-O analysis. An international comparison of the effects of sickness benefits on individual absenteeism is provided by Frick and Malo (2008). Using cross-section data from the European Survey on Working Conditions they show that individuals tend to

be more absent in countries with higher level of sickness benefits. From the existing literature it emerges that reduction in sick pay may help at solving moral hazard problems that seem to be responsible for a considerable fraction of workplace absences. However, the literature on the absenteeism issue provides evidence only for a small number of countries. Our analysis is an attempt to reduce this gap by providing evidence on a country that has scarcely been investigated by previous works and contributing to a better understanding of the relationship between absence behaviour and organizational management.

3. The Hera Group

This paper analyzes the absenteeism in the Hera Group organizational context, Italy's leading multi-utility company with over 8,500 employees covering a large area throughout Emilia-Romagna, in part of the province of Pesaro-Urbino and the in the provinces of Padua and Trieste. Since establishment in 2002, Hera records a constant growth becoming one of the largest multi-utility in Italy reaching a 2012 turnover of 4.5 billion euro serving about 1.8 million customers (on average). Hera is currently “Top” ranked at national level in three main businesses, waste, gas and water. Human resource management is strategic for the Hera Group: the main investment is in human capital, training people to support the mission of the Group while helping them to develop a competitive advantage. Indeed, Gruppo Hera in 2014 was awarded a second place in the Top Employers among the best Italian companies.

4. The concept of absenteeism

The definition of absenteeism is a “habitual absence from work for one or more days, usually justified by medical certificate but, actually, due to personal interests and poor sense of duty.” In addition, the definition becomes more severe by adding - “Indifference, lack of interest in political and social problems or in issues of common interest”. It is easy to notice the negative meanings of these definitions which underline the abuse of the personal absences as opposed to the company or the society interests. As it usually happens, the negative side of the phenomenon is stressed even though, as you can easily imagine, it is a necessity justified in many cases, as well as a right luckily obtained after years of working class struggles. In fact absenteeism has different expressions, all permitted by law:

- Vacations: a time of respite from work.
- Day off: absence from employment for a period of time planned before with the employer.
- Strikes: collective abstention from work by the employees in order to protect their economic, political and union interests.
- Leave: work suspension to reconcile the employer’s position with his public commitments or the occurrence of personal and family problems.
- On-the-job injury: work accident which causes the temporary impossibility to continue the activity.
- Sick leave: pathological condition that causes inability to do the work usually done by the worker.
- Make-up hours: work suspension to recover the hours of overtime prematurely done.

In this paper we consider only few forms of absenteeism, as it follows:

- Great or excessive use of paid leaves.
- Regular recourse to sick leaves.
- Absences without leave.
- Habitual lack of punctuality or lack of observance of the minimum working hours.

It is well known that a company has to face this negative connotation of the phenomenon. We cannot forget that an ethical company has to consider the work life balance of its employees, by respecting their free time and by leaving enough time for the happy events such as maternity and paternity. If it is easy to define the absenteeism, the study of its causes is not easy because the phenomenon is rooted in many aspects of the modern life. By schematising, we can identify five main causes of absenteeism (Del Boca and Parisi, 2010):

- The workforce’s individual characteristics, that is the differences due to gender, age, holdings, etc. For example, we observe a difference between the female and the male absenteeism rate. Moreover, if employee

personal holdings increase thanks to winnings or an inheritance, it will be plausible that his income and his work acquire less importance for him and he could dedicate less time to his work because he thinks it is more satisfactory to dedicate time to the use of the new holdings.

- The culture, that obviously plays on the propensity for the absence: the sense of responsibility, the motivation and many other aspects relating to the culture (extra and intra organizational) contribute to push or to keep the person from being absent.
- The contractual agreements and the organizational flexibility, the significant indexes are the amount of part-time and the presence of atypical contracts in the organisation.
- The institutions: among the State's obligations there is, for example, the sickness insurance. In the event that the absence cost is distributed between the company and the social security institutes, the system will behave differently depending on which one of the two players will have to pay for the absence. For example, if the burden is completely at the expense of the company for the absences from 1 to 10 days of sickness and at the expense of the social security institute for the absences from 11 to 100 days, it will be observed a higher frequency of the sickness certificate up to 10 days.
- The market conditions: the labour market (and the unemployment rate) gives more discipline to the absence. If the labour demand is higher than the labour offer, as it happens for any commercial product, the labour value increases as well as the employer's effort to not lose it.

