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A study on the enforcement strategy for safety and health compliance in manufacturing sector in Malaysia

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Abstract. Safety and health aspect should always be part of manufacturing system so that every stage of the manufacturing process and activities will expose no risk to more than a millions workers involved in this sector. In Malaysia, manufacturing sector is under the jurisdiction of Occupational Safety and Health Act 1994 (OSHA) and Factory and Machinery Act 1967 (FMA) which are enforced by the Department of Occupational and Health (DOSH). The objective of the study is to study the enforcement strategy carried out by DOSH officers whether it is persuasive, punitive or combination of both. Persuasion and punishment refer to the type of action taken by the enforcement officers against the errand employers. Making remarks in a log book, giving out directive letters and issuing notices (Notice of Prohibition, NOI and Notice of Improvement, NOP) are considered persuasive whilst opening an investigation paper (IP) for the purpose of offering compound and bringing the matter to court are considered punitive. The study depends on DOSH's statistic i.e. OSH enforcement activities and action taken by its officers against errand employers during enforcement activities. The statistic shows that DOSH use both persuasion and punishment strategies during occupational safety and health (OSH) enforcement activities, but the use of persuasion is too glaring i.e. as much as 98.5% from the total number of actions taken against errand employers.

Keywords. Safety and Health; Compliances; Persuasive; Punitive; Strategies; Enforcement; Manufacturing

1. Introduction

Malaysian economy has transformed from an agricultural economy to industrial based economy since early 1980s when it embarked to be an industrialization country. Since then, manufacturing sector began to grow rapidly and has become the engine of economic growth in Malaysia. According to the Department of Statistics Malaysia, until March 2019, a total of 1,087,760 persons are engaged in the local manufacturing sector [1].

To keep Malaysian manufacturing sector on the right track in term of competitiveness and reliability, the manufacturing system has to protect its most valuable asset i.e. its manpower. This simply means that, it has to ensure the safety and health of 1,087,760 workers in the sector. Ensuring safety and health of workers is very important because accidents at work will greatly affect the economy, the workers and



their families [2]. Injuries, occupational disease or death will cause a big loss to a company and will decrease productivity [3].

Legal action is one of the important measures in order to ensure safety and health and therefore prevent accident and occupational disease at workplace [4]. In Malaysia, the duty of care to provide the safe and healthy workplace is clearly spelled out in the Occupational Safety and Health Act (OSHA) 1994 in Section 15(1),

“It shall be the duty of every employer and every self-employed person to ensure, so far as is practicable, the safety, health and welfare at work of all his employees” [5].

Besides OSHA, Factories and Machinery Act 1967 (FMA) also states provision compulsory for employers in order to ensure safety, health and welfare of workers at workplace [6].

It is very important to make safety and health aspect as part of manufacturing system so that hazards present in every stage of the manufacturing process will be identified and risk associated with it will be assessed and subsequently control measures will be put in place so that no accident will occur [7].

Apart from OSHA Section 15, Section 20 stated the general duties of manufacturers alongside with designers, importers and suppliers to ensure their plant for use at work, so far as is practicable, is safe and without risk to health. Also in Section 21, OSHA further stated the duty of manufacturers alongside with formulators, importers and suppliers for the safe and without risk of the substance used [5].

2. Safety and health in manufacturing sector in Malaysia

The words ‘safety’ and ‘health’ have their own distinctive meanings but they are dependent on each other [8]. Occupational safety is providing workers with means to protect them from physical accident [7], [9] by eliminating situation which has a potential to cause harm [7], [10], whereas occupational health concerns about workers well-being related to his job and is involved with occupational cleanliness, occupational psychology, safety, physiotherapy, ergonomics etc. [11], [12]. Safety and health come together and related to each other, therefore it is a holistic approach towards workers’ well-being at work [13].

