Summary

Access to new markets and lower production costs are some of the reasons why companies have established manufacturing operations all around the world. These manufacturing operations may constitute wholly owned factories, joint ventures, as well as external contractors, forming an international manufacturing network with unique capabilities. Effective integration and coordination among these operations could become more and more a pre-requisite in order to survive in an increasing competitive market.

Preliminary contacts with an international pharmaceutical company with significant activities in Asia-Pacific revealed the company had difficulties in solving manufacturing location issues efficiently, for new product launches or responding to environment changes, even though these present a good opportunity for the company to optimise their chain of locations of the manufacturing operations. In the pharmaceutical case, manufacturing location decision consists of locating the incorporation into dosage form step (bulk standard product) and the packaging step (customized finished product).

An extensive literature review reveals two main research gaps:

- The manufacturing location decision literature does not include a network perspective.
- Manufacturing network literature does not consider extended networks including wholly owned in-house plants, joint ventures, and external contractors.

This study examines location decisions from a manufacturing network perspective in order to understand the impact of these decisions for the entire manufacturing network.
Six retrospective and four longitudinal case studies were conducted over an eight-month period in the pharmaceutical company, detailing ten product manufacturing location decisions in Asia-Pacific markets.

The cases confirmed and detailed the importance of the manufacturing capabilities in product manufacturing location decision-making. They revealed that a manufacturing location decision is largely driven by the potential benefits drawn from the exploitation and from the development of the company manufacturing capabilities at both the plant level and the network level. The drivers, such as plant knowledge or economies of scale are grouped into four categories: Use of / Development of single site capabilities, Use of / Development of network configuration capabilities, Use of / Development of network coordination capabilities, Use of / Development of financial capabilities. More particularly, it also permitted to identify and detail the influence of the case specific context and environment, specified by legislation requirements, markets specifications, and product specifications, on the role of the previously identified drivers. These drivers can be classified into qualifying criteria and ranking criteria categories. However, the relative importance of the drivers is dynamic, varying from one case to another according to the case specific factors.

The findings suggest that managers, when making manufacturing location decisions, should seek to maximize the use and the development of the manufacturing capabilities, taking into account the influence of the decision context and environment. A simple step-by-step guide has been developed to assist managers in making the right location decision.