So we can state that the absenteeism cannot be faced as a simple phenomenon because it is connected to a plurality of causes and it represents a symptom of social, economic and, above all, organisational inefficiency. Effectively, the sociology for labour considers the absenteeism in general as the index of a bad organisational climate and of a dysfunctional and not motivating organisation for the persons, that does not ask and does not fairly compensate the employers. Therefore, the absenteeism is a sociological phenomenon directly connected to the individual and the company behaviour and to the general work conditions. For this reason, satisfactory and motivating work conditions and environments proved to be the fundamental factors for the absenteeism decrease, while the opposite conditions, the disaffection and a scarcity of company supervisions, support the phenomenon. We will find a confirmation by a parallelism between absenteeism and the results of the climate survey done within the Hera Group. In general, the absenteeism is the result of psycho-social conflicts caused by a significant deterioration of the relationships between the employer and the company. Some analyses have identified three key factors related to a personal justification:

- Possibility of development and internal mobility: where the company ensures the employee development or it facilitates the tasks change, the absenteeism tends to decrease. The development aspects, in effect, by supporting the professional growth and the possibility to change task within the same company, create an incentive and they reduce or oppose the fact that monotony and repetitiveness may arise, which could cause disaffection and disinterest in medium-long term.
- Company evolution: in crisis or difficulty conditions, especially when the job seems in danger, the absenteeism tends to decrease to try avoiding the unemployment.
- Economic internal factors: the absenteeism tends to increase when the employee thinks to be really underpaid and his motivations go down.

By studying the organizational effects related to the absenteeism, we find that the phenomenon can really bear on many company's dynamics:

- It forces to oversize the workforce.
- It penalizes the planning of the working activities, especially in relation with the necessity of rotations and availability.
- It stops the company's processes in the case of employers who have critical competences and knowledge.
- It has a big economic effect.

It is evident that the phenomenon can have a bad effect on many company's dynamics but we cannot forget that, otherwise, the excessive presence causes phenomena of "*presenteeism*", which are originated by the presence at work even when the employee is ill, with the risk that he makes mistakes or he infects his colleagues. We would like to analyze more in the detail some of the listed aspects. Referring to the organizational effects of the absenteeism, the phenomenon forces to oversize the workforce because the FTE necessary to execute the generic activity K is obtained by dividing the yearly working hours necessary for the activity (K activity total effort) by the yearly working hours:

$$FTE_k = \frac{TE_k}{YWH}$$

where FTE_k is the Full Time Equivalent related to activity k, TE_k is total effort related to activity k and YWH are the yearly working hours. As for a theoretical yearly working hours, we have to consider also the peculiarities of the organizational structure to resize, by referring to historical data of presence. For this reason, by reducing the denominator, it will be necessary to have more *Full time equivalent* to guarantee the K activity, because of the absenteeism. As for the planning of the working activities and, especially, of the rotation, we observe the phenomenon of the self-discipline, which pushes the employees to reciprocally supervise the behaviours. Actually, in these work environments, there is a direct connection between the absence of a shift worker and the obligation of a colleague to do his shift (sometimes, by doing a double shift). Therefore, it causes a self-discipline which causes a decrease of the absenteeism. In the case of Hera Group, referring to a specific area where the Group works (area A, Ravenna), we compared in figure 1 the absenteeism due to the shift workers (blue collars) and not shift workers population.

