

Figure I.1 Basic conditions, decision making, coordination and competitiveness

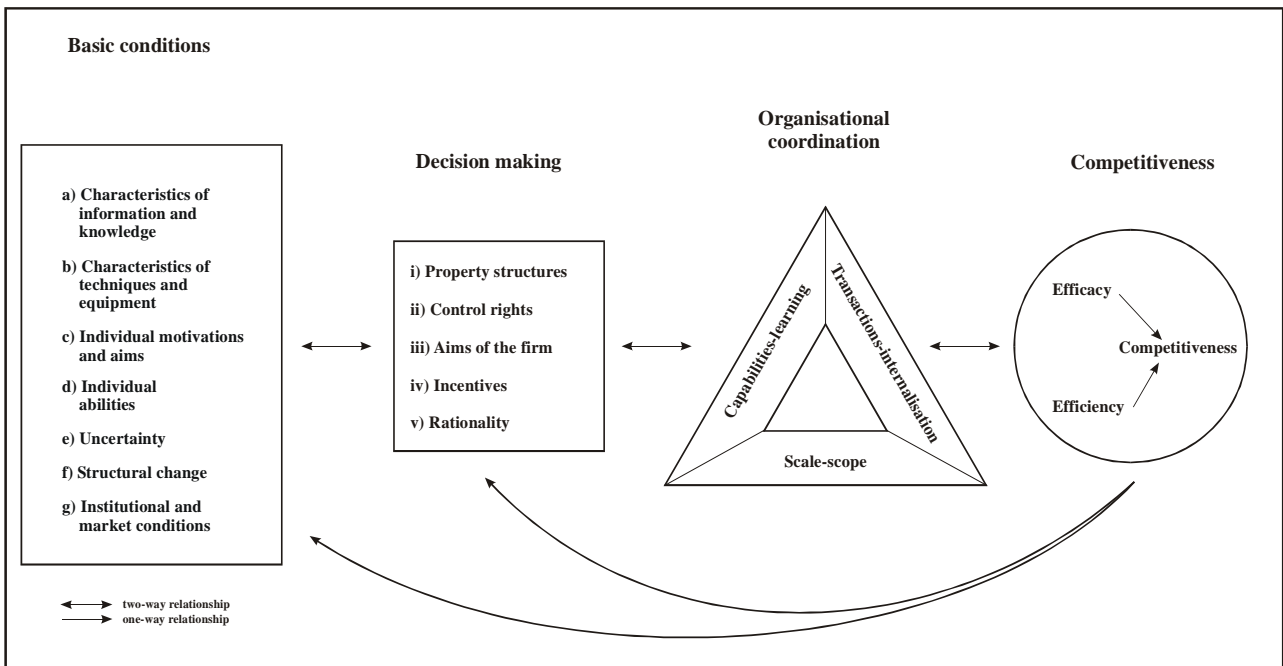


Figure 1.1 Basic conditions

