

Understanding the concept of OSH management and the promotion of innovation through regulations

The main purpose of developing OSH Management System is to create a sustainable system that does not rely solely on a specific person with OSH expertise. This concept is the core of the International Organization for Standardization – ISO standards which promote the creation of a sustainable system based on the assumption that humans make mistakes. Then, it is argued that government regulations may create inefficiency and hinder innovation, however, it has been shown that government regulations promoted innovation for some enterprises that tackled the regulations by overcoming the restriction to make it into the advantage in the market.

Keywords: OSH Management System, government regulations.

Il concetto di gestione della OSH e la promozione dell'innovazione attraverso le normative. Lo scopo principale dello sviluppo del Sistema di Gestione della SSL è quello di creare un sistema sostenibile che non faccia affidamento esclusivamente su una specifica persona con competenze in materia di SSL. Questo concetto è il nucleo degli standard Organizzazione Internazionale per la Standardizzazione – ISO che promuovono la creazione di un sistema sostenibile basato sul presupposto che gli esseri umani possono commettere errori. Quindi, esiste dibattito sulla possibilità che le norme governative possano generare inefficienza e ostacolare l'innovazione; tuttavia, è stato dimostrato che le norme hanno invece promosso l'innovazione per alcune imprese che hanno aderito alle norme, superando le difficoltà in modo che l'azienda godesse poi di un vantaggio sul mercato.

Parole chiave: Sistema di Gestione della OSH, norme governative.

La gestion de la SST et la promotion de l'innovation par la réglementation. L'objectif principal du développement du Système de Gestion de la SST est de créer un système durable qui ne repose pas uniquement sur une personne spécifique ayant une expertise en SST. Ce concept est au cœur des normes Organisation internationale de normalisation – ISO qui favorisent la création d'un système durable basé sur l'hypothèse que les humains peuvent faire des erreurs. Ensuite, il y a un débat sur la possibilité que les réglementations officielles peuvent créer de l'inefficacité et entraver l'innovation ; au contraire, il a été démontré que les réglementations favorisaient l'innovation pour certaines entreprises qui s'attaquaient à la réglementation pour obtenir d'avantages de marché.

Mots clés: Système de Gestion de la SST, réglementations officielles.

1. Introduction of the International Training Centre of the ILO

The International Labour Organization (ILO) was founded in 1919 in Geneva, Switzerland, as part of the Treaty of Versailles that ended World War I, based on the premise that social justice is essential to universal and lasting peace. Since then, the ILO tripartitely (in collaboration with the govern-

ment, workers and employers) set international labour standards (ILS) including a large number of standards related with OSH and promoted its member States to fulfill the minimum standards through providing some member States with technical supports. The International Training Centre (ITC) was founded in 1964 in Turin, Italy, as a training arm of the ILO since it is crucial to improve the quality of human resources of the governments, workers and

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employers in the member States. Now, ITC provides residential courses, tailor-made courses and online courses. From 2012, ITC in collaboration with the University of Turin provides Masters course on OSH that attracts practitioners, government officials and social partners around the world.

2. Why OSH Management System?

2.1. Global Estimates of Occupational Accidents and Work-related Diseases

Since most of the countries do not have reliable reporting and recording systems on occupational accidents and work-related diseases, the ILO makes a reasonable estimation of them considering the estimated rates of reporting, etc. According to the global estimate by the ILO in 2017, 380,000 fatal accidents occur and 2,400,000 fatal work-related diseases occur every year. The economic is also estimated to be as high as 3.94% of global Gross Domestic Product – GDP and especially it hinders developing countries from attaining social and economic development. In light of the situation, The 2030 Agenda with 17 Sustainable Development Goals (SDGs), adopted in September 2015 in New York, focuses on the impact of decent work on inclusive and sustainable economic growth highlighted by Goal 8 which aims to “promote sustained, inclusive and sustainable economic growth, full and productive



Fig. 1. Overview of the ITC in Turin.
Panoramica dell'ITC a Torino.

employment and decent work for all". The ILO will be celebrating the 100th anniversary of the foundation in 2019. The founding mission of the ILO that social justice is essential to universal and lasting peace is never getting obsolete but it is getting more and more relevant in the present age that still lacks decent work for many people.

2.2. Latest Topic on OSH Management System

The latest topic on OSH in 2018 is the issue of ISO 45001, Occupational health and safety management systems – Requirements. Since ISO 45001 follows the generic management system approach of ISO 14001 (environmental management) and ISO 9001 (quality management),

ISO 45001 is expected to promote employers to reduce workplace injuries and illnesses through integrating other ISO management systems standards that businesses have already introduced.

It is true that some employers are fed up with the requirements for documentation when then introduced ISO 14001 and ISO 9001 and they might be reluctant to introduce ISO 45001. However, you may notice that many of the requirements for ISO 45001 are already being implemented in your workplace, so it is enough to fulfill the requirements through the daily business and OSH activities. OSH Management System is not a goal or requirements, but it gives you hints to improve OSH and make OSH activities sustainable in your workplace.



Fig. 2. Goal 8 in SDGs.
Obiettivo 8 dei SDG.

2.3. Roman Empire and the Management System

There is no other Countries except for the Roman Empire that had flourished for as long as one thousand years. Why has it succeeded in retaining its states? One of the reasons for their success is said that because they had a system that does not rely on a single person and makes up for human mistakes by regulating laws and rules. In the early years, instead of laws and rules, they relied on emperors with strong leadership and foresight and it is true that such emperors were crucial for the foundation of the empire as many research results tell us that socialistic societies have higher economic development rates in the early stages. However, even a good emperor may change as years goes by and the citizens cannot always expect a good emperor. Besides, the judge of an emperor may not be always constant, so the citizens were afraid of the capricious judges. Therefore, they created a system that appoints two consuls by election every year and governs the citizens by laws and rules.

