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Assessment of shop house enterprises in the Bangkok metropolitan area in view of environmental and health aspects



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ABSTRACT

This study aims to assess environmental and health impacts created by shop house enterprises and to identify the factors contributing to those impacts. The work was carried out in Bangkok, Thailand. This study used questionnaire surveys, interviews, and data collection. Responses were obtained from two different groups of stakeholders. First, the perceptions of owners and workers in shop house enterprises of their environmental management practices were determined. A second group of stakeholders consisting of affected community members, customers and relevant decision makers was queried to determine their perceptions of environmental performance of shop house enterprises. Using this strategy, perceived environmental conditions were determined by stakeholders and supported with actual measurement in air and noise pollution generated by shop house enterprises. The study results show that activities of shop house enterprise are perceived to generate adverse environmental and health impacts at various levels. The magnitude of each of these impacts suggests the priority at which policy interventions are needed to address these factors. We conclude that public policy to reduce environmental and health impacts should be done concurrently with efforts to mitigate factors contributing to environmental and health impacts generated by shop house enterprises. The effectiveness of existing environmental management measures for shop house

Abbreviations: BMA, Bangkok Metropolitan Administration; EMMs, Environmental Management Measures; NSO, National Statistical Office

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enterprises by a decentralized administrative system requires further examination. It will be necessary to revisit existing environmental management practices for enterprises engaging in high risk activities.

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1. Introduction

In developing countries, it is quite common that some people use their homes as the base of their livelihoods. In urban areas, most people who use their homes for earning income usually engage in secondary modes of livelihood such as processing and manufacturing or tertiary modes of livelihood such as trading or providing services (Tirapas, 2012). They allocate a part of their houses exclusively or intermittently for their livelihood activities and thereby sacrifice some of the normal functions of a home (Chantawarang, 1985). These are referred to as home based enterprises in the literature (Gough and Kellett, 2001). In some cases, processing or manufacturing occurs in the home while trading of these processed/manufactured goods takes place elsewhere. These are called home based and business location operated enterprises (Perera and Amin, 1995; Gough, 1996). A home-based enterprise is any business for which the principal administrative and managerial activities take place within an individual's personal residence, i.e., shelter, house, flat or apartment or shop house. Owners of most home-based enterprises are poor. Health hazards, long working hours, unstable income and fierce competition are often the norm (Allal, 1999).

A reliable classification of enterprises can be made to facilitate a clear and unambiguous understanding of shop house enterprises by focusing on 2 criteria, (1) scale of enterprises and (2) status of enterprises. By scale of enterprises, micro-, small- and medium-sized enterprises are defined according to number of employees and registered capital. A micro-enterprise is defined as an enterprise which employs between 1 and 4 persons and registered capital of less than 500,000 Baht. A small enterprise is defined as an enterprise which employs between 5 and 49 persons and registered capital of 500,000 Baht to less than 8 million Baht, whereas a medium-sized enterprise is defined as an enterprise which employs between 50 and 199 persons and registered capital of 8 million Baht to less than 50 million Baht. Comparing the status of enterprises between formal and informal sector enterprises, an informal sector enterprise is not clearly defined in Thailand. The definitions used by National Statistical Office (NSO) and others are based on qualitative characteristics of the sector and on the number of employees (1–9 workers according to the NSO definition). Any enterprise which is not registered with one authority or another, should be defined as an informal sector enterprise, whatever may be its size. Thus, it is plausible that a proportion of small enterprises is a part of the informal sector enterprises. Altogether, over three quarters of the employed labor force is in the informal sector. Using the 2012 NSO statistics on industrial and business establishments, it can be shown that employment generated by the informal sector in the manufacturing, trade and service sectors is approximately 3.5 times that generated by the formal sector. Women are more represented in the informal than the formal sector (Allal, 1999). Therefore, shop house enterprises are a subset of home-based enterprises. Most shop house enterprises are micro- and small-enterprise, and more than 75% of shop house enterprises are in the informal sector (see Fig. 1).

Shop house enterprises receive legal recognition under urban planning and housing policies in the cities of some developing countries (Larco, 2010). However, it has been observed that manufacturing and service enterprises are also being located in shop houses in violation of urban planning regulations for mixed-residential areas.

Amidst the geographic propagation of mixed residential areas in cities, there exists considerable health and environmental threats posed by enterprises that do not comply with urban planning regulations (Tipple, 2005a). Hameed and Raemaekers (1999) stressed that the potential impacts of industrial activities conducted in residential buildings upon the health of occupants are worse than in other types of dwellings. Sorensen et al., (2007) asserted that the environmental impacts generated by small scale enterprises are potentially even greater than for large enterprises.

It is therefore reasonable that a large number of shop house enterprises will have substantial environmental and health impacts because they are located within or in close proximity to residential

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