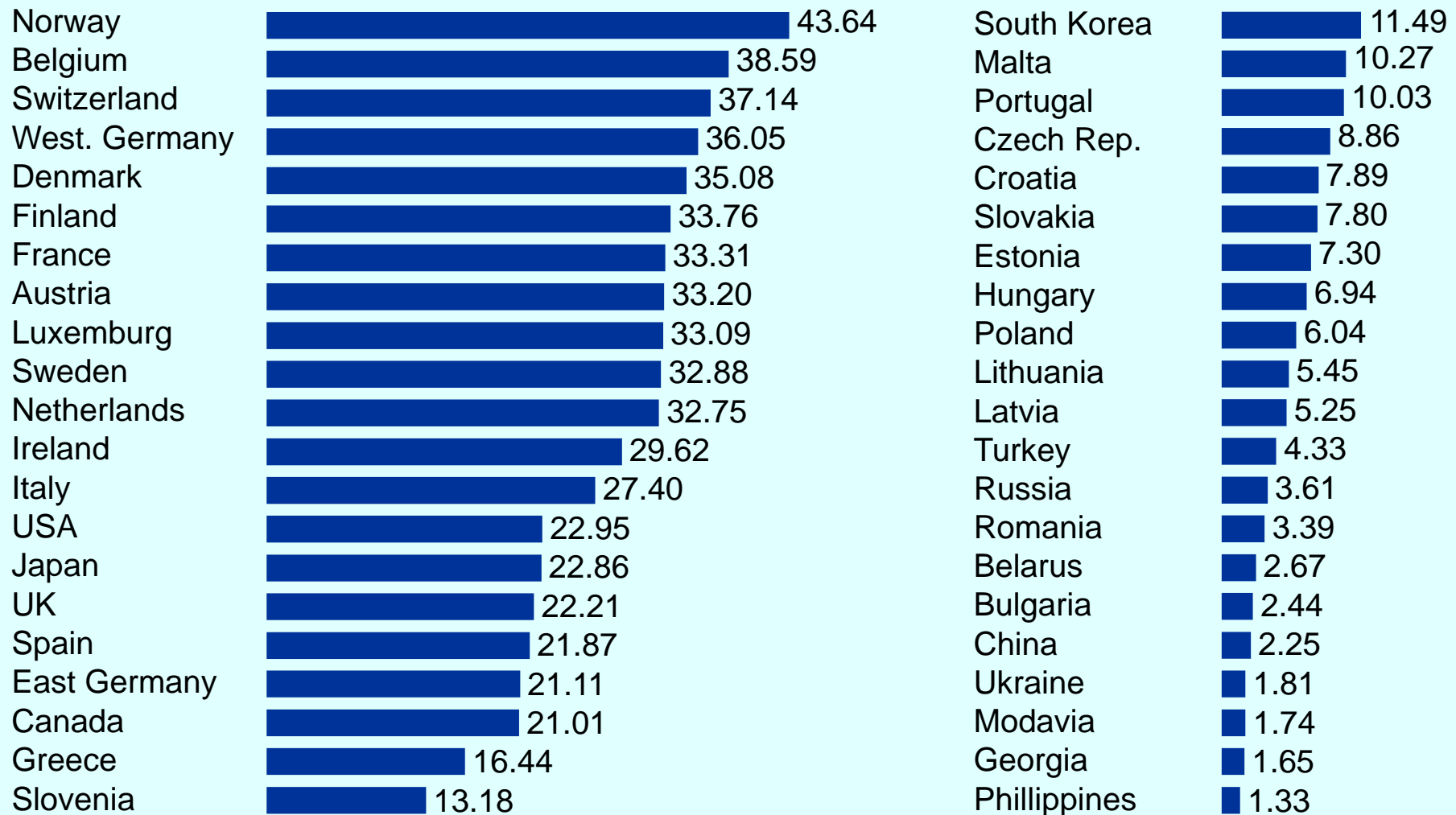


Labor costs in manufacturing industries in different countries

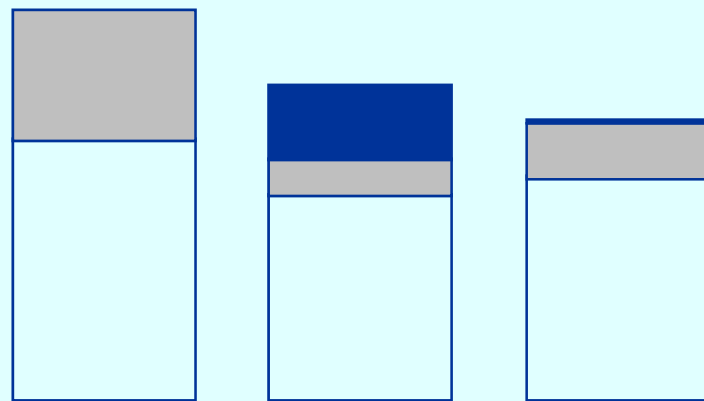


Data in EUR per hour, 2009

(adapted from Institut der Deutschen Wirtschaft, 2010)

Total costs of Electrolux for products sourced in different regions

Chest-freezers for US market



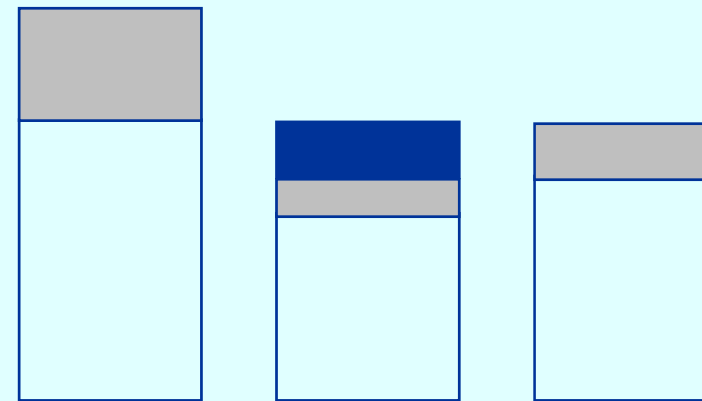
USA

China

Mexico

Production Country

Washing machines for EU market

Western
Europe

China

Eastern
Europe

Production Country

■ = Logistics ■ = Direct labour & overhead ■ = Materials & components

(Electrolux, 2005)

Components of procurement cost

Purchasing cost or production costs abroad

+ Logistics

- Inland freight in the production country
- International freight
- Inland freight in the home country
- Transfer charges
- Additional safety stock

