



Contents lists available at ScienceDirect

Safety Science

journal homepage: www.elsevier.com/locate/ssci

Special Issue Article: Effects Financial Crisis

Maintaining occupational safety and health levels during the financial crisis – A conceptual model

Ioannis Anyfantis^{a,*}, Georgios Boustras^b, Alexandros Karageorgiou^a^a Center for the Prevention of Occupational Hazards of Central Greece, Labour Inspectorate (SEPE), Greek Ministry of Labour, Farsalon 6, 41110, Larissa, Greece^b Center for Risk, Safety and the Environment (CERISE), European University Cyprus, 6 Diogenes Street, Egkomi, 2404 Nicosia, Cyprus

ARTICLE INFO

Article history:

Received 7 November 2015

Received in revised form 15 February 2016

Accepted 17 February 2016

Available online xxxxx

Keywords:

Occupational accident rates

Financial crisis

OSH level model

OSH safety net model

Risk communication across OSH leveling

ABSTRACT

The current financial crisis has imposed significant pressure upon the labour market and working conditions while, at the same time, Occupational Safety and Health (OSH) is challenged. Crucial organizational functions such as training, new work equipment purchasing and innovation are mainly affected. Literature suggests a positive correlation between a country's GDP (Gross Domestic Product) and accidents' rate with a respective phase shift (time lag) representing the required time needed for adaptation.

This paper presents a new model, based on a qualitative approach. This paper proposes a new model according to which OSH is defined by eight (8) determinants which are interacting, adapting and defining OSH's level, flexibility and strength against pressure posed by external factors like recession. In effect, this model acts as an opposing force to any pressure posed on OSH. Steady state is defined by the net's density, strength and OSH's centrality while the key for stability is National Labour Inspectorate's (NLI) position and relation with each of the stakeholders. That can be achieved either by regulatory surveillance and strong enforcement or by raising general public awareness, taking advantage of the social amplification/attenuation theories regarding risk. An additional model of risk communication across the OSH leveling determinants is proposed. The proposed models are evaluated by the use of the Greek paradigm.

© 2016 Elsevier Ltd. All rights reserved.

1. Introduction

The global financial crisis that followed the Lehman Brothers' crisis (2008) had significant impact in most European countries. Greece was hit by recession, austerity measures for strong and sustained fiscal consolidation and deep structural reforms, directly affecting the structure of the labour inspectorate as well as the number of labour inspectors. In that context labour market and working conditions undertook significant pressure and OSH was and continues to be challenged. This paper attempts to identify the determinants that support OSH and puts forward a model of maintenance of an acceptable OSH level, in countries hit by financial crisis.

Authors confirmed that occupational injury rates are influenced by economic cycles. Thus, periods of economic slow-downs may accompany a reduction in the number of injuries. Therefore, it would be logical to suppose that during an economic crisis, given the apparent rise in unemployment rate and subsequent reduction of employed workers, the number of injuries would also fall. This manuscript attempts to investigate apart from the variations in

the number of active workforce, additional parameters that influence the number of occupational accidents. Studies conducted on injury rates during economic expansion, established that the demand for work led to work intensification and in a consequence increase of workload (Kossoris, 1938). Also they made clear that the rapid incorporation of inexperienced workforce increased injury rates at work (Kossoris, 1943). Other authors have argued that an increased workload implies a longer working day with overtime, resulting in workers becoming even more tired and having more injuries (Shea, 1990). On the contrary, other authors were unable to find any clear evidence that overtime and work-load affect injuries in the workplace (Schuster and Rhodes, 1985).

Previous studies indicated that minor injuries are underreported during periods of recession (Román, 2006), which reduce the official number of minor injuries reported. Leigh (1985) also established a relation between unemployment and occupational absenteeism indicating that high unemployment rates lead to lower absenteeism.

The aim of this paper is to propose a conceptual model that defines OSH and positions it into the social-economic environment. This model is used to shed light on the reasons for which the incidence index fell in times of economic crisis and provides a scheme that could support OSH and reposition it in the affecting

* Corresponding author. Tel.: +30 2410616106, mobile: +30 6977532626.

E-mail address: yiannis4@gmail.com (I. Anyfantis).

environment. Several attempts have been made to identify OSH determinants (Boustras and Economides, 2014). However this analysis takes into account all possible parameters to investigate the internal forces that interact and shape OSH leveling and proposes ways to support and sustain an acceptable level within economic slowdown.

2. The nature and economic consequences of the Greek financial crises

The Lehman crisis in 2008 had a serious impact on most Euro-zone countries which entered a deep financial crisis spiral that has significantly affected Europeans' lives. In Greece in 2009 the general government deficit reached 15.5% of GDP (after incorporating data revision) and public debt climbed at 129% of GDP, 75% of which was held by non-Greek investors (Greek Statistical Authority, 2014). Actually the Lehman crisis was just the ignition that sparked the "time-bomb" and uncovered the underlying deficiencies of the Greek economy and the respective political culture.