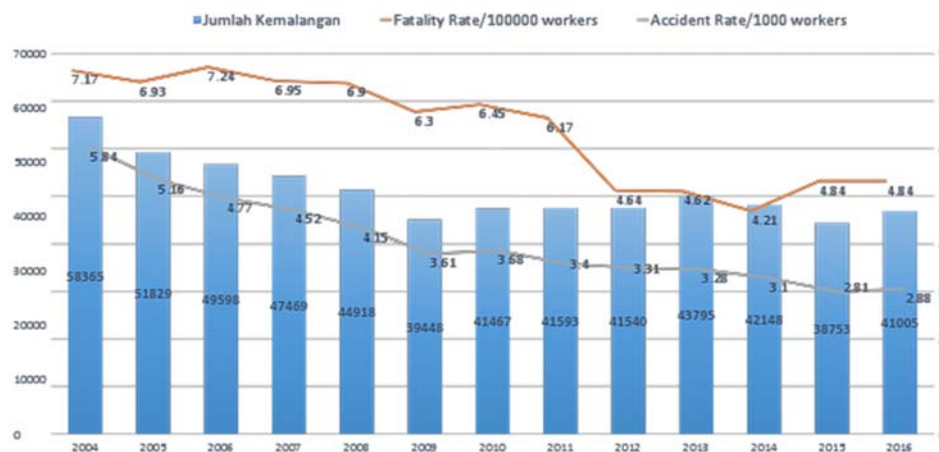


Figure 1. National accident rate from 2004 – 2016 (Source: SOCSO).

Figure 1 shows national accident rate from 2004 until 2016. It shows fatality rate (per 100,000 workers) and Accident Rate (per 1,000 workers) and also total number of industrial accident. In that period, fatality rate has dropped 32.5% i.e. from 7.17 to 4.84 for every 100,000 workers. Whereas, Accident Rate has dropped 50.7% i.e. from 5.84 to 2.88 for every 1000 workers [14].

Table 1 shows that the number of reported accidents for the manufacturing sector has been the highest in the 2012 to 2016 period. It also recorded an increase of 26.2% from 1,722 in 2012 to 2,333 in 2016. This reflects that high risk of accident presents in manufacturing sector and the government must show their high interest on such vulnerable employees in order to curb accidents [15].

Table 1. Industrial accidents reported by sectors from 2012 to 2016 (Source: DOSH).

Sector	2012	2013	2014	2015	2016
Manufacturing	1,722	1,655	1,667	2,040	2,333
Mining and Quarrying	42	35	62	39	25
Construction	177	164	172	237	233
Agriculture, Forestry, Logging and Fishery	446	535	492	480	471
Utility	94	108	70	96	75
Transport, Storage, Communication	95	93	102	131	130
Wholesale and Retail Trade	73	78	83	108	109
Hotel and Restaurant	15	20	57	62	90
Financial, Insurance, Real Estate, Business Services	62	71	74	119	126
Public Services, Statutory Bodies	54	67	26	32	110
Grand Total	2780	2826	2805	3344	3702

3. Enforcement Strategies: Punitive or Persuasive?

In Malaysia, OSHA and FMA are enforced by the Department of Occupational Safety and Health (DOSH) under the Ministry of Human Resource. In exercising their power to enforce the law, DOSH has both use persuasive and punitive strategies.

According to [16], enforcement officers usually use both persuasive and punitive strategies in carrying out their task, however they use persuasion more than punishment which lead to very few errand employers being penalised and the amount of the penalty is small too. This include for the repeating offenders. According to [17];

“a conciliatory style is a form of “social repair and maintenance” designed “to ameliorate a bad situation” whereas panel control “prohibits certain conduct, and enforces its prohibitions with punishment”.

Overuse of persuasion instead of punishment will cause the same offence be repeated by some employers [16]. According to [18], among strategies used by governments in the effort to make people change their unpleasant attitude are by giving more relevant information, providing more facilities, formulating regulations and giving out incentives. Maybe this is in the mind of certain law enforcers when they consider to tackle a breach of OSH law by persuasion instead of punishment.

Study has shown that enforcement could bring down accident rate compared to consultancy [11]. However, there are still argument on which strategy is the best, persuasion or punishment? According to [20], the objective of enforcement whether by persuasion or punishment is to get compliance to the law from the party which the law is enforced upon. The consensus is that both strategies are the best depending on the situation. They are both vital to bring down the accident rate depending on the current situation [21]. However, it is important to consider what regulations need to be complied by the employers before deciding on which strategy to use [20].

Punitive strategy is used in the hope that it will act as individual deterrence and general deterrence. It will prevent the person who has committed the offence from repeating it and also other person who has not yet committing the offence from doing it [22]. When an accident happened in a workplace, the employer is *prima facie* liable to the accident as held by Stuart-Smith LJ in *R v Associated Octel Co Ltd* [1994] 4 All ER 1051, 1063a:

“If there is a risk of injury to the health and safety of the persons not employed by the employer, whether to the contractor’s men or members of the public, and, a fortiori, if there is actual injury as a

result of the conduct of that operation there is prima facie liability, subject to the defence of reasonable practicability.” [23]

Despite the prima facie liability, many enforcement officers still in doubt as to whether to take punish or to persuade the employers which accidents had occurred in their premises.