+ Customs duties and fees

- Duties
- Customs fees
- Harbour fees

+ Taxes

- VAT and/or import tax
- ./ Tax incentives in the production country

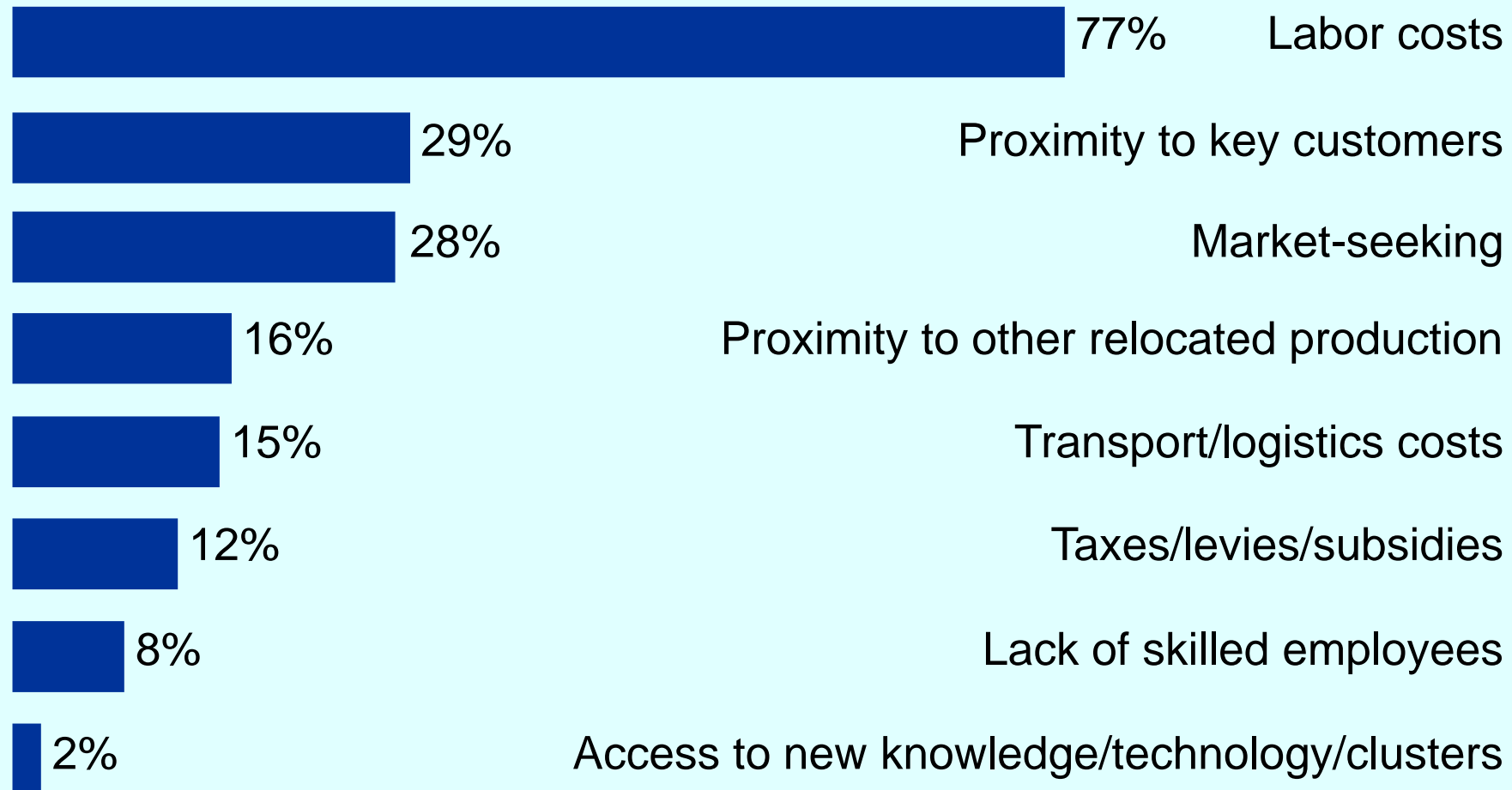
+ Other costs

- Cost of quality monitoring
- Cost of damage
- Supplier development and certification
- Cost due to exchange rate volatility

= Total cost of procurement

(adapted from Deloitte, 2007)