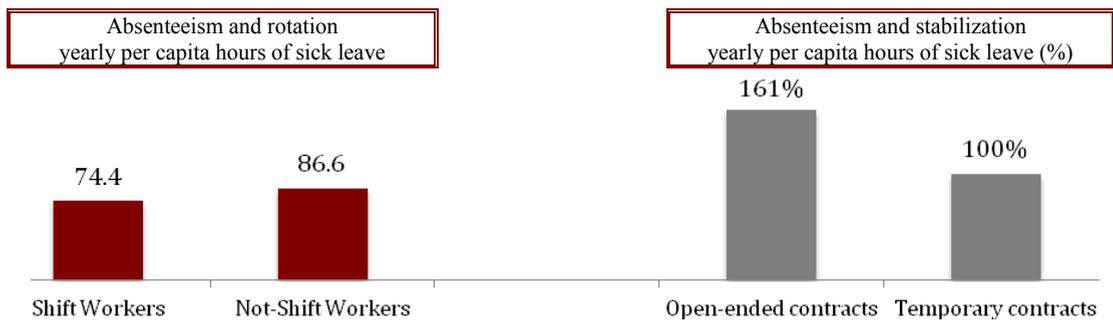


Figure 1. Absenteeism, rotation and stabilization

We observe that the non-shift workers do 10 hours of sick leave more than their shift workers colleagues. Finally, if we take in consideration the problems caused by the absenteeism in the Call Centers and their relation to the transitions from temporary contracts to open-ended contracts, we observe that, considering a sample of 39 companies, the absenteeism rate has increased immediately after the stabilisation of the call center workers. This process is confirmed comparing these data with the per capita hours of absenteeism recorded in 2011 in the Hera Group: the open-ended employees record an absenteeism of 61% more than their non open-ended employees colleagues as shown in figure 1.

5. External and internal benchmark related to absenteeism phenomenon

In this section we examine benchmarks in order to compare absenteeism data in the Hera Group with competitors and analyse national geographic differences. There is a constant decrease of the hour of sick leave from 2009 to 2011 with a per capita average value of 7,4 days per year. Notice that in Europe, Italy has a value of 6,7 days per year, Turkey with 4,6 days is the best European country and the Bulgaria was the last with 22 days. The European analysis suggests that the main aspect which reduces the absenteeism is the professional devotion and the motivation. Since the sickness is the main cause of absenteeism, it is clear that its control and management need more improvements. So we compared the average per capita hours of sick leave recorded in the different areas where the Group works observing different absenteeism values. As a consequence, we decide to limit the quantitative analysis to the Area A (Ravenna), and to not analyse the Group labour population located in the other areas (figure 2).

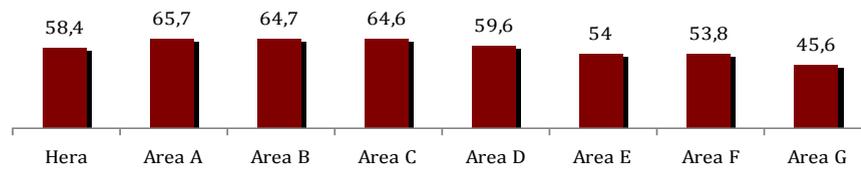


Figure 2. Absenteeism and territory, yearly per capita hours of sick leave

6. Absenteeism quantitative analysis in the Hera Group

In this section connections between the absenteeism and other aspects related to the personal dimension of the employee are presented. The following employees' features are considered:

- Personal characteristics: gender, age and educational qualification.
- Organisational characteristics: business areas and employee position.
- Characteristics related to the job: tasks and suitability.

The main personal characteristics can be summarized as follows:

- The female employees get sick more compared to the male employees (figure 3).
- The 50-59 age range is the one which records more absences, especially for the men (figure 4).
- As show in figure 5 a lower education degree coincides with a higher inclination to get sick (this result is also coherent with the outcome of the connection of the absenteeism with the task; in fact it is more probable that the more operational tasks, usually related to outdoors tasks and more subject to the atmospheric factors, especially in winter, are linked to the employees with a lower education level).

Now we take into account the organisational aspects that characterize the human resources of the Group:

- The environment business area has the higher number of absences (figure 6).
- As the responsibility increases, we observe a decrease of the incidence of the sickness (figure 7).
- Differences between managers and executives are not observed.