According to [24], prosecuting errand employers in court is a must because they have breached the law. Table 2 shows offences that has been taken to court by DOSH against errands employers.

Table 2. Prosecution in court against errand employers.

No.	Offences	Section/Regulation, Act
1.	Failure to establish Safety and Health Committee.	Section 30(1), OSHA 1994.
2.	Failure to appoint a Safety and Health Officer.	Section 29(2), OSHA 1994.
3.	Failure to notify accident.	Section 32(1), OSHA 1994.
4.	Failure to establish Safe Operating Procedures.	Section 15(1), OSHA 1994.
5.	Failure to comply to Notice of Prohibition (NOP).	Section 49(1), OSHA 1994.
6.	Failure to inspect and maintain scaffolding which lead to accident.	Section 17(1), OSHA 1994.

4. DOSH Enforcement Approach

It is a difficult task for a prosecutor to decide whether or not to prosecute someone [25]. DOSH has come up with Enforcement Uniformity Module (EUM) in order to ease its officers in deciding what action to be taken against errand employers. EUM basically stated that every enforcement action must correspond to the associated risk and the seriousness of the law been breached [26]. DOSH action towards any non-compliance by employers usually follow the hierarchy in figure 2.

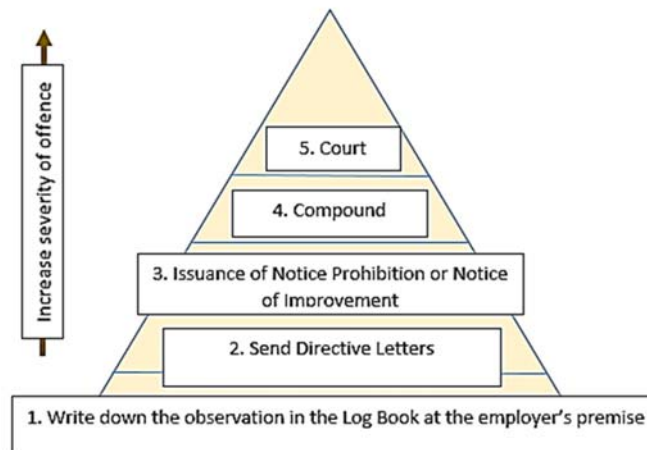


Figure 2. Hierarchy of action taken by DOSH Malaysia.

Figure 2 shows the hierarchy of action usually taken by DOSH officer when conducting enforcement or inspection at a place of work. At DOSH, all the 5 actions are called punitive action for the sake of

recording purposes (statistic), but as a matter of fact, the first 3 actions from the bottom of the pyramid are persuasive in nature (i.e. remarks in log book, directive letters/surat arahan and notices) and the top 2 actions are the punishment (i.e. compound and prosecution in court).

Enforcement activities that were carried out by DOSH include approval and authorisation, registration, certification, inspection, investigation and litigation. Among these activities, inspection and investigation are very much in need of decision whether to use persuasive or punitive strategies. These activities are shown in table 3 [27]. (Dosh website)

Figure 3 shows histogram of actions taken by DOSH in the year 2017 (until November) [27]. It shows both the persuasive and punitive actions. The ratio of persuasive action (Surat arahan/Directive Letters and Notices) to punitive action (compound and prosecution) is 50:1. This ratio clearly shows persuasion is the choice of DOSH officers most of the time compared to punishment.

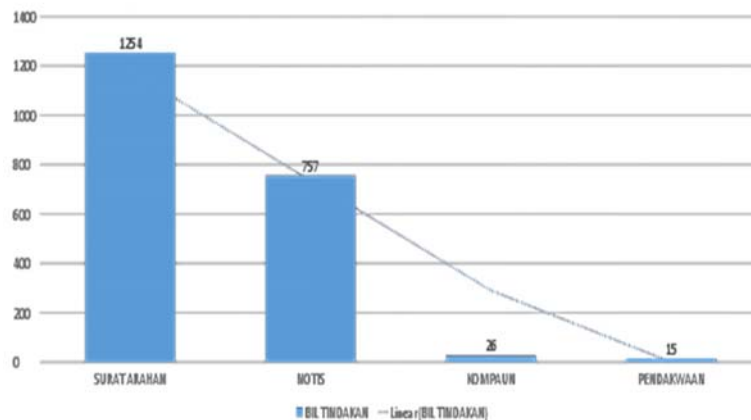


Figure 3. Action taken by DOSH Malaysia in 2017 (until Nov. 2017) (Source: DOSH 2017).

