

Transaction Cost Economics in Offshoring: From Naïve To Realistic View on Associated Costs

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Global Software Development (GSD)

Information Systems (IS)

Offshoring

Offshore Insourcing

Information Technology (IT)

Sourcing

Outsourcing

Software Development

Global Sourcing

Software Maintenance

Onshore outsourcing

Distributed Development

Offshore Insourcing Software Development

High-level research questions

1

Distributed development:

1.1

What is the effect of distribution on productivity and quality?

1.2

Are there settings that lead to higher quality and productivity?

Architectural split

Roles & Responsibilities

2

Transfers:

2.1

What is the effect of transfer on productivity and quality?

2.2

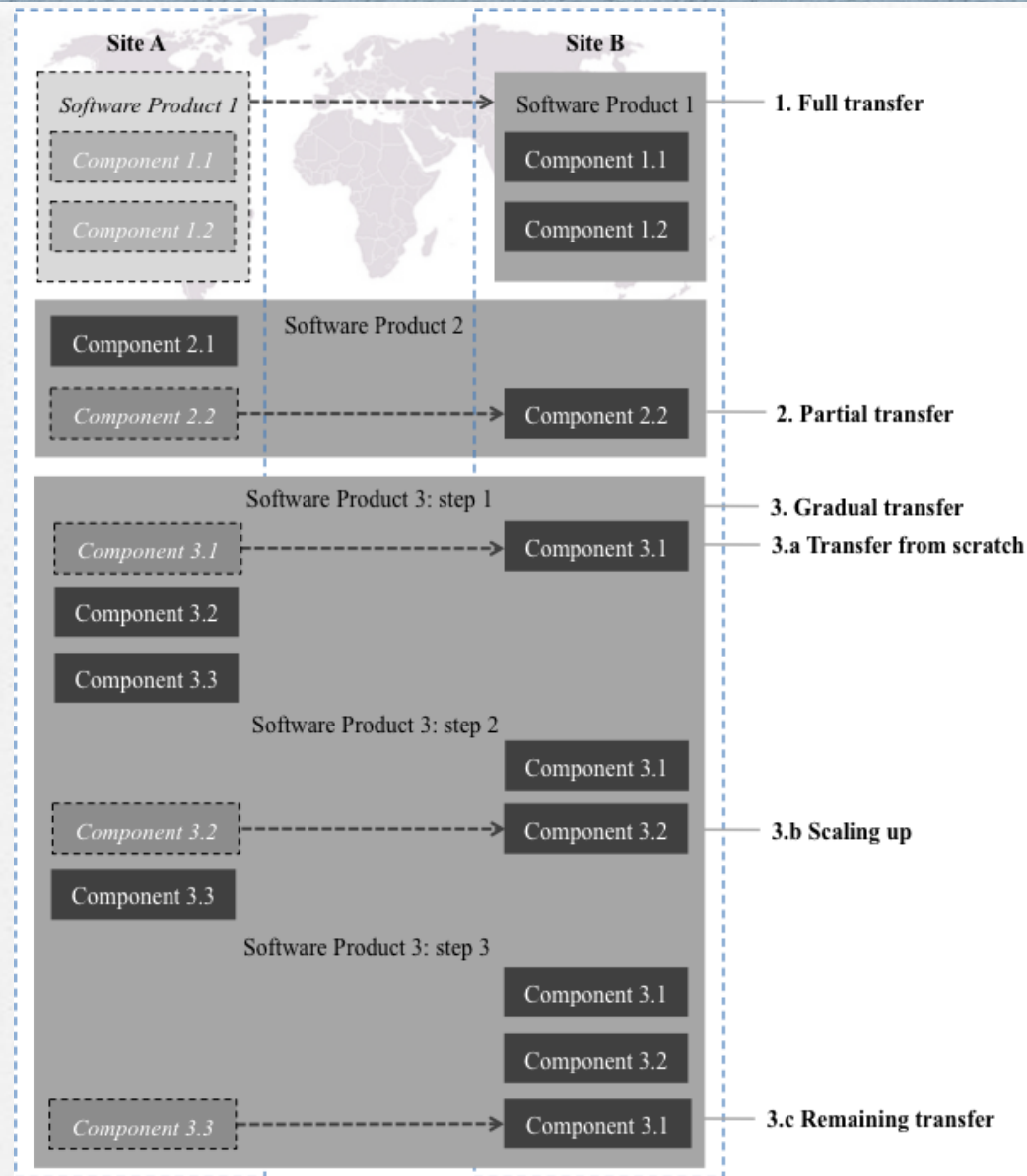
How fast can the product recover from such effects?

