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# Subcontracting Risks in Electronics Manufacturing Industry in China

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# Introduction

Companies are especially tempted by vast markets and low labor costs of China.

## **Research Question:**

*What are the most significant **risks** with Chinese subcontractors as well as the **criteria** for selecting subcontractors?*



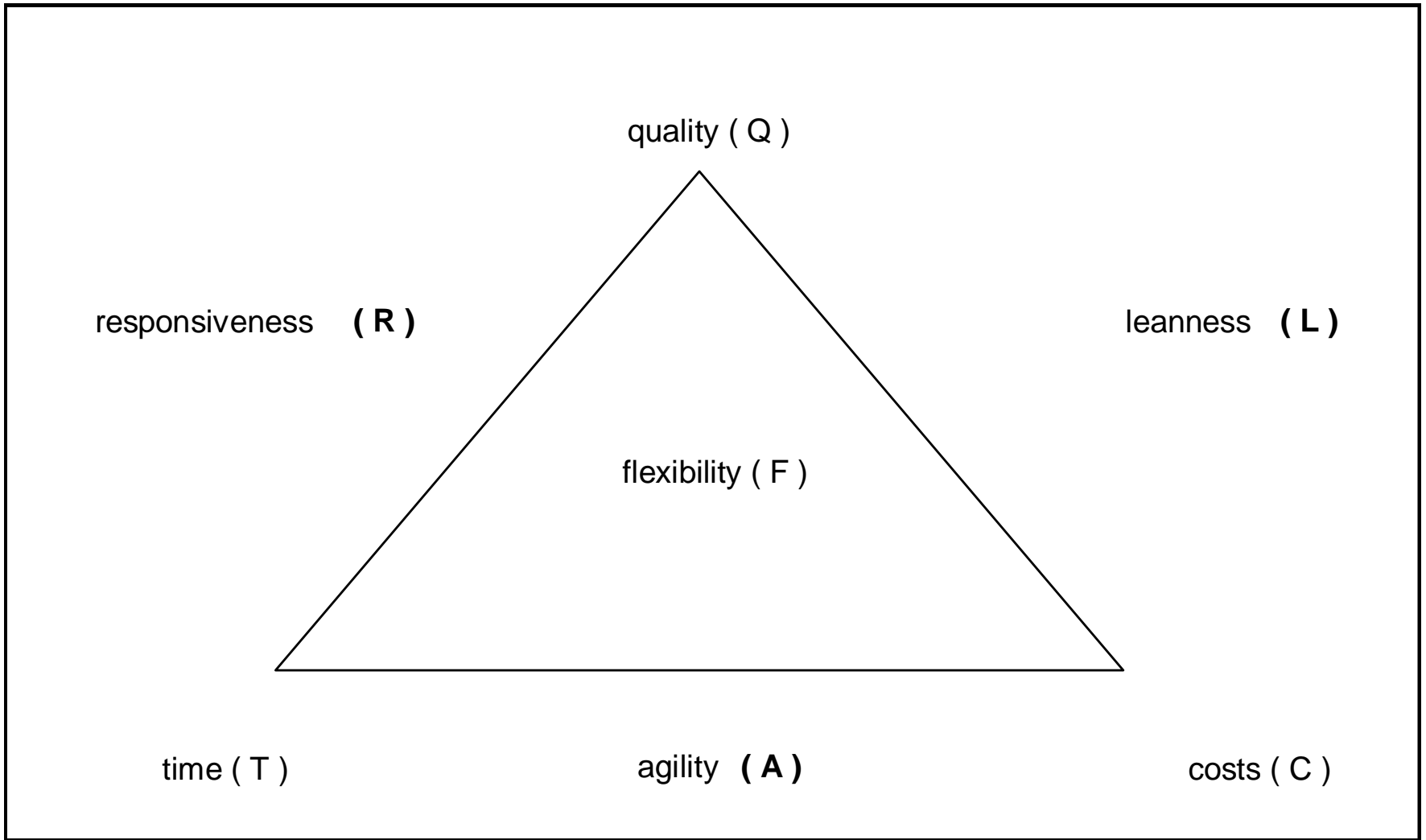
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# Risks