Table 3 and 4 show activities conducted by DOSH Malaysia in 2018 (until October) [27]. Table 3 shows the OSH enforcement activities done by DOSH are 278,278 and table 4 shows investigation activities which are 6,711. Together, the total number of activities carried out by DOSH until October 2018 are 284,989.

Table 3. Enforcement activities of DOSH Malaysia in 2018 (until October).

Activity	No.
Enforcement of occupational safety and health (OSH) at workplace	24,890
Enforcement of OSH at construction site	10,141
Enforcement of OSH in Small and Medium Enterprises (SME)	3,205
Enforcement and inspection of occupational health	10,924
Inspection of certificated machinery	211,651
Design approval of certificated machinery	11,550
Inspection of Major Hazard Installations	40
OSH promotion	5,877
Grand total	278,278

Table 4. Investigation of complaint, accident and occupational disease by DOSH Malaysia in 2018(until October).

Description	No.
Accident	2,750
Fatal accident	189
Occupational disease and poisoning	2,704
OSH Complaint	1,068
Total number of investigation	6,711

Table 5 shows action taken by DOSH against errand employers until October 2018 [27]. Total number of persuasive action (directive letters and notices) issued by DOSH are 65,405 whilst the total number punitive action (compound and prosecution) done by DOSH are 1,011. The ratio between persuasive and punitive strategies used by DOSH in that period is 65:1. The percentage persuasion is used is 98.5% compared to 1.5% of punishment.

Table 5. Action taken by DOSH Malaysia against employers in 2018 (until October).

Description	Directive Letters/Surat Arahan	Notice of Improvement (NOI)	Notice of Prohibition (NOP)	Compound	Prosecution in court
No.	39,623	13,670	12,112	787	224
Total	65,405			1,011	
Ratio	65 : 1				
Percentage	98.5%			1.5%	

In table 6, the ratio DOSH officers use persuasion to the total number of activities is 1 to every 4.4 activities (1:4.4) whilst the ratio they use punishment to the total number of activities is 1 to every 281 activities (1:281).

Table 6. Comparison of the use of strategies by DOSH Malaysia in its enforcement activities in 2018 (until October).

Description	Persuasion	Punishment
Numbers of all activities by DOSH (Enforcement and investigation)	1 : 4.4	1 : 281

5. Conclusions

In conclusion, DOSH uses too much persuasion in its enforcement in manufacturing sector. As this sector contributes the highest number of accident in Malaysia, DOSH should consider to use punishment strategy more often in the future when carrying out OSH enforcement in this sector.

In order to achieve its vision and mission i.e. "to be the leader of Occupational Safety and Health" and "to ensure safety and health at work" respectively [27], DOSH has to change its officers style of enforcement which is seems to be too persuasive. DOSH has to study its officers' perception towards punishment strategy which according to [22], will act as individual deterrence and general deterrence so that its objective to prevent industrial accidents and occupational diseases by the year 2020 through reduction in rate of fatalities to 4.36/100,000 workers and reduction in rate of accidents to 2.53/1000 workers will be a reality [27]. By the way, year 2020 is just a few months away! Studying the enforcement officers' perception towards punishment strategy will give DOSH new ideas in getting

more compounds and prosecution against errands employers. This will therefore lead in greater compliance to the law and lesser number of accidents in manufacturing sector.

Even if more punishment strategy will be used in the future, DOSH will not move away from its corporate value i.e. "Firm, Fair and Friendly" [26], [27]. Being friendly does not mean that we have to compromise on everything, moreover when we are dealing with safety and health matters.