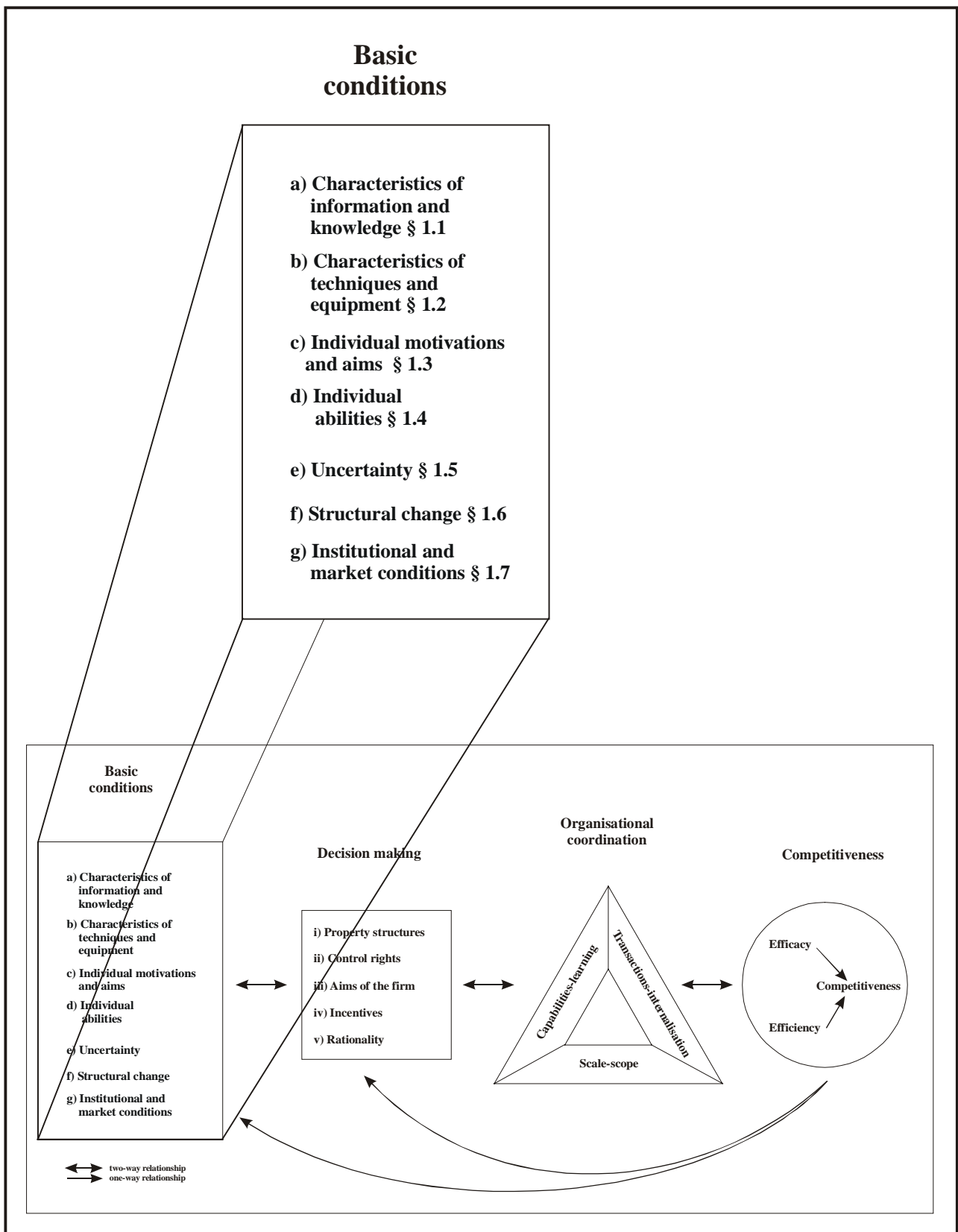


Figure 1.2 Individual abilities

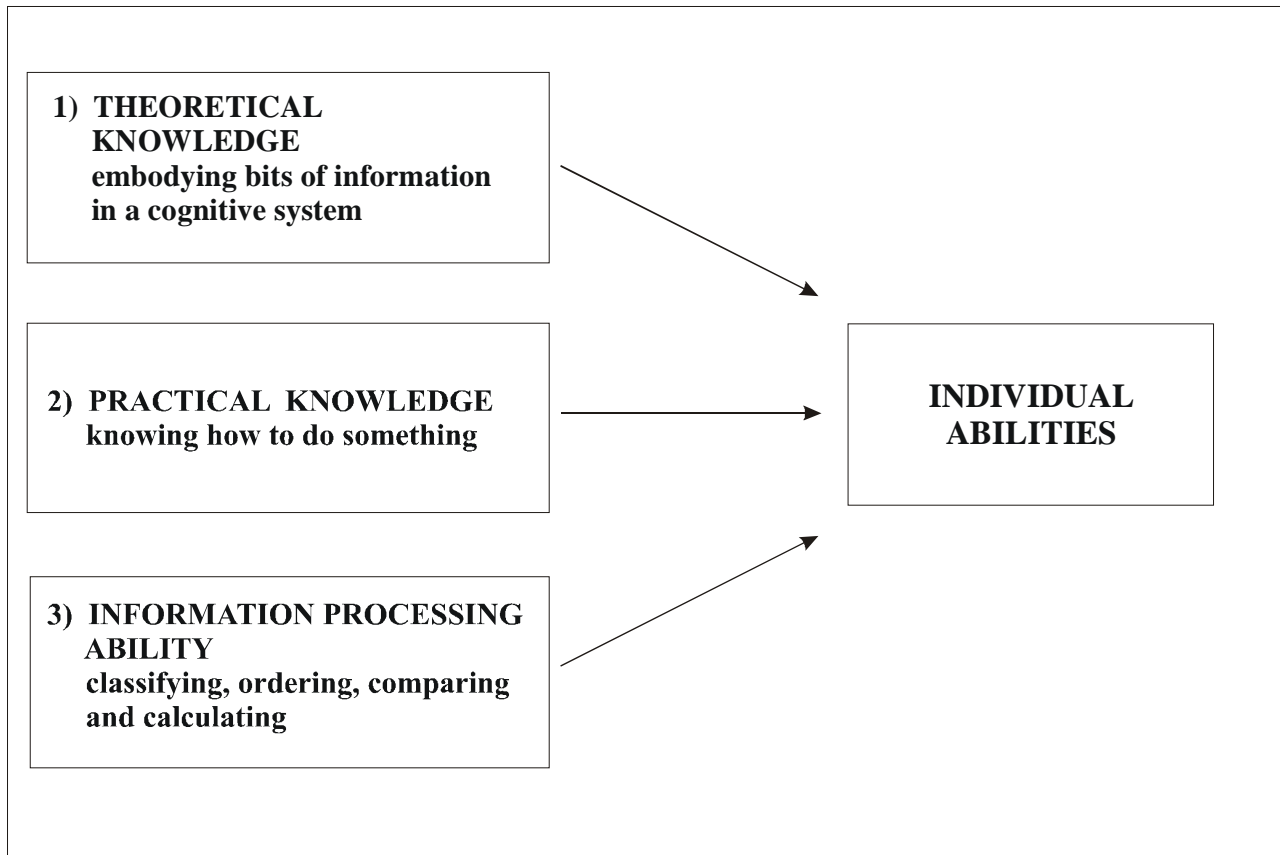


Figure 1.3 Increasing need for knowledge

