The Dynamics Of The Global Factory: Building A New Sport Manufacturing Cluster

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Background and aim of the research

The value of Taiwanese bicycle exports has grown from US$0.9 billion in 1990 to US$1.7 billion in 2014. While the quantity of bikes exported over this period has reduced by fifty per cent, the value per bike has grown almost five-fold (Taiwan Bicycle Association, 2015). Even when taking into account the inflation rate, this represents a significant and rapid increase in exports that was realised mainly through higher unit prices.

The purpose of this paper is to investigate the case of the Taiwan cycle industry from a cross-sectional perspective to understand the success factors of localised industries and how they fit into global supply chains. Six factors of cluster development are scrutinised: geo-economic, sport-related, socio-economic, political, geographical, and historical (Gerke, Desbordes, & Dickson, 2015). The actors of this rising cluster and their relationships are then analysed to understand how firms build a strong position in the global value chain to create and retain value, rather than being outsource partners or OEM manufacturers.

Theoretical background and literature review

Industrial clusters are an alternative form of economic organisation to the fordist mass production and are based on flexible specialisation. Clusters consist 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 (Porter, 1998).

The observation of the recent success of the Taiwanese bicycle industry prompts the question of how it achieved this increase in value, given that much discussion of the "global factory" is about low costs, with globally-coordinated production bringing efficiencies (Buckley, 2011). The global factory — featuring a "system of globally-inter-connected firms" — is a key factor in the development of the global economy (Buckley, 2011) and is a particular feature of the participation of emerging economies in global value chains (Buckley & Strange, 2015).

Methods, research design, and data analysis

This study is based on a single holistic case study of a national industry using semi-structured interviews with cycle firms and related organisations as the primary data source complemented by observations and secondary data. We conducted 21 formal semi-structured interviews and four informal exploratory 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 is analysed with Nvivo 10 using pre-defined coding themes based on the sport cluster model (Gerke et al., 2015). The purpose is to identify location-specific factors, cluster members, and their linkages to understand the Taiwanese cycle industry, to what extent it corresponds to a cluster, and in what way it corresponds to the concept of the global factory.

Results, discussion, and conclusions

Preliminary data analysis indicates that location-specific factors favour the emergence and development of a sport industry cluster around cycling in Taiwan. Actors of the Taiwan cycle industry are clustered in the south of the country and many of them engage actively in innovation. While some managers of established firms have started to take initiative moving from manufacturer to innovator, others remain in a pure manufacturer perspective rather than in the perspective of being creative developers. In addition, there are still only few start-up companies contributing to the transition process from OEM to innovative cluster member.

Local demand for cycling products has traditionally been low in Taiwan but this is changing. Participation in cycling through the local population as sport or recreational activity has been increasing over the last decades. The participation in cycling at amateur level by local population and visitors has 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. The role of these sport-related location-specific

factors for the cycling cluster are analysed to investigate to what extent this cluster is a specific sport cluster as opposed to a regular cluster.

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