To conclude this quantitative analysis of absenteeism, we analyse the following employee tasks:

- In the environment business area, the tasks with a higher physical "load" record more sick leaves as shown in figure 8; this is not true for the distribution network area (figure 9).
- The videoterminal employees assume different absenteeism values in the business areas (figure 10).

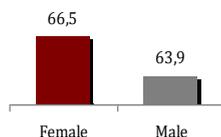


Figure 3. Absenteeism and gender, Yearly per capita hours of sick leave

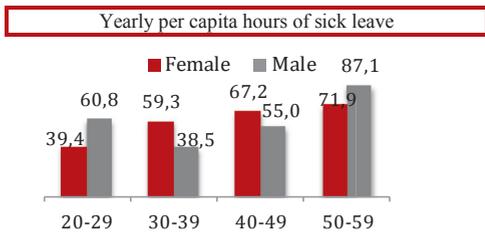


Figure 4. Absenteeism, gender and age

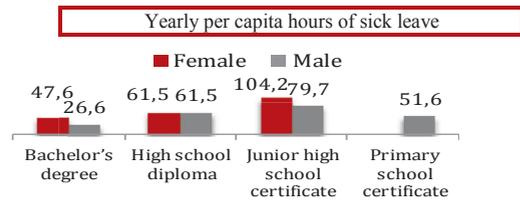


Figure 5. Absenteeism, gender and educational qualification



Figure 6. Absenteeism and business area, Yearly per capita hours of sick leave



Figure 7. Absenteeism and employee position, Yearly per capita hours of sick leave



Figure 8. Absenteeism and employee task (Environment area), Yearly per capita hours of sick leave

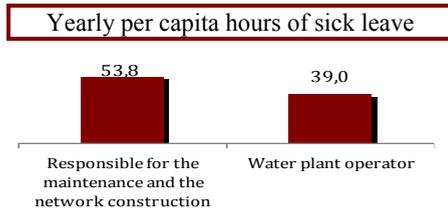


Figure 9. Absenteeism and employee task (Distribution Network area)

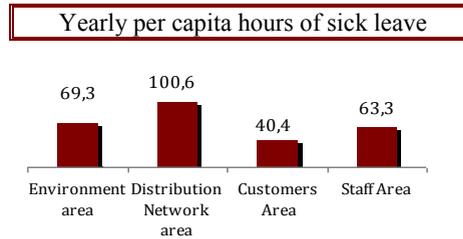


Figure 10. Absenteeism and employee task (Videoterminal)

7. Strategic actions proposals

The quantitative results presented in the previous section facilitate the definition of the strategic proposals to enforce in the company to face the phenomenon of the absenteeism. “Soft” solutions are preferred, with the only purpose of increasing the phenomenon perception and inciting the people to speak about it. The absenteeism, in fact, is connected to motivational factors and its decrease cannot be reached by company unilateral actions (which could ironically worsen the situation), but it has to be faced with the collaboration of the workers’ delegation in order to trying to act directly on the triggering causes. We clustered the interventions as follows:

- Initiatives oriented towards the communication; since the communication can modify the resource behaviour, we need to aim at the feedback to let emerge those behaviours, accepted and not, that are usually easier to ignore to avoid troubles. So it is important to communicate to the best and worst performers the data concerning their absenteeism and to give them notice to all the respective supervisors. In addition, the return to work, especially after long absences (for example after the maternity leave), can be sometimes difficult and stressful. In that sense, we can consider, as business procedure, the interviews of return to work which are a useful mean to understand the possible new necessities of the worker, to give him a psychological support and to minimise the next absences.
- Proposals focused on the motivation; starting with the assumption that the absenteeism can compromise the employee performance, especially if they hold a position of responsibility, during the evaluation phase it can be taken in consideration the absenteeism data. Since one of the elements which reduces the absenteeism is the motivation and it has been observed that in Hera the senior workers are the most absent, there can be developed some interesting actions of intergenerational dialogue which consider specific initiatives, as the tutoring, that can act on the motivational element of the seniors.
- Initiatives for the health protection. Thanks to the health promotion in the company, it is possible to increase in the long period the company quality and productivity. As a matter of fact, the healthy workers are more efficient and motivated. Also with the support of the specialist doctor, it is possible to launch some activities of analysis that, beginning from a study about the main physical problems came to light during the periodic check-ups, put in practice a campaign for the health by focused actions and conferences/seminars. The campaign could also include some general initiatives with the aim of reducing the short-lasting sickness (e.g. free anti-flu vaccine on demand for the high-risk category). For this reason, it turns out to be useful to distinguish between actions oriented toward the circumstances (as ergonomic workspaces, noise protection systems and work organization) and actions oriented toward the behaviour (as sport events, nutrition expert advice and information campaigns about smoke and alcohol).