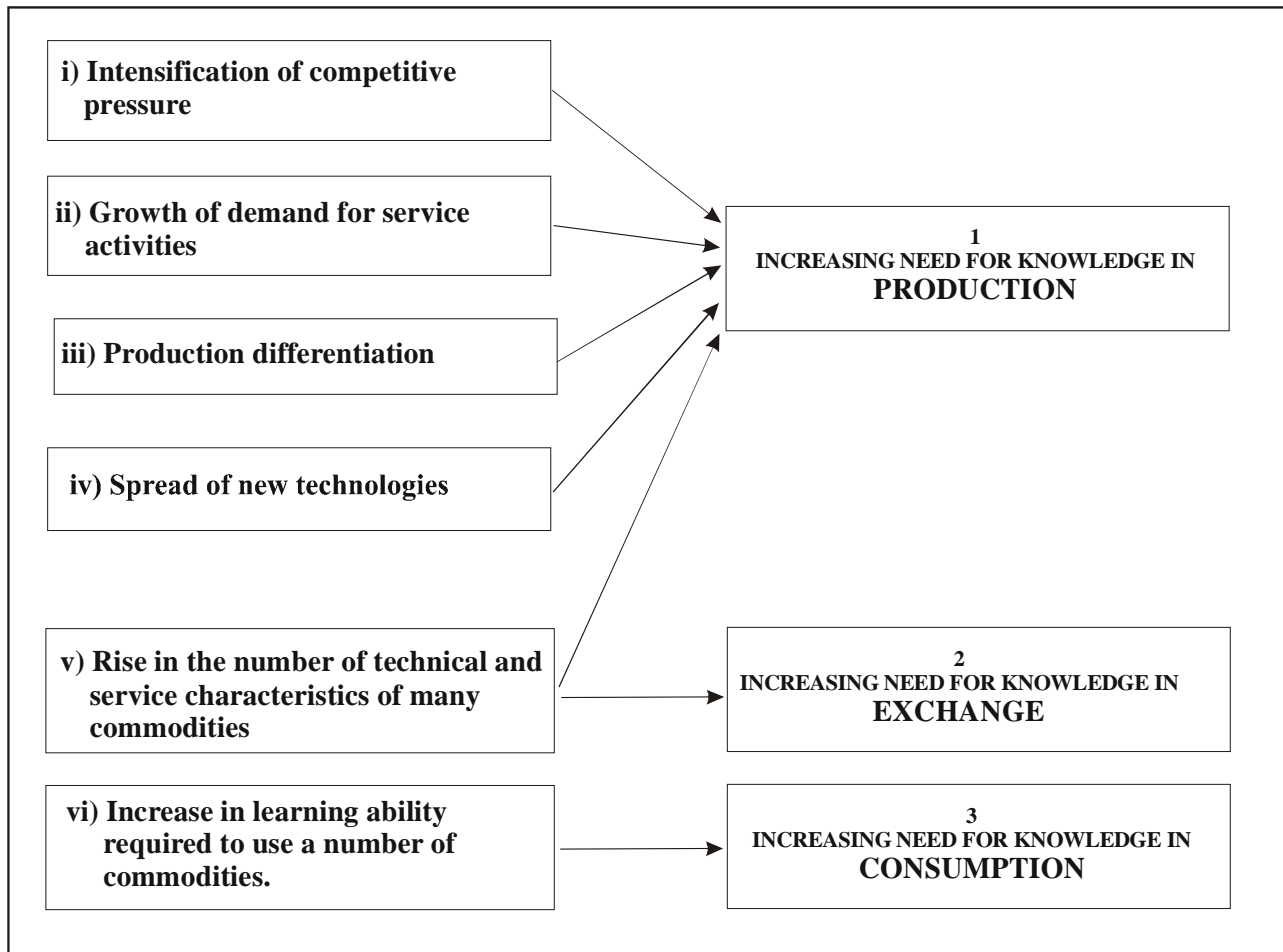


Figure 1.4 Forecasting ability, theoretical knowledge and information-processing ability