2.3

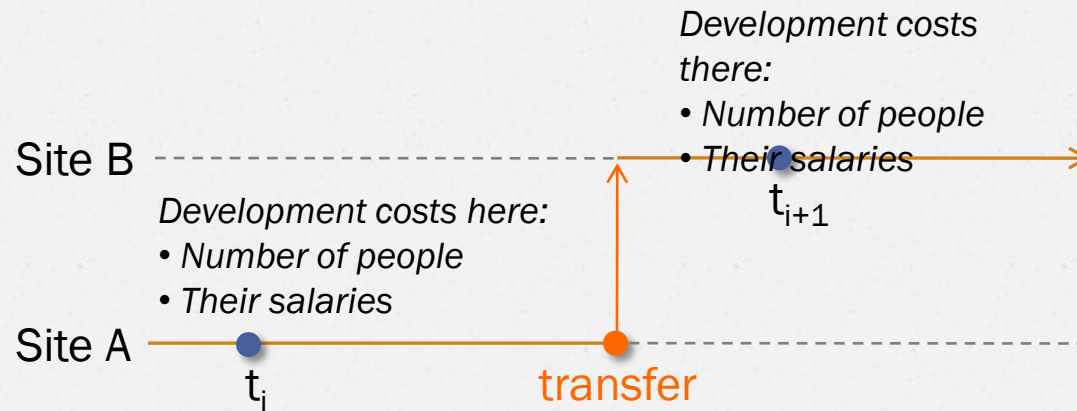
Do transfers lead to short-term and/or long-term cost savings?

Software Transfers

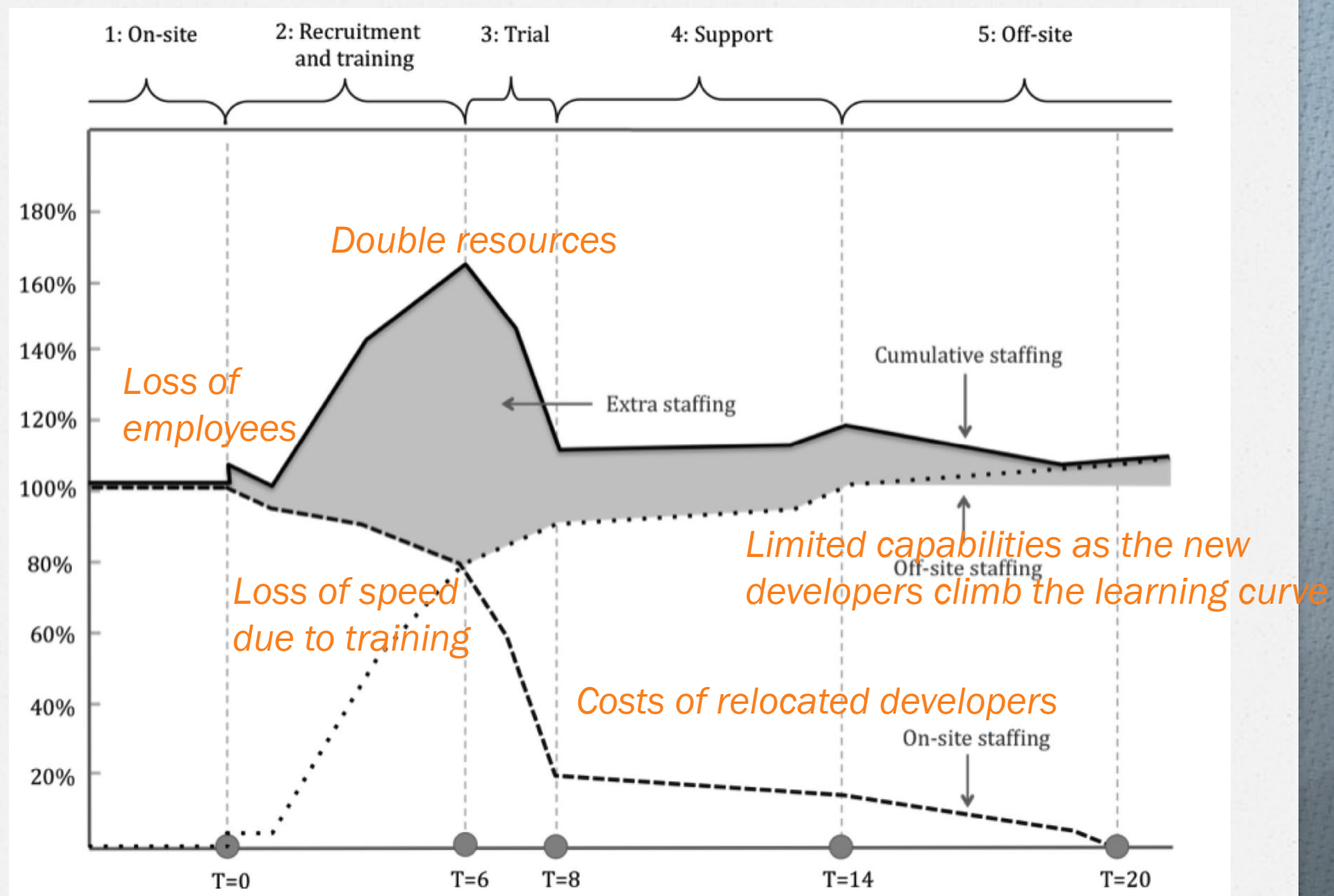
- It is assumed / expected that the new site will maintain the same level of service, quality and productivity
- The ROI should be reached within 1-2 years