To summarize, the absenteeism can be reduced if we take in consideration the dimension and the depth of the phenomenon, by spreading the right company culture and by assigning responsibility to the entire network of actors.

In particular the employee must work in a responsible way respecting the Company and the colleagues; he must be absent only when it is strictly necessary and eventually communicate the absence immediately to the supervisor. At the same time the supervisor must be aware that a good and exemplary leadership helps the collaborators management, by motivating them and inciting them to reduce the absences. The supervisor must check and promptly communicate the collaborator absences to the HR manager; moreover he must take in consideration also the absenteeism during the performance evaluation phase and give motivational feedbacks to the persons most absent. The HR business partner must hand over the good procedures of resources management to the supervisors, by developing a culture of the leadership which has to take in consideration the absenteeism; he must know the best management practices of the phenomenon, supervise the interviews of return to work and promote the health in the company.

Conclusions

Strategic human resource management focuses on human resources programs with long-term objective. The primary goal of strategic human resources is to increase employee productivity by focusing on business obstacles able to limit company performance. The primary action of a strategic human resource manager is to identify key HR areas where strategies can be implemented in the long run to improve the overall motivation and productivity. In this paper an analysis of one strategic aspect of HR, absenteeism, is studied with the aim to define actions able to allow employee productivity and company performance. This study follows the emerging interest of HRM on strategic issues accompanied in the future by a greater emphasis in linking absenteeism control to business competitive and organizational performance. To conclude the presented analysis is useful to give an evaluation of the direct costs due to the absenteeism phenomenon, that is the cost due to services not supplied, and about the indirect costs attributable to the company procedures slowdown, to the lesser quality of the services and the consequent lesser competitiveness. We estimated that the only cost of sickness absence is about 1,5% of the total workforce cost paid by the Hera Group in 2011.

