### UNIVERSITI TEKNOLOGI MARA

# THE STUDY OF INDUSTRIAL DESIGN ACTIVITY AND FINANCIAL PERFORMANCE OF MALAYSIAN FIRMS

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#### **ABSTRACT**

Whilst some research has been carried out on industrial design, lack of studies were empirically tested. However, there is a reason that industrial design activity benefits to a firm. This study analyzes the relationship between the industrial design activity and financial performance at the Malaysian firm level. Previous studies focus the industrial design as one of the effective product design in the market, but not as the protection mechanism. Since, lack of industrial design related studies found in Malaysia, this study derived the idea from the patent and trademark system. The industrial design activity variables are measured based on the industrial design application/renewal, variety and quality of technology classes and complementary assets of industrial design and patent. This study applied a panel dataset from 2008 to 2014 and the model is estimated using panel least square. The main finding from the hypothesis testing is that there is a significant relationship between industrial design activity and financial performance at the Malaysian firm level, but that the impact is rather small and the signs are mixed. Even though the industrial design is well known for its monopoly power, but this situation may be changed due to the market condition that the firms faced.

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# CHAPTER ONE INTRODUCTION

#### 1.1 RESEARCH BACKGROUND

According to the World Intellectual Property Organization (WIPO) in its Intellectual Property Report (2014), intellectual property right (IPR) is an exclusive right which results from intellectual activity in the industrial, scientific, literary and artistic fields (Derclaye, 2010). IPRs are property rights in products of the mind, namely creations (such as novels, plays, paintings), inventions (such as engines, phones, technology), designs (car, furniture, clothings) and trademarks (sign that attached to goods or services such as words or logos). These exclusive rights give the inventors a chance to recoup their investment by ensuring that they are the only one who will be allowed to sell their inventions or innovations in the market for some time (Derclaye, 2010). One of the IPRs is known as an industrial design. Industrial design is generally understood as a product that attracts a person's eye. The attractiveness of a product's appearance becomes one of the conditions to select besides functionalities (Schickl, 2013).

Industrial design that has attractive product designs are competitive in the market. In order to increase a product's competitiveness, firms need to innovate the product designs (Z.Chen & Liang, 2006). Innovation that is secured by a legal protection leads to the distribution of profit since it does extend the monopoly power of firms (Nelson, 2006; Teece, 2000). Besides those of innovations, application of industrial design involves cost; and if it is registered, more costs then accrue to keep it in force. Therefore, firms that have registered their industrial design will accumulate benefits. The industrial design also involves many variety and quality of classification. The variety and quality of product innovation can be used as a support if the operation of market forces lead to a net loss (Mangàni, 2007). Furthermore, the innovation created by the firms can be more profitable after combining any assets or capabilities of firms. According to Munari and Santoni (2010), each of the intangible assets, store the hidden value. Thus, any combination of assets may become another source of profit (Munari & Santoni, 2010; Teece, 2012).