The central idea of the Roman Empire's governance is exactly the same as that of management systems. The management systems approach does not rely on specific individuals but makes and revises the rules by themselves and strictly operates based on the rules to continuously improve the situa-



Fig. 3. Potential Synergy of Management Systems.

Potenziale Sinergia dei Sistemi di Gestione.



Fig. 4. Overview of Foro Romano in Rome (from Y. Shimazaki, 2018).
Panoramica del Foro Romano a Roma (Y. Shimazaki, 2018).

tion. So why don't you make the best use of the systems approach to improve OSH in your workplace that has proven to be effective over a long period of time from the age of Roman Empire?

3. Can Regulations Promote Innovation?

3.1 Honda CVCC engine and the Clean Air Act of U.S. in 1970s

Regulations are often thought to be a source of inefficiency through interfering the individual's free choice and discouraging innovation. However, some stories show

us that regulations can promote innovation, gain competitiveness and make the profits in the long run. Here is a story of Honda Motor Co. Ltd. In 1970s, air pollution was becoming one of the biggest global issues and many countries strengthened their regulations to mitigate air pollution. Reflecting this trend, U.S. amended their Clean Air Act in 1970 which required the reduction of CO, HC and NOx from the engine of a car to one tenth compared with those in 1970. Most of the world's automakers opposed the revision saying that it's too high a hurdle to overcome in a short period of time. However, Honda Motor Co. Ltd, not a major automaker then yet, invented the "CVCC" (CVCC stands

for Compound Vortex Controlled Combustion) engine in October 1971 that satisfies the amended Clean Air Act. Since not only fulfilling the stricter regulations but also it improved the fuel efficiency as a by-product, although the enforcement of the amendment was postponed, Honda Motor Co. Ltd has gained its reputation which paved the way to becoming one of the automotive majors some decades later. This story tells us that good regulations can promote innovations, rather than discouraging it, and contribute to the society in the long run through providing enterprises with opportunities to invest in a field with potential growing demands in the future.



Fig. 5. The first Civic/CVCC in 1973, photo from the Home Page of Honda Motor Co., Ltd (<http://world.honda.com/history/challenge/1972introducingthecvcc/index.html>).
La prima Civic/CVCC in 1973, da pagina Web Honda Motor Co., Ltd.

researches on the topics with such negative externalities.

The potential topics with strong negative externality on OSH might be nano-materials, psychosocial risks, musculoskeletal disorders – MSDs, risks for the elderly, behavioral economics on OSH and so on. The government needs to be always aware of the negative externalities on OSH and try to promote enterprises to invest in the potential areas by creating a new market through regulations.

4. Conclusion

The idea of management system comes from the wisdom of the ancient times to maintain an organization in an effective and efficient way. Therefore, why don't you make the best use of the wisdom to improve OSH in the workplace? Besides, the introduction of ISO 45001 gives us an opportunity to improve OSH in an organized way with other relevant ISO standards.

Regulations are not the obstructions to innovation, instead, good regulations promote innovation. Regulations can create a chance for researchers and engineers with innovative spirits by setting a goal that goes against the negative externalities for the society as a whole.

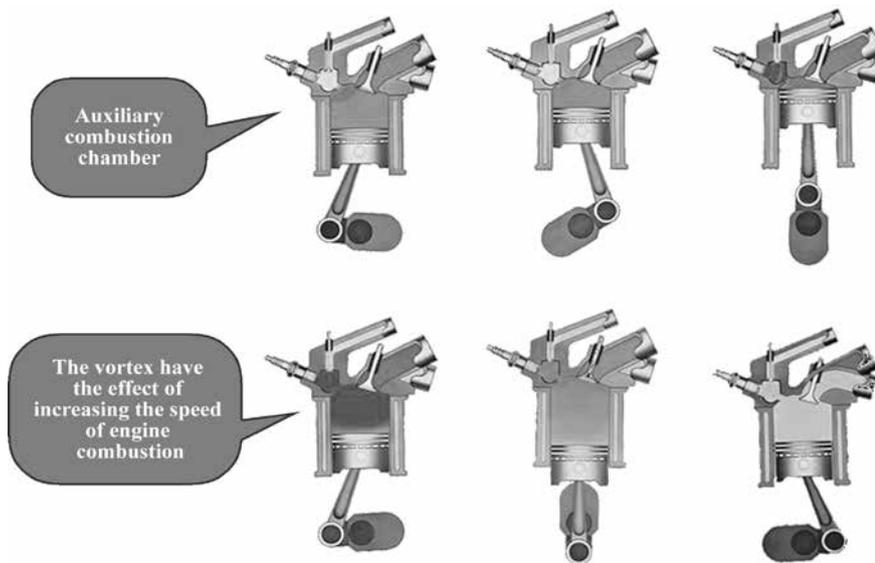


Fig. 6: The mechanism of CVCC engine, figure from the Home Page of Honda Motor Co., Ltd (<http://world.honda.com/history/challenge/1972introducingthecvcc/index.html>).
Il motore CVCC, figura da pagina web di Honda Motor Co., Ltd.

3.2. Potential Frontiers of OSH Research

Researches on OSH are always underinvested as the demand for OSH is not often recognized in the market economies. This is mainly because of the fact that negative impacts of occupational accidents and work-related diseases are regar-

ded that they should not be compensated by the employers although they should. It is called “negative externality” in the economic term. When the government finds any negative externalities, the government tries to mitigate the negative impact by creating new regulations to internalize the externalities and at the same time by subsidizing the

Bibliography

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