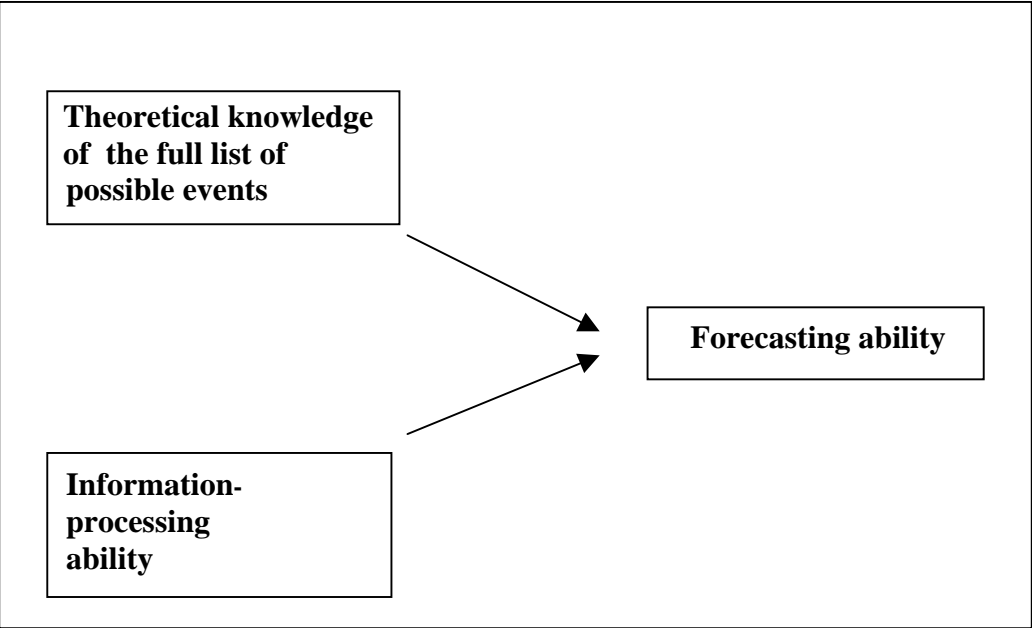


Figure 1.5 Complete and incomplete forecasting ability

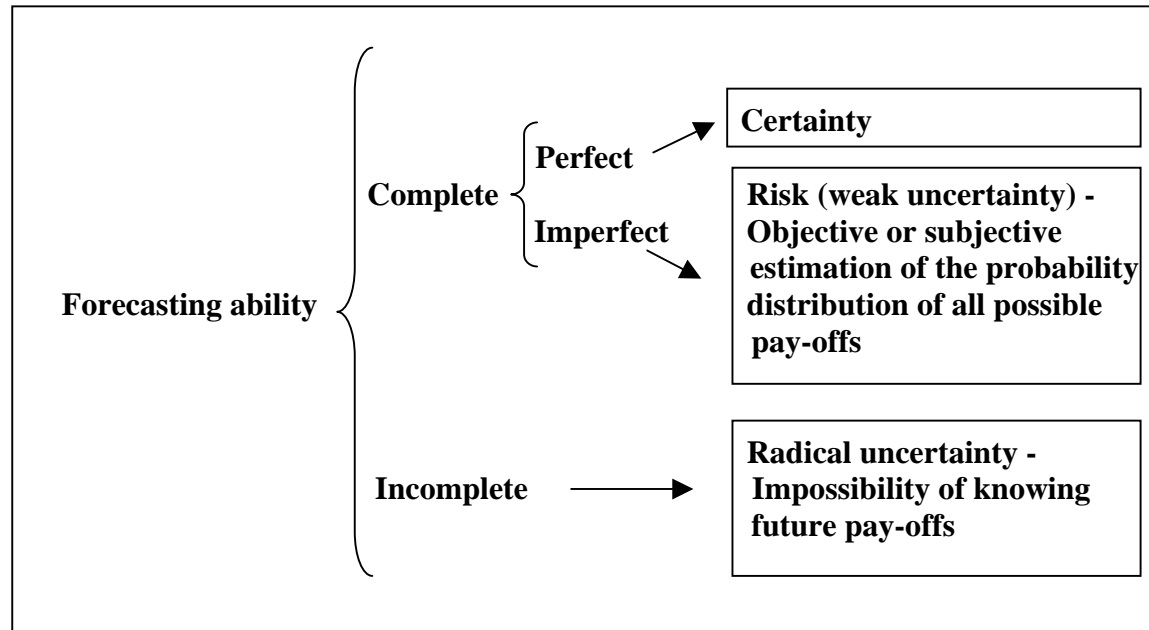


