



## From manufacturing base to innovative cluster – the case of Taiwan’s cycle industry.

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## **TITLE OF ABSTRACT**

FROM MANUFACTURING BASE TO INNOVATIVE CLUSTER – THE CASE OF TAIWAN’S CYCLE INDUSTRY

**ABSTRACT KEYWORDS:** sport cluster, cycling, innovation, location-specific factors

## **1. RESEARCH QUESTION**

This research deals with Taiwan’s cycle industry investigating the transition from a pure manufacturing base towards an innovation cluster. The role of cycling as sport and recreational activity in this transition process is analysed. The sport cluster model is used as theoretical framework aiming at refining the model and at better understanding the evolution of sport-based industries (Gerke, Desbordes, & Dickson, 2015). Results are discussed with regards to contemporary literature on the transition process of Taiwan’s SME-based economy from traditional industries towards innovative niche industries (Utterback, 1987; Wong, Hu, & Shiu, 2015)

## **2. THEORETICAL BACKGROUND**

Industrial clusters are an alternative form of economic organisation to the fordist mass production and are based on flexible specialisation. Clusters consists of geographical proximate organisations – primarily small-and medium-sized enterprises and related organisations – with activities in the same or similar sectors. Cluster members are interconnected through social and economic interdependencies, commonalities, and complementarities (Dalla Pria, 2008; Porter, 1998). Other terms have been used to describe the same or similar phenomena including industrial district, regional innovation system, innovative milieu, and innovative network (Asheim, 1996; Camagni, 1995; Cooke, 2001; Hotz-Hart, 2000; Marshall, 1920). The cluster model has been used in research and practice in different industrial contexts and on varying geographical scope (Dalla Pria, 2008; Europe Innova Cluster Mapping Project, 2008; Porter, 1998). Gerke et al. (2015) propose the sport cluster model building on Shilbury (2000) which illustrates the specific characteristics of an industry cluster based on sport products.

## **3. METHODS**

This study is based on a single case study using semi-structured interviews with cycle firms and related organisations as primarily data source complemented by observations and secondary data (Eisenhardt, 1989; Yin, 2009). We conduct 21 formal semi-structured interviews and four informal explorative interviews. All interviews were conducted in person on site during a cycle trade show. Interviews were either conducted in English or in Chinese with an interpreter. All interviews were transcribed by a bilingual Chinese native speaker. Data was analysed with Nvivo 10 using pre-defined coding themes based on the sport cluster model. The purpose was to identify location-specific factors, cluster members, and their linkages. This information allowed us to qualify (or not) the cycle industry in Taiwan as sport cluster (Gerke et al., 2015; Shilbury, 2000).

#### 4. RESULTS

While data collection has been finished the data analysis is still in process. Preliminary data analysis indicates that location-specific factors favour the emergence and development of a sport industry cluster around cycling in Taiwan. While some managers of established firms have started to take initiative moving from manufacturer to developer, others remain in an executing perspective rather than creating one. Furthermore, there are too few start-up companies contributing to the transition process.

While participation in cycling through the local population as sport or recreational activity has been increasing over the last decades, this is not fully exploited as economic driver by the majority of the cluster members. The participation in cycling at amateur level by local population and visitors has been increased through the construction of cycle paths, cycle tourism, and cycle events. Cycling as professional sport is still underdeveloped at national level and hence it is only foreign elite athletes that stimulate innovation within certain companies but not professional sport at national level.

#### 5. DISCUSSION AND CONCLUSION

This research analyses the cycle industry in Taiwan with regards to the cluster model. Initial findings indicate sport-related location-specific factors. There is potential to further exploit these factors to the benefits of the cluster members and the overall cluster. This research provides paths for managers and researchers of how to use sport as driver for economic development. Structures and mechanisms that facilitate interaction, collective activities, and collaboration between cluster members need to be further developed to achieve virtuous cycle development (Wong et al., 2015).

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