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References

- [1] Monthly Manufacturing Statistics Malaysia, March 2019. Department of Statistics Malaysia. <https://www.dosm.gov.my/v1/index.php?r=column/ct>
- [2] Rommel, A., Varnaccia, G., Lahmann, N., Kottner, J., & Kroll, L. E. (2016). Occupational injuries in Germany: Population-wide national survey data emphasize the importance of work-related factors. *PLoS ONE*, 11(2).
- [3] Hui-Nee A. (2014). Safety Culture in Malaysian Workplace: An Analysis of Occupational Accidents. *Health and Environment Journal*, 5(3), 32–43.
- [4] Park, J. K., & Khai, T. T. (2015). Occupational Safety and Health Activities Conducted across Countries in Asia. *Safety and Health at Work*, 6(2), 143–145.
- [5] AKKP (2009). Akta Keselamatan dan Kesihatan Pekerjaan dan Peraturan-Peraturan Edisi 2009. Act 514. ISBN 967-70-1211-8.
- [6] Akta Kilang dan Jentera dan Peraturan-Peraturan 1967. Edisi 2010. ISBN 978-967-70-1333-9
- [7] Guidelines for Hazard Identification, Risk Assessment and Risk Control (HIRARC). Department of Occupational Safety and Health. Ministry of Human Resource, Malaysia JKPP DP 127/789/4-47. ISBN 978-983-2014-62-1
- [8] Husna C.H. (2018). Kajian Keperluan Latihan dalam Aspek Keselamatan dan Kesihatan Pekerjaan Terhadap Guru Sekolah-Sekolah di Negeri Kelantan. Sarjana Sains. Universiti Malaysia Kelantan.
- [9] Harrison, J. (2012). Occupational Safety and Health in The United Kingdom: Securing Future Workplace Health and Wellbeing. *Industrial Health*, 50(4), 261–266.
- [10] Mitchell, M. A., & Schmidt, N. B. (2014). General in-situation safety behaviors are uniquely associated with post-event processing. *Journal of Behavior Therapy and Experimental Psychiatry*, 45(2), 229–233.
- [11] World Health Organization. (2014). Types of Healthy Settings. *Health Promoting Schools. Healthy Settings*, (1998), 1998–2000.
- [12] Rountree, T. (2007). *Fundamentals of Occupational Safety and Health. Health Physics* (Vol. 81).
- [13] Salminen S. (2015). Workplace Safety and Health Definition of Workplace Safety and Health. *International Encyclopedia of Social & Behavioral Sciences*, 727–732.
- [14] JKPP, Jabatan Keselamatan dan Kesihatan Pekerjaan (2017). Statistik Kemalangan Pekerjaan Mengikut Sektor Sehingga Oktober 2017.
- [15] Danish Ali et al. (2017). Safety Culture and Issue in the Malaysian Manufacturing Sector. *MATEC Web of Conferences* 135, 00031 (2017). ICME'17
- [16] Brown, R. (1994). Theory and practice of regulatory enforcement: Occupational Health and Safety Regulation in British Columbia (pp. 63–91).
- [17] Donald Black (1976). *The Behaviour of Law*. Academic Press Inc.
- [18] George I. Balch (1980). The Stick, the Carrot and Other Strategies: A Theoretical Analysis of Governmental Intervention. *Law & Policy Quarterly*. Vol 2, No. 1. Pp. 35-60.
- [19] James Baggs et al. (2003). Workplace Health and Safety Regulations: Impact of Enforcement and Consultation on Workers' Compensation Claims Rates in Washington State. *American*

- Journal of Industrial Medicine 43:483–494 (2003).
- [20] Andrew Hopkins (1994). Compliance with what? The Fundamental Regulatory Question. *Brit.J. Criminol.* Vol.34 No. 4 Autumn 1994.
 - [21] Akta Kilang dan Jentera dan Peraturan-Peraturan 1967.
 - [22] John T. Scholz and Wayne B. Gray (1997). Can Government Facilitate Cooperation? An Informational Model of OSHA Enforcement. *American Journal of Political Science*, Vol. 41, No. 3 (Jul., 1997), pp. 693-717 Published by: Midwest Political Science Association
 - [23] Hudson. The Purpose of Criminal Punishment. *Ethics and the Criminal Justice System*. Pp.103–126.
 - [24] Opinions of The Lords of Appeal for Judgment In *The Cause R v Chagot Limited (t/a Contract Services) and others (Appellants) (On appeal from the Court of Appeal Criminal Division)*.
 - [25] Amal Raihan Abdul Razak et al. (2017). The Colloquium 10 (2017) pp.21-27. *Construction Industry Prosecution Cases Under Malaysian Occupational Safety and Health Legislation*.
 - [26] Jonathan John Mwalili. *The Role and Function of Prosecution in Criminal Justice*.
 - [27] Jabatan Keselamatan dan Kesihatan Pekerjaan. *Enforcement Uniformity Model (EUM)*.
 - [28] Laman Web Rasmi. Jabatan Keselamatan dan Kesihatan Pekerjaan. Kementerian Sumber Manusia. Diakses daripada <http://www.dosh.gov.my/index.php/en/>