

# Subcontracting product development – creating competitiveness through networking

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# Introduction

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- Product development has become increasingly complex and resource-consuming
- Internal development capabilities can prove insufficient for maintaining a firm's competitive position
- Accessing necessary complementary knowledge or resources through external cooperation and networking
  
- In this paper, cooperation is studied as the key to improving competitiveness, especially in case of small firms.
- The empirical part describes supplier cooperation in four case companies. The focus is on software product development cooperation with foreign suppliers

# Network approach

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- Net of relations between a focal firm and the outside world
- Industrial network model: actors, activities and resources
- Networks provide access to the resources needed to build up and exploit firms' competitive advantage
  - Specialisation, flexibility, focus
  - Complexity of handling the process



# Cooperation with suppliers

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- Supplier involvement in product development is one of the factors leading to better process performance in terms of speed and productivity
- Innovative performance of a firm: reduction of development cost and time, improved quality and value
- Situational point of view - different operational environments, organisational characteristics and unique histories of firms require differentiated management approaches and organisational structures

# Characteristics of software industry

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- Firms are typically small, specialised and have limited internal resources
- Growth of cooperation
  - Technological reasons - maintaining various types of technological expertise
  - Financial reasons - high risks and costs of PD
  - Major pressure on time-to-market
- Companies need to create both formal partnerships and informal collaborative networks

# Supplier cooperation in SW development

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- Software is an informational artefact
- Software development processes are increasingly distributed worldwide and becoming both multi-site and multicultural in search for lower costs and skilled resources
- Small firms are known for their resourcefulness and networking capabilities
- Specialisation and scarcity of domestic resources increases motivation for international cooperation and use of foreign suppliers in software development

# Case study, Finland

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- Purposeful sampling
  - software product development activities and experience of cooperation with Russian companies
- 4 Finnish ICT companies
  - Business offering: communication, mobile software, software projects, mobile games
- In-depth interviews, summer-autumn 2003; follow-up interviews with 2 companies 03/2006
- Aim: understanding the principal reasons which have led to supplier cooperation and describing models of such arrangements

# Experiences of international subcontracting

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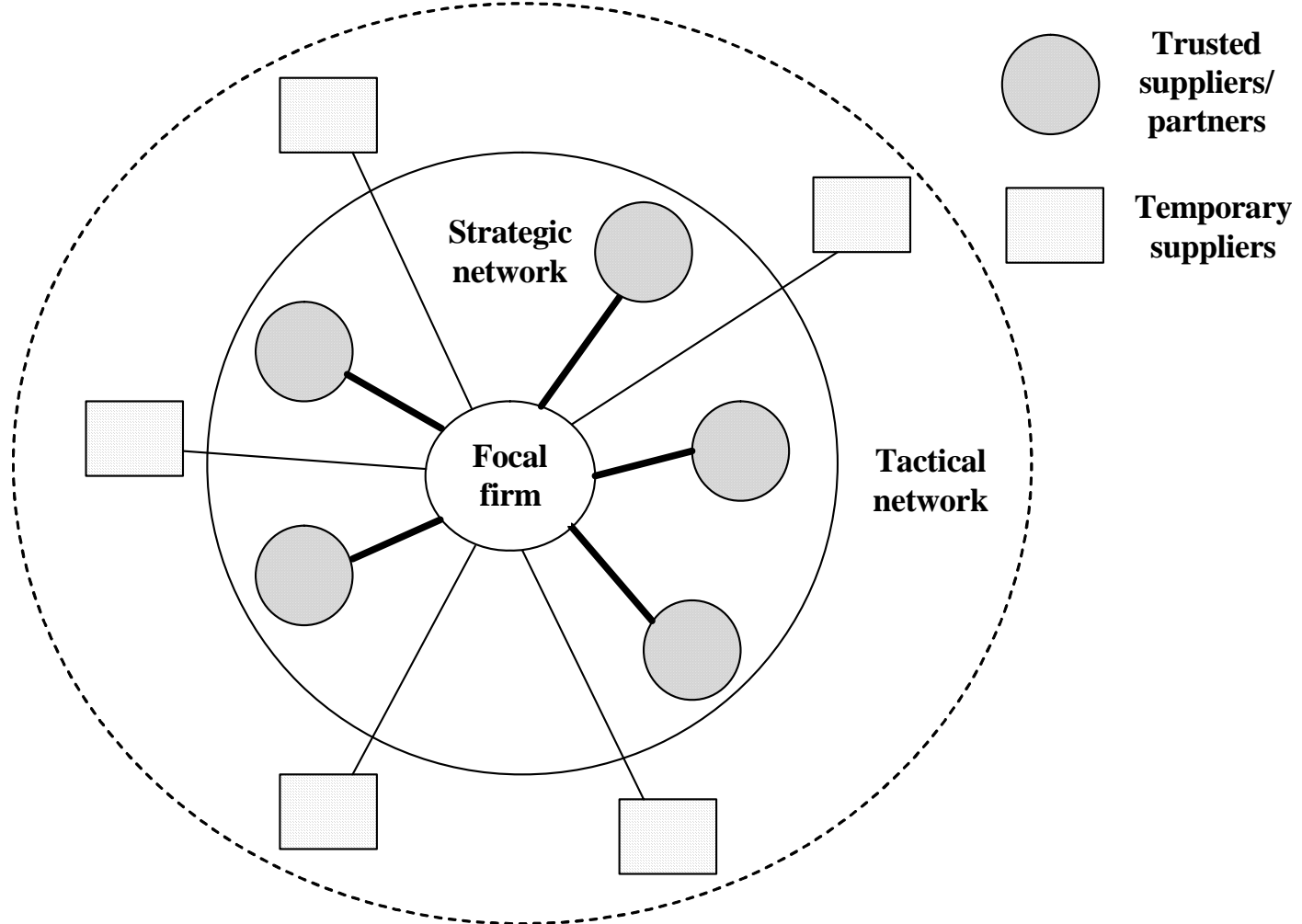
- Motives: concentrating on core activities, access to complementary resources, increased flexibility, shorter development time, dealing with demand peaks, cost regulation, lowering risks related to industry turbulence
- Compatibility of the actors:
  - cost efficiency vs. complementarity
  - origin vs. resources and capabilities
  - common language and short physical distance vs. maturity of the partner and similarity in organisational values

# Models of international subcontracting

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- Rapid environmental and technological change generates need for flexibility and lower organisational complexity
- Project-based and contractual relationships
  - disadvantage of being a small company
  - small firms try to remain flexible in case there are sudden changes in their customer base, operational environment or technology
- Organisational structure of cooperation vary according to companies' goals
- Small firms often find their suppliers through personal networks

# Subcontracting networks



# Conclusions (1/2)

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- Especially for small firms, cooperation can be the key to improving their competitiveness
- Motivation for engaging in a network varies, but it is often seen as a necessary precondition for success or even survival of a firm
  - complementary resources, increased flexibility, economising, dealing with the industry's turbulence
- Networking can enable a small specialised firm to concentrate on its core competences and create an extensive offering of integrated products and services at the same time

## Conclusions (2/2)

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- Building a competitive advantage requires a firm to be able to replenish its internal resources with the external ones, by engaging in relationships with various domestic and foreign actors
- The decisions of what to do and where are rooted in the mixture of elements of knowledge, skills, quality and costs
- Supplier networks can be divided into strategic and tactical level
- Ability to coordinate and manage a network can in itself become a firm's core competence