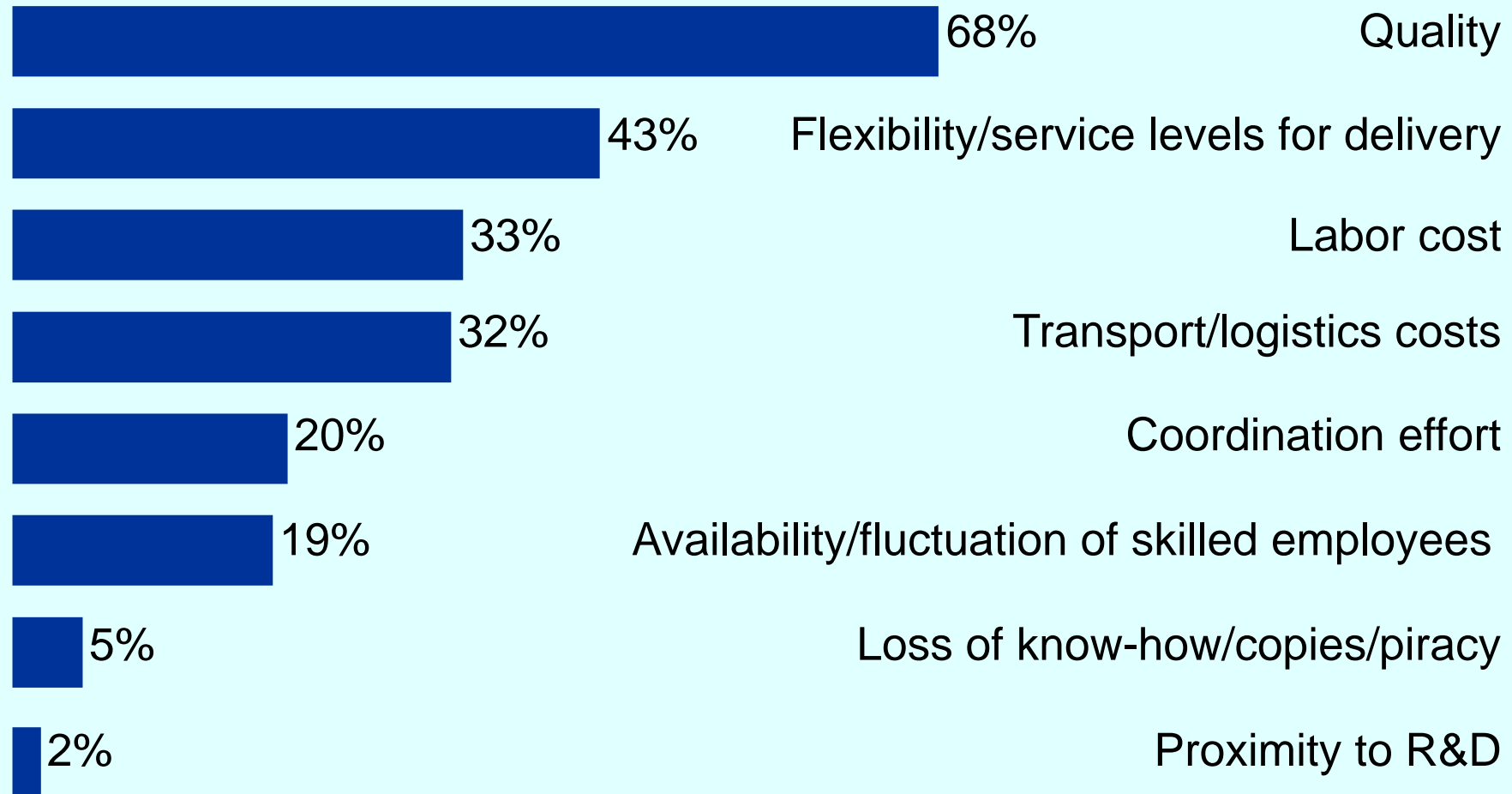
Motives for relocating production abroad



% = Percentage of relocating companies

(adapted from Fraunhofer Institut, 2009)

Reasons for foreign divestments



% = Percentage of reversing companies

(adapted from Fraunhofer Institut, 2009)