References

- Ahmad, S. and Schroeder, R. (2003), "The impact of human resource management practices on operational performance: recognizing country and industry differences", *Journal of Operational Management*, 21 (1), pp. 19-43.
- Akhtar, S., Ding, D.Z. and Ge, G.L. (2008), "Strategic HRM practices and their impact on company performance in Chinese enterprises", *Human Resource Management*, 47 (1), pp. 15-62.
- Arai, M. and Thoursie, P. (2005), "Incentives and selection in cyclical absenteeism", *Labour Economics*, 12, pp. 269-280.
- Banerjee, A. and Duflo, E. (2006), "Addressing Absences", *Journal of Economic Perspectives*, 20, 1, pp. 117-132.
- Barmby, T., Ercolani G. and Treble, J.G. (2002), "Sickness Absence: an International Comparison", *Economic Journal*, 112(480), pp. 315-331.
- Boxall, P., Purcell J. and Wright, P.M. (2007), "Human resource management: scope, analysis and significance", in Boxall P., Purcell J. and Wright P.M. (eds.), *The handbook of Human Resource Management*, Oxford University Press, pp. 1-16.
- Bycio, P. (1992), "Job performance and absenteeism: a review and meta-analysis", *Human relations*, 45, pp. 192-220.
- Campisi, D. and Gastaldi, M. (1996), "Decomposing growth in a multiregional I-O framework", *Annals of Regional Science*, 30, 4, 409-425.
- Cucchiella, F. and Gastaldi, M. (2006), "Risk management in supply chain: a real option approach", *Journal of Manufacturing Technology Management*, 17 (6), pp. 700-720.
- Cucchiella, F., Gastaldi, M. and Koh, L.S.C., (2010), "Performance improvement: an active life cycle product management", *International Journal of Systems Science*, 41 (3), pp. 301-313.
- Curington, W. P. (1994), "Compensation for Permanent Impairment and the Duration of Work Absence: Evidence from four natural experiments", *Journal of Human Resources* 29 (3), pp. 888-910.
- Del Boca, A. and Parisi, M.L. (2010), "Why Does the Private Sector React Like the Public to Law 133? A Microeconomic Analysis of Sickness Absence in Italy." University of Brescia, Department of Economics Discussion Paper No.1008. Available at SSRN: <http://ssrn.com/abstract=2118774> or <http://dx.doi.org/10.2139/ssrn.2118774>.
- Dionne, G. and Dostie, B. (2007), "New evidence on the determinants of absenteeism using linked employer-employee data", *Industrial & Labor Relations Review* 61 (1), pp. 108-120.
- Frick, B. and Malo, M. (2008), "Labor Market Institutions and Individual Absenteeism in the European Union: The Relative Importance of Sickness Benefit Systems and Employment Protection Legislation", *Industrial Relations*, 47, 4, pp. 505-529.
- Goetzal, R.Z., Long, S.R., Ozminkowski, R.J., Hawkins, K.H., Wang, S. and Lynch, W. (2004), "Health, absence, disability, and presenteeism cost estimates of certain physical and mental health conditions affecting U.S. employers", *Journal of Occupational and Environmental Medicine*, 46, pp. 398-412.

- Goodman, P. S. and Atkin, R.S. (1984), "Effects of absenteeism on individuals and organization", *Tepper School of Business*, Paper 848.
- Green, K.W., Wu, C., Whitten, D. and Medlin, B. (2006), "The impact of strategic human resource management on firm performance and HR professionals' work attitude and work performance", *International Journal of Human Resource Management*, 17 (4), pp. 559-579.
- Halbesleben, J.R.B., Whitman, M.V. and Crawford, W.S. (2014), "A dialectical theory of the decision to go to work: bringing together absenteeism and presenteeism", *Human Resource Management Review*, 24, pp. 177-192.
- Harpaz, I. and Meshoulam, I. (2010), "The meaning of work, employment relations, and strategic human resources management in Israel", *Human Resource Management Review*, 20, pp. 212-223.
- Harrison, D.A. and Martocchio, J.J. (1998), "Time for absenteeism: a 20-year review of origins, offshoots, and outcomes", *Journal of Management*, 24, pp. 305-350.
- Hesselius, P. (2007), "Does Sickness Absence Increase the Risk of Unemployment?", *Journal of Socio-Economics*, 36, pp. 288-310.
- Ichino, A. and Riphahn, R. (2005), "The Effect of Employment Protection on Worker Effort: Absenteeism during and after Probation", *Journal of the European Economic Association*, 1, pp. 120-143.
- Leigh, J. (1985), "The effects of unemployment and the business cycle on absenteeism", *Journal of Economics and Business*, pp. 159-170.
- Lengnick-Hall, M.L., Lengnick-Hall, C.A., Andrade, L.S. and Drake, B. (2009), "Strategic human resource management: the evolution of the field", *Human Resource Management Review*, 19, pp. 64-85.
- Meyer, B.D., Viscusi, W.K. and Durbin, D. L. (1995), "Workers' compensation and injury duration: Evidence from a natural experiment", *American Economic Review* 85 (3), pp. 322-340.
- Scoppa, V. (2009), "Shirking and Employment Protection Legislation: Evidence from a Natural Experiment", MPRA Paper 16694, University Library of Munich, Germany.
- Winkelmann, R. (1999), "Wages, Firm Size and Absenteeism", *Applied Economics Letters*, 6, pp. 337-341.