Additionally since 2010, Greece is under a State – Aid program in order to restore market confidence. This is considered the way of laying the foundations for a sound medium-term growth through strong and sustained fiscal consolidation and deep structural reforms (service sector, Pension, revenue administration, fiscal, Labour market) while safeguarding financial sector stability and reducing the risk of international systemic spillovers (Reuters, 2010).

The economic sectors that were mostly affected by the financial crisis in all European countries were construction (–20%) and all relevant economic sectors, as well as transportation, wholesale and retail trade sectors (EU, 2010; ICAP, 2013) (see Fig. 1).

As a consequence unemployment rates dramatically increased (Greece: 27.2% official unemployment rate in May 2014) underpinned by economic instability and uncertainty (Greek Statistical Authority, 2014). In that context, it could be argued that the economic crisis has also revealed pathogeneses well hidden during the last decades under the Greek economical system, political culture and industrial relations, that actually developed to an ethical, social and interrelations' crisis.

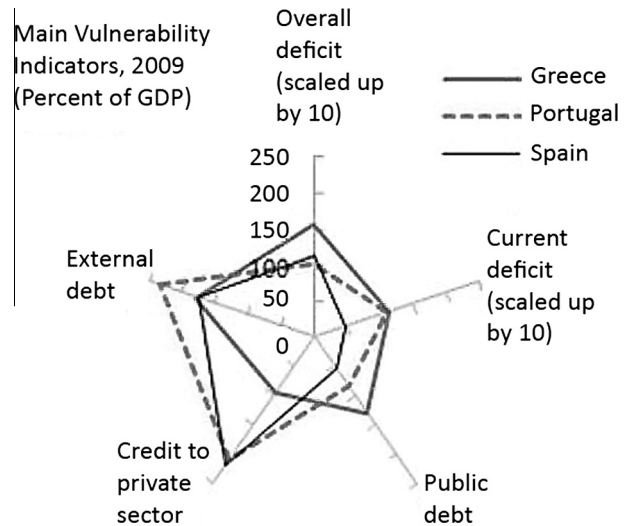
As a result significant pressure was put upon the remaining labour market and working conditions are challenged in many areas (e.g. OSH implementation, perspective and culture). In this context the Greek paradigm can clearly indicate the consequences of the financial crisis over OSH at a full extent.

3. Initial indication of the impact crises on OHS

The financial crisis, as it appears so far has affected OSH mainly in areas such as: training, purchasing of new work equipment and innovation. Additionally, sales of Personal Protective Equipment and training programs have been dramatically dropped in sectors hit by the recession i.e. in the construction sector A survey was conducted to investigate that. Eight (8) major production and re-selling firms were contacted and participated to the survey. However, the number of occupational accidents, including fatal as well as the respective rates, decreased during the period of the financial crisis (Greek LI Annual Report, 2012) (see Fig. 2).

By analyzing economic values from most European countries for the last few years during the different phases of economic cycles (Cooley, 1995), it could be argued that accidents' rate is strongly correlated to GDP, thus in periods of reduced economic activity occupational accidents' rates decrease (procyclical effects) (Davies et al., 2009; Davies and Jones, 2005; HSE, 2013).

However the two values are not perfectly related and occupational accidents' rates do not instantly follow GDP changes as in



Sources: IMF, *World Economic Outlook*, and IMF staff calculations.

Fig. 1. Main vulnerability indicators for European countries of the South (IMF, 2013).

the theoretical model. There is an apparent phase shift (time-lag) since firms, employees and in general all OSH determinants are trying to adapt and confront to possible pressure posed by the transition to a new stage of the economic cycle. Actually it takes some time for economic indicia to have an impact to real economy and life. Additionally the first shock impacts on workers psychology and loosens safety measures (see Fig. 3).

The reduction of occupational accidents and their respective rates during a financial crisis is probably due to:

- Dangerous economic sectors (e.g. construction) were significantly shrunk.
- High unemployment rates indicate a trend to keep more experienced workers and avoid recruiting workers having little experience (unemployment on the younger generations reaches almost 60%).
- A dramatic increase in under-reporting (due to the fear of dismissal).
- Undeclared (shadow) work.

Additionally, new risk factors such as employment risks and industrial risks are introduced and levels of perceived work intensity rise among the workforce. Employees are willing to accept more workload and longer working hours in order to keep their jobs (SLIC, 2012). Crisis is usually becoming an excuse for non-compliance with labour standards, and an argument to press on workers to accept lower standards on working conditions. The situation was made worse after changes in labour legislation leading to a dramatic increase of flexible employment relations, while undeclared labour has taken very troublesome dimensions (estimated up to 30%) and forms in an expanding recession environment (Greek Foundation for Economic and Industrial Research, 2012).

Moreover, relevant research shows the effects of the economic crisis on the psychosocial health of workers (SLIC, 2012). Typical impacts of that are: lost days at work (LWDs) or long term cardiovascular diseases related to higher stress level at workplace. Other studies (Burchell et al., 2002) indicate that relative risks of stress-related mental and physical disorders are twice as high among

Download English Version:

<https://daneshyari.com/en/article/6974880>

Download Persian Version:

<https://daneshyari.com/article/6974880>

[Daneshyari.com](https://daneshyari.com)