Process for evaluating new production and sourcing locations

1. Producing an initial list of potential country locations



2. Eliminating the less attractive countries



3. Selecting the most attractive countries

Evaluation of Romania in the World Competitiveness Report

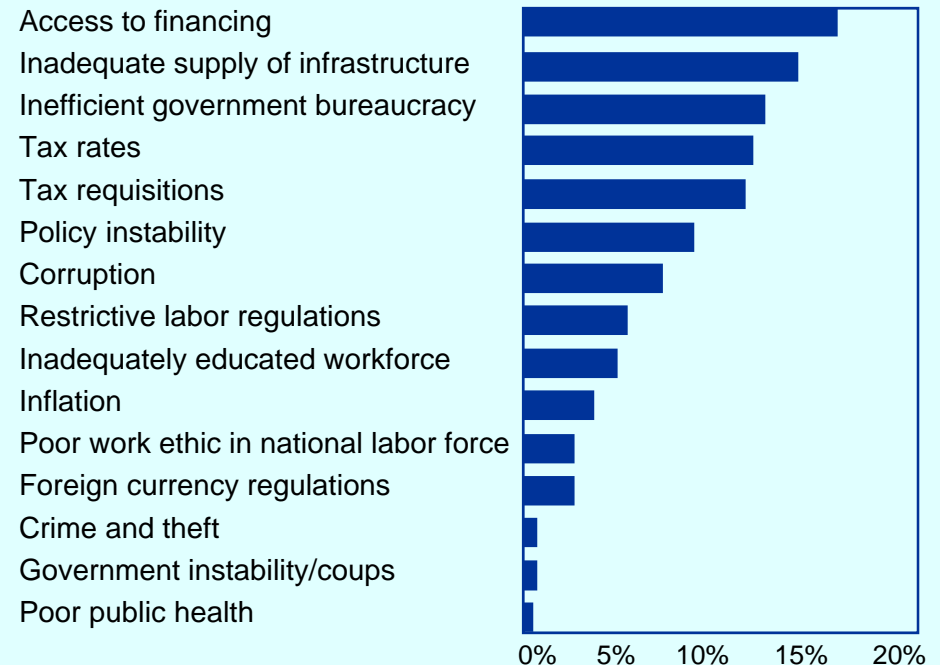
Key indicators

Population (millions)	21.3
GDP (billions USD)	161.5
GDP per capita (USD)	7,542

Global Competitiveness Index and its components 2010-2011