Figure 1.6 Different degrees of uncertainty

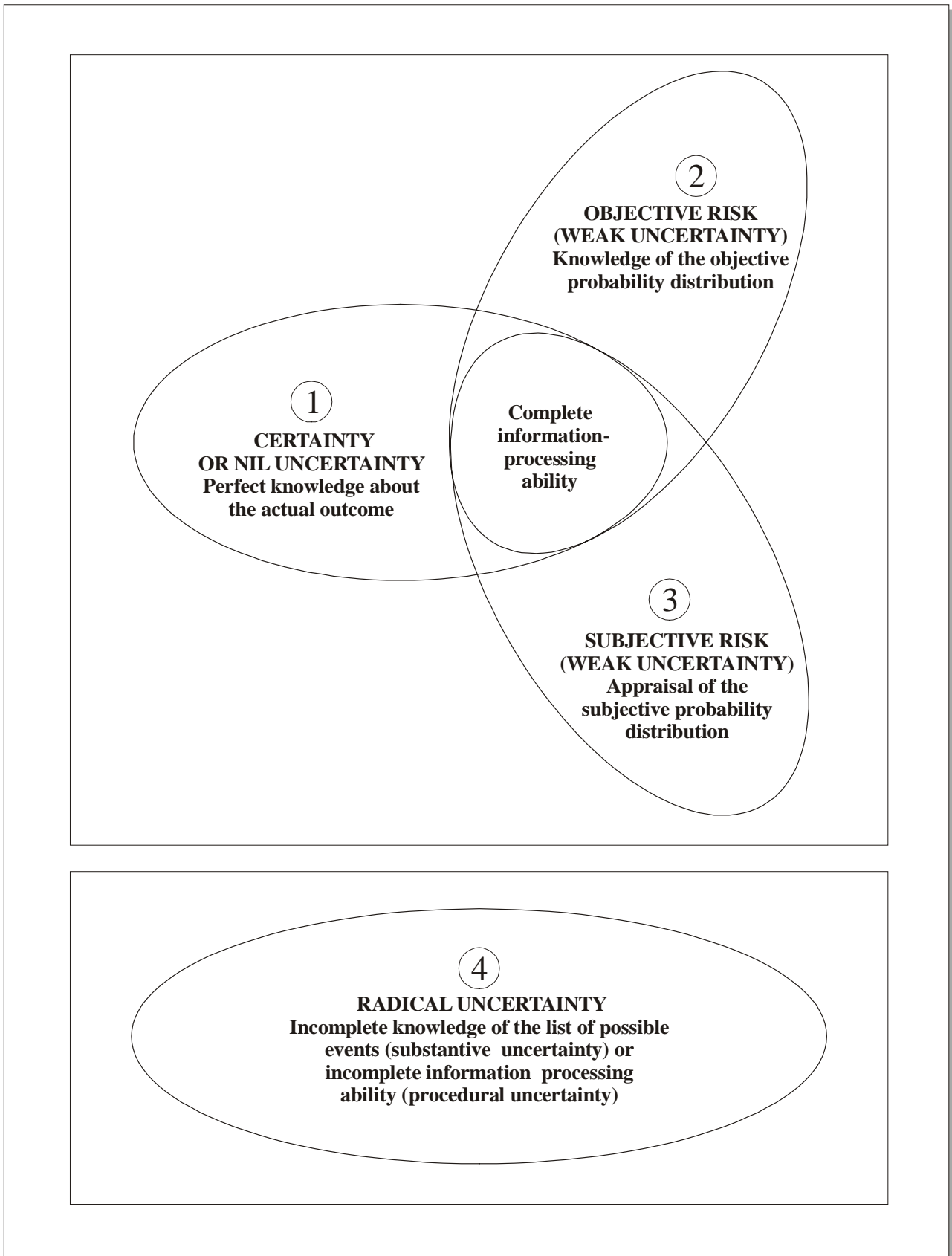


Figure 2.1 Decision-making