- Company has to *learn to live with* certain amount of uncertainty, i.e. *risks*
- Since companies are part of *complex networks*, risk analysis and proper partner selection are important procedures *for securing the company's competitive position.*



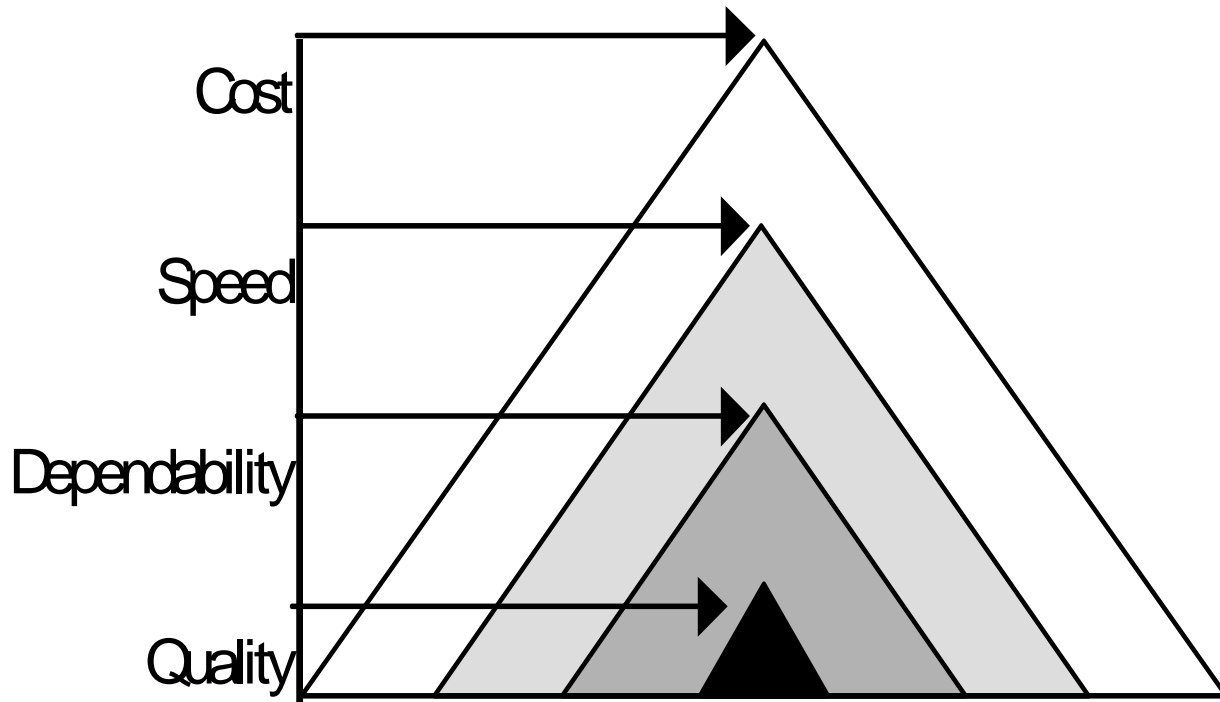
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**RAL-concept**