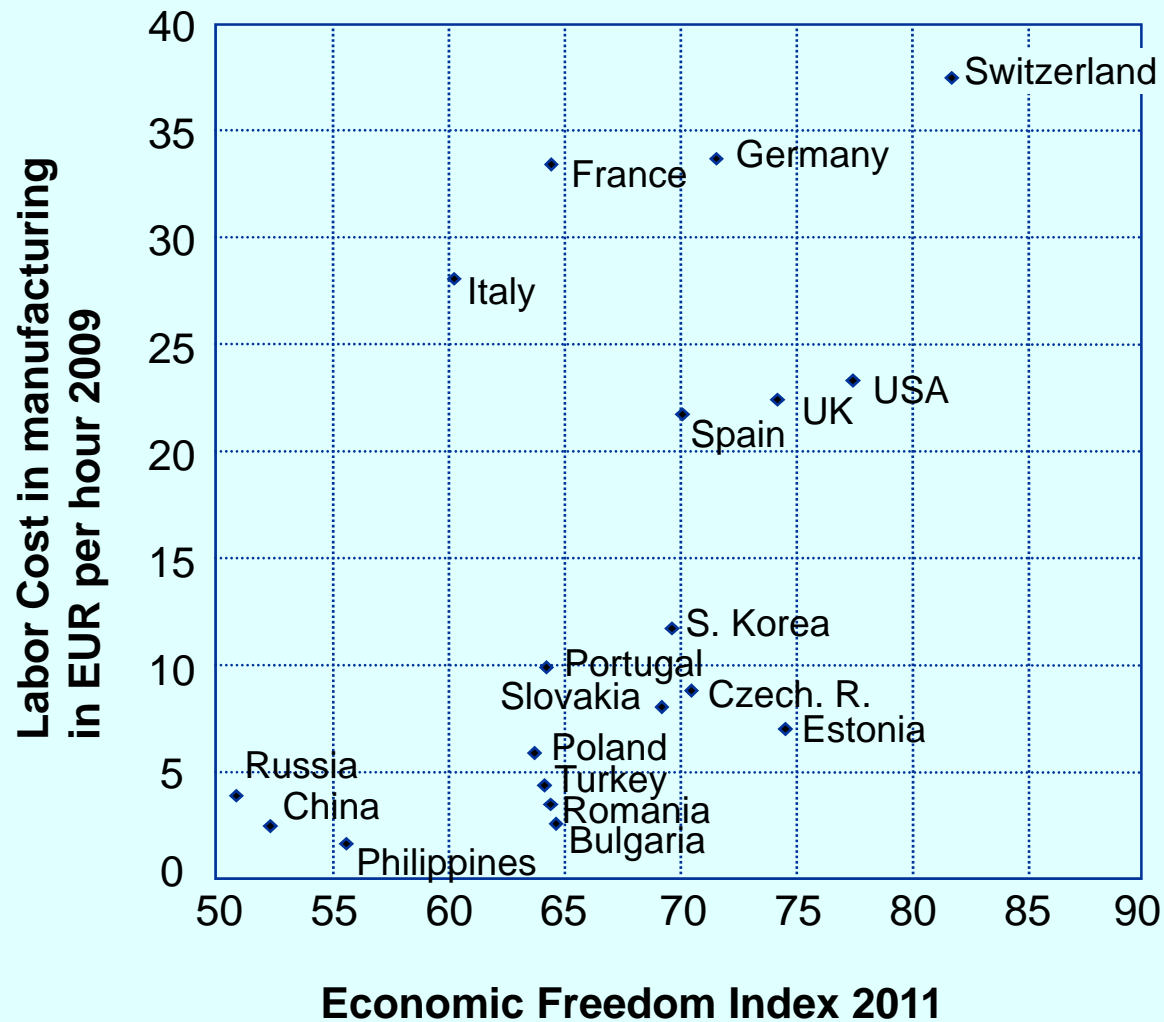
Criterion	Rank (out of 139)	Score (1-7)
Institutions	81	3.7
Infrastructure	92	3.4
Macroeconomic environment	78	4.5
Health and primary education	63	5.8
Higher education and training	54	4.5
Goods market efficiency	76	4.1
Labor market efficiency	76	4.3
Financial market development	81	4.0
Technological readiness	58	3.8
Market size	43	4.4
Business sophistication	93	3.5
Innovation	87	2.9
Global Competitiveness Index	67	4.2