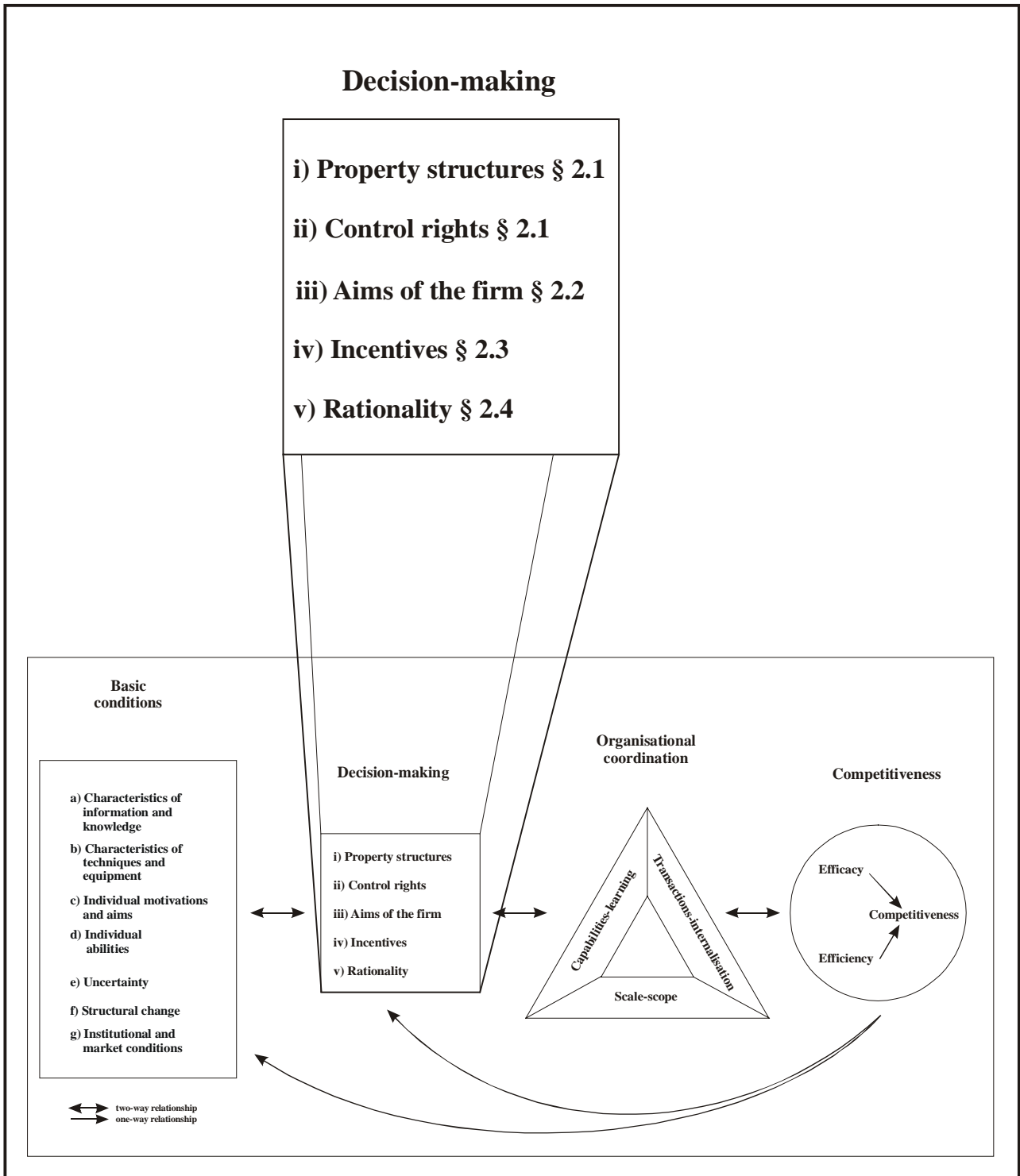


Figure 2.2 Perfect and cognitive rational behaviour

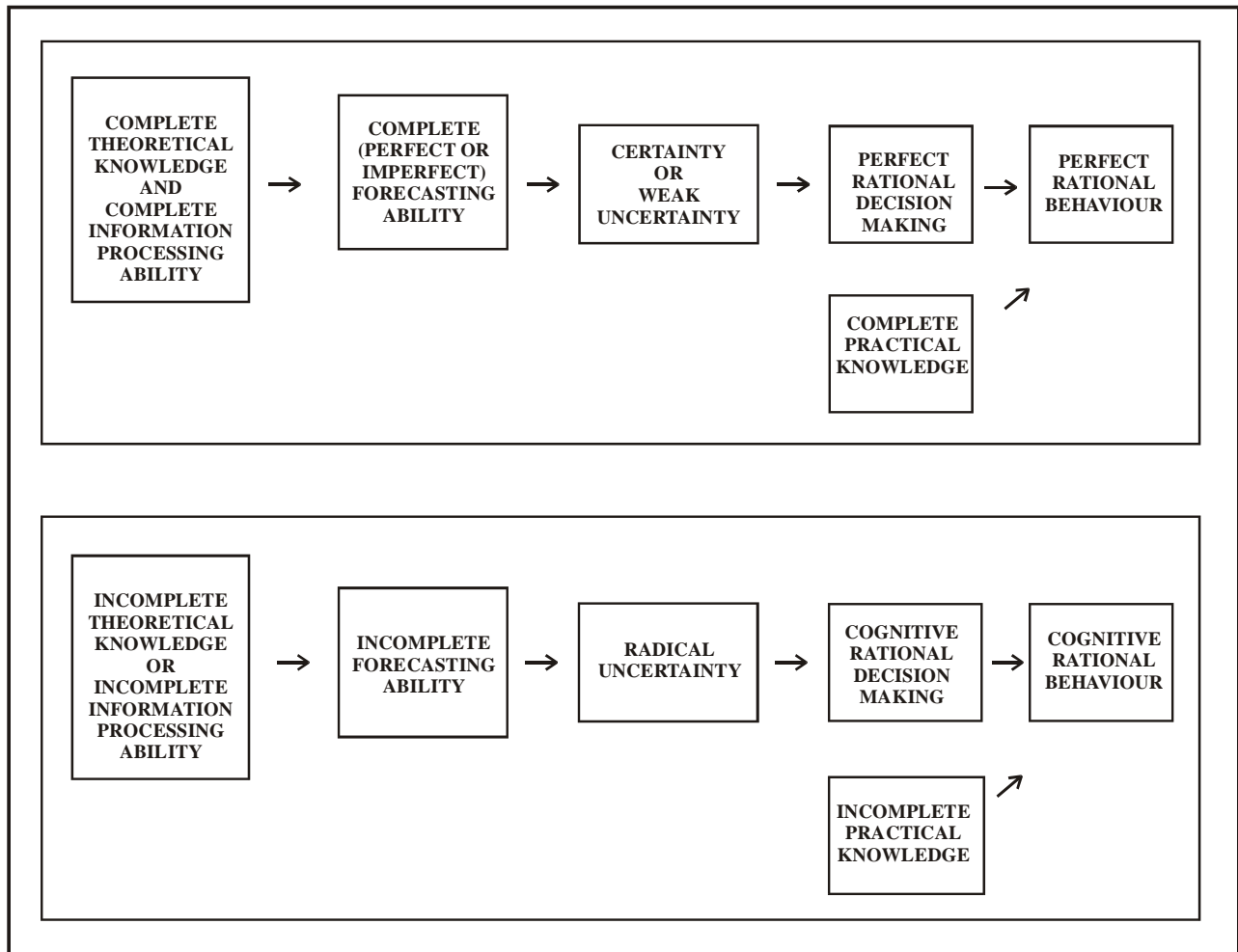