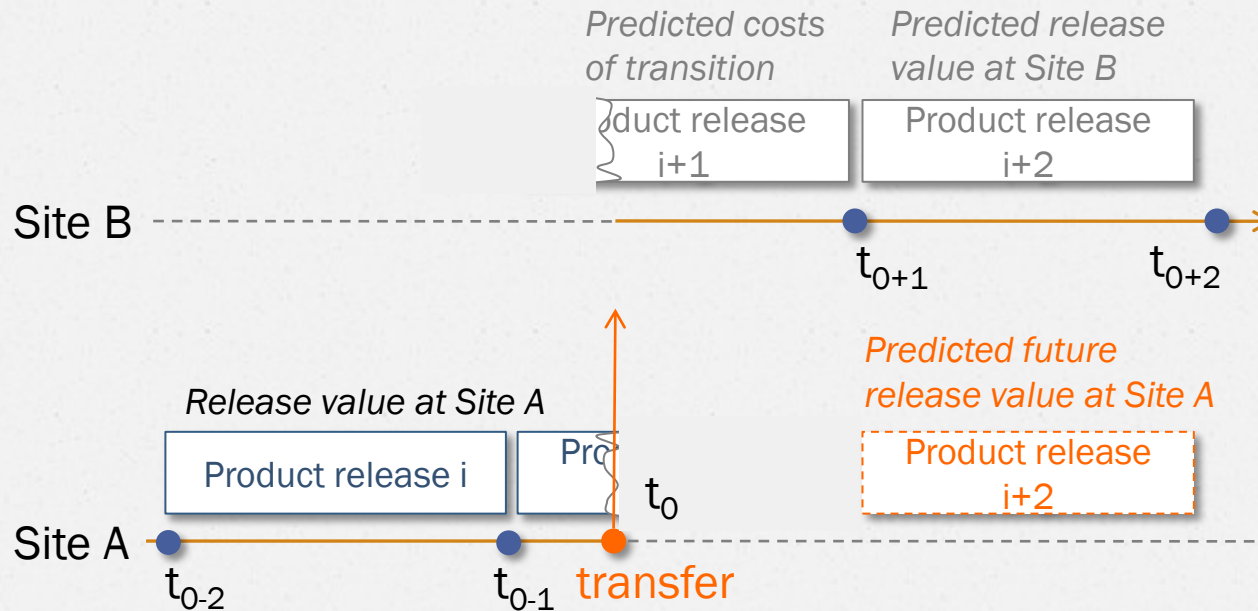
Naïve cost calculation through salary comparison



Ignored costs: Decrease in productivity, Quality decrease, Cost for transition (travel, training, documentation), Coordination overhead, High maintenance costs, Reduced scope of delivery



From naïve towards realistic cost calculation for transfers



Cost-benefit analysis: Fair comparison, Value also comprises of product quality and delivered features

Calculation formula

$$V_T = -TC + PV(C_A) - PV(C_B) + PV(\text{Opportunity Outcome}) + PV(\text{Options})$$

TC — the cost of a transfer: training, travel etc.

$PV(C_A)$ — the present value of the production cost of developing the software at the present site

$PV(C_B)$ — the present value of the development cost at the offshoring site

$PV(\text{opportunity outcome})$ — the difference between expected and realized value of the outcome over time: new customers, innovativeness

$PV(\text{Options})$ — the cost of exercising the options: marketing costs to get the new customers, the cost of returning the work back home if the service is dissatisfactory

Implications

- Can this improve site strategy?
- Explore the benefits of producing software in a particular location (quality, productivity, innovative capacity,...)
- Calculate realistic ROI scenarios and weigh the need for additional developers versus
 - 1) transition costs, and
 - 2) effect on the product after transition.

Conclusions:

FAIR COMPARISON of the VALUE of development OVER TIME

Thank you for your attention Questions?

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ĪEGULDĪJUMS TAVĀ NĀKOTNĒ