The most problematic factors for doing business (% of responses)



(adapted from World Economic Forum, 2010)

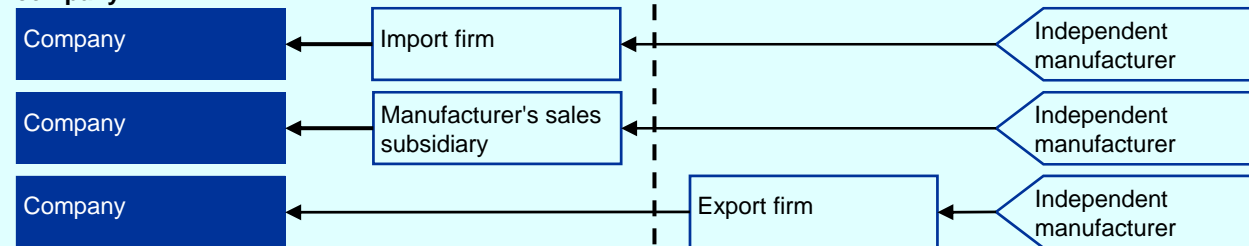
Labor costs and economic freedom in selected countries



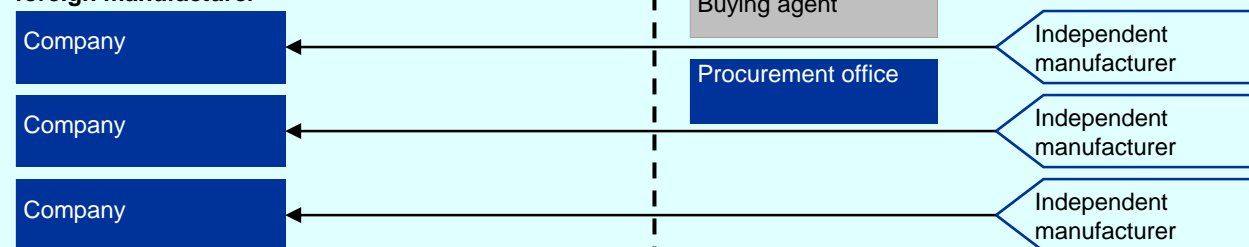
(based on Institut der Deutschen Wirtschaft, 2010; Heritage Foundation, 2011)