Figure 3.1 Organisational coordination

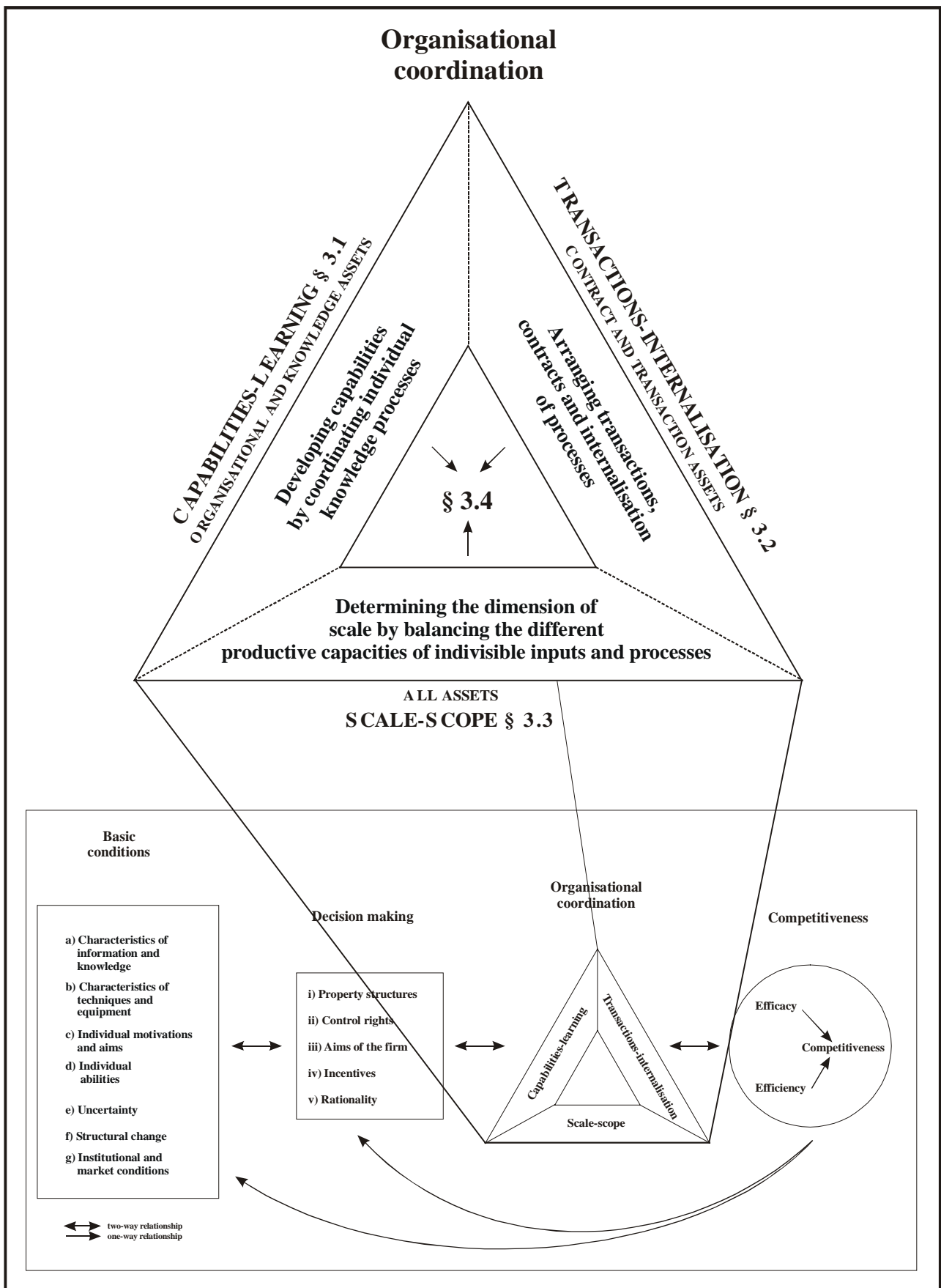


Figure 3.2 The assets of the firm