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Sand cone model

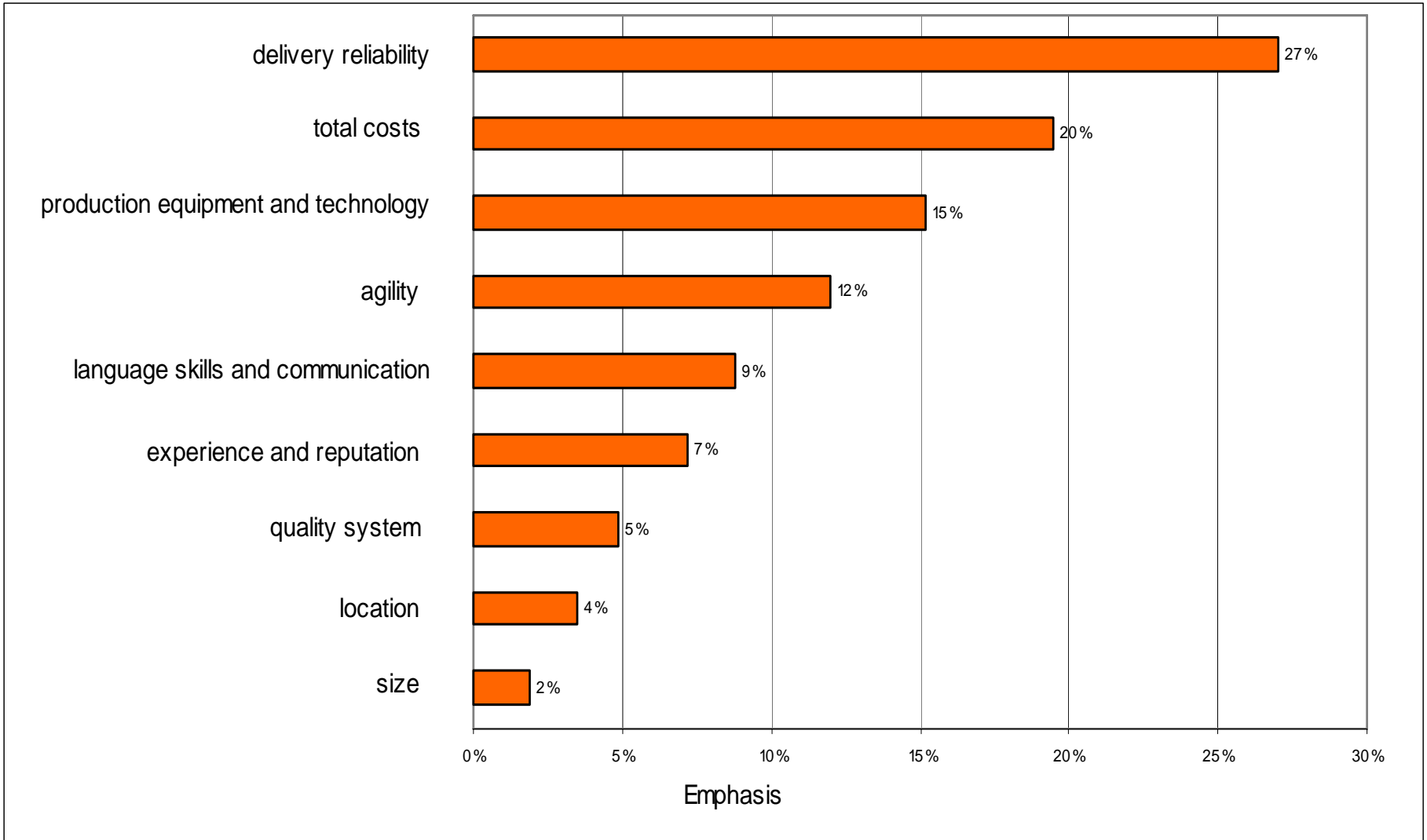
# Methodology

- AHP questionnaire form
- They are compared in pairs with respect to each element