Different alternatives for sourcing from abroad

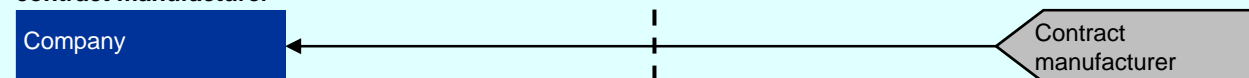
Sourcing from a trade company



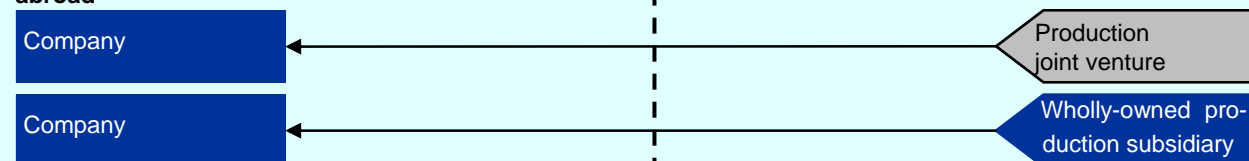
Sourcing from an independent foreign manufacturer



Sourcing from a foreign contract manufacturer



Taking up own production abroad



Border

- = Company
- = Alliance/partnership
- = Independent suppliers

Process for evaluating foreign operation modes

1. Eliminate the less suitable operation modes based on external and internal conditions



2. Select the most suitable operation modes based on a detailed evaluation

Fit between country attributes, production asset attributes and operation modes

Country risk			
high	Sourcing from independent manufacturers (or trading firms)	Contract manufacturing	Production joint venture
medium	Sourcing from independent manufacturers (or trading firms)	Contract manufacturing	Production subsidiary or production joint venture
low	Sourcing from independent manufacturers (or trading firms)	Contract manufacturing or production subsidiary	Production subsidiary
	low	medium	high
	Specificity of necessary assets		

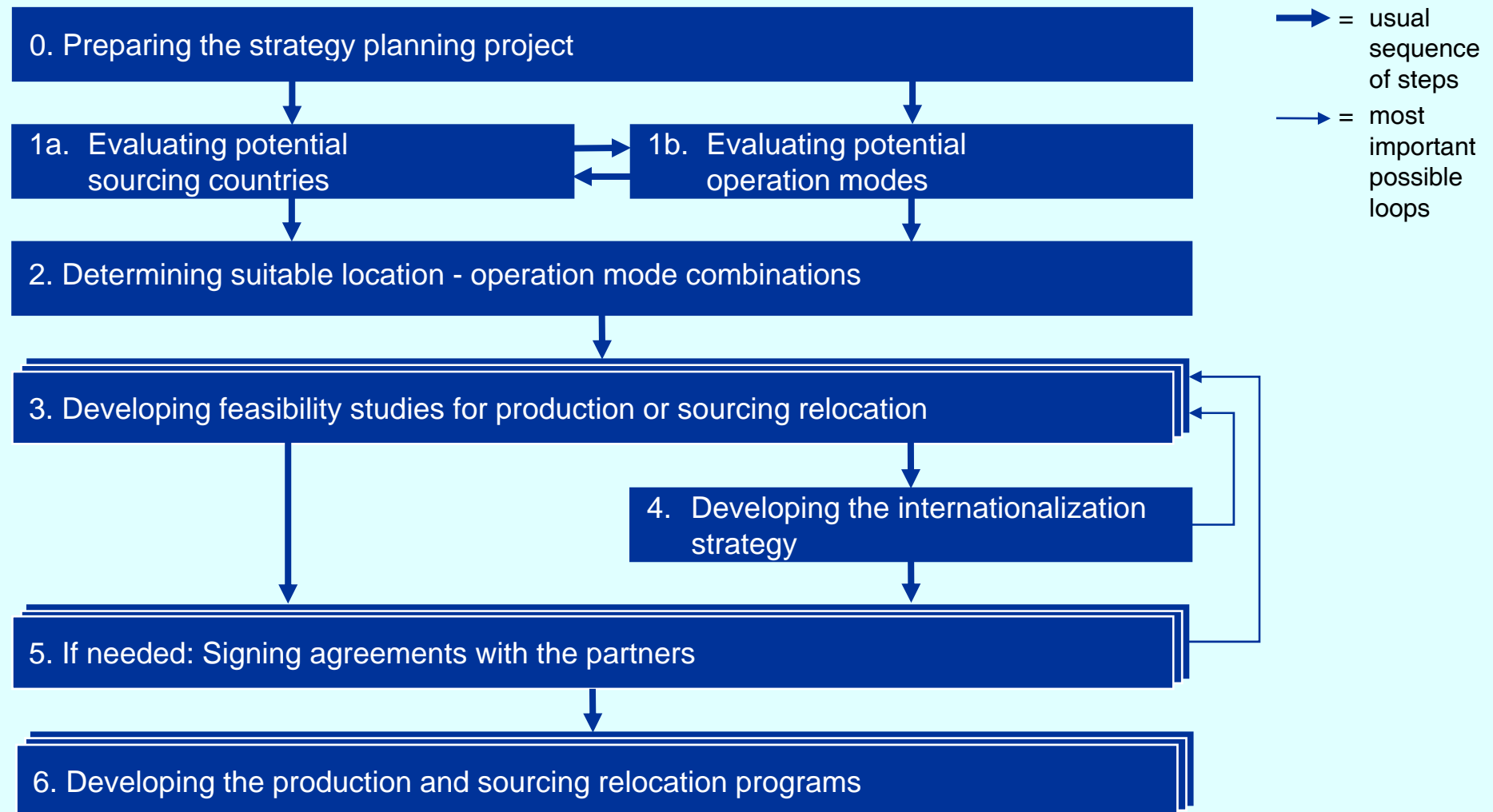
Scoring model for selecting the operation mode