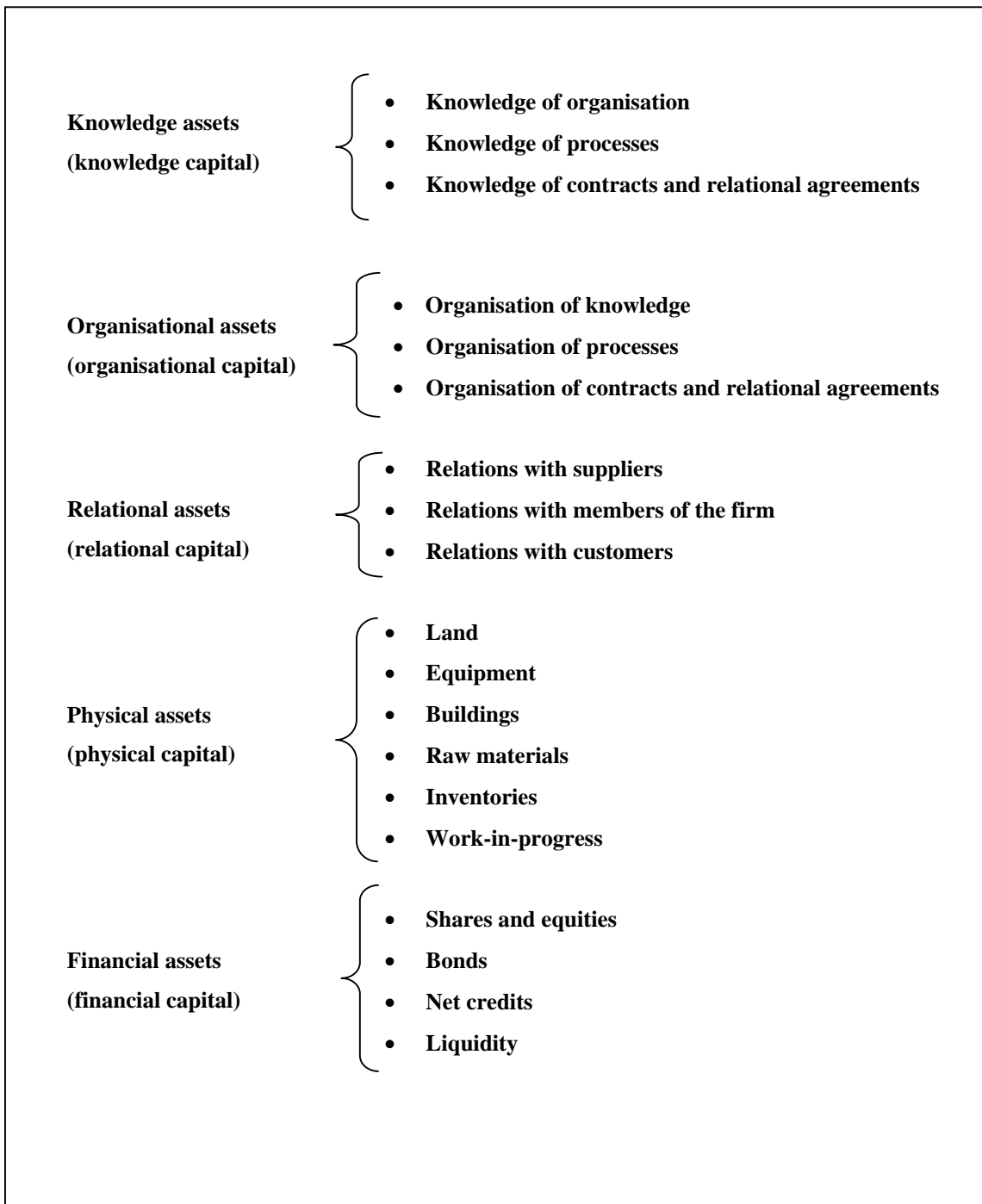


Figure 3.3 Corporate culture, internal functioning and external image