	A	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	B
	(A important)																		(B important)
<b>1. Main criteria questions</b>																			
Customer focus	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Costs	
Customer focus	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Quality	
Customer focus	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Flexibility	
Customer focus	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Delivery promptness	
Costs	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Quality	
Costs	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Flexibility	
Costs	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Delivery promptness	
Quality	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Flexibility	
Quality	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Delivery promptness	
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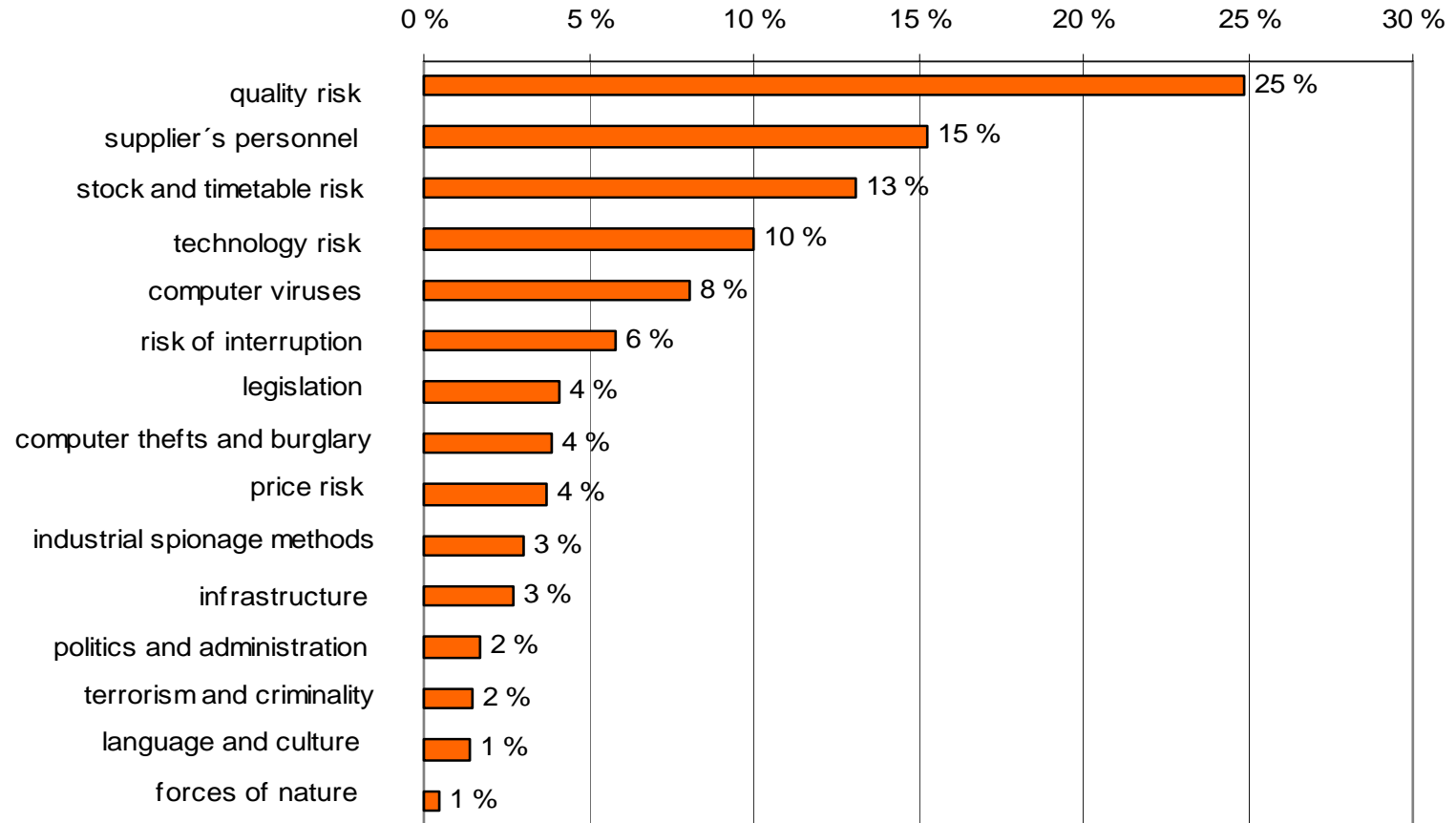


Most important factors for Chinese subcontractor selection



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Emphasis



Most likely risks related to Chinese subcontractors





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# Open Opinions, examples

- “The Chinese supplier was given drawings and model pieces according to which they were supposed to manufacture prototypes. The supplier had to *manufacture the same piece five times before it was close to* what is was supposed to be. “
- “When consensus is reached, *everything works until next change.*”



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# Reliability of the Results

- **In AHP the ICR value for *selection* of the important factors for Chinese subcontractor was 10 %, and ICR value for the most likely *risks* related to Chinese subcontractors was 13 %, both very acceptable (taking into account the quite small number of informants, 20)**
- *According to these ICR values, the results can be evaluated (internally) valid and trend-setting.*



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# General conclusions

- *Decision to go to China have to be based on reasonable facts and **thorough** evaluations.*
- *According to the opinions, poor language skills and lack of communication cause problems. Getting acquainted with **Chinese culture** is recommended.*
- *Emphasis has to be on **long-term relationships** based on mutual trust and win-to-win benefits.*