Criteria	Importance of the criterion	Options		
		Independent manufacturer	Contract manufacturer	Wholly-owned production
Control over the production process and quality	3	1	3	4
Financial resources required	2	4	4	1
Cost per product unit	3	1	3	4
Flexibility to switch the sourcing location	2	4	2	1
Risk of knowledge dissemination to another company	1	3	2	4
Supply security	3	1	2	4
Effectiveness of knowledge-transfer to the foreign production site	1	1	2	4
Overall evaluation		29	40	48

Scores: 4 = very positive 3 = positive 2 = negative 1 = very negative

Importance of the criterion: 3 = high 2 = medium 1 = low

Process for developing an internationalization strategy for production or sourcing



Location - operation mode combinations as result of Step 2

Product	Most attractive locations		Operation modes		
	Country	Location within country	Sourcing from a domestic import firm	Sourcing from an independent manufacturer	Sourcing from a joint venture
P1	China	C1			a
		C2			b
	Vietnam	V1	c		
P2	Ukraine	U1		d	
		U2		e	
	Romania	R1	f		


 = selected operation mode at that location a - f = suppliers/partners

Table of contents of a feasibility study for a relocation option

1. Product and production step characteristics
2. Country characteristics
3. Characteristics of the specific location within the country
4. Operation mode
5. Supplier, contract manufacturer, partner and/or acquisition object
6. Supply chain
 - 6.1 Transport and warehouses, including costs
 - 6.2 Delivery times
 - 6.3 Supply security
 - 6.4 Other decision-relevant aspects of the supply chain
7. Legal aspects
 - 7.1 Protection of intellectual property rights
 - 7.2 Other aspects of contracts with foreign partners
8. Resources required
 - 8.1 Human resources
 - 8.2 Assets
 - 8.3 Working capital
9. Quantitative objectives and forecasts with regard to labor costs, production volumes, etc.
10. Measures
 - 10.1 Steps and time needed to build up activities
 - 10.2 Steps and time needed to terminate current activities that will be relocated, e.g. supplier contracts in home country
11. Responsibilities
12. Budget
 - 12.1 Initial investments
 - 12.2 Annual expenses
13. Economic evaluation

The Net Present Value of a relocation option

Elements of the NPV	Initial investment	Cash flows year 1-15	NPV
Maintaining production in the home country		-1,000	
Production joint venture in China with a partner in location C2	-2,900	-300	
Cost of closing down the production in the home country	-600		
Difference	-3,500	700	593.2

All figures in thousands of Swiss francs

Table of contents of an internationalization strategy for sourcing and production

1. Products and production steps
2. Countries and locations
3. Operation modes and partners
4. Quantitative objectives
5. Timetable
6. Responsibilities
7. Investment budgets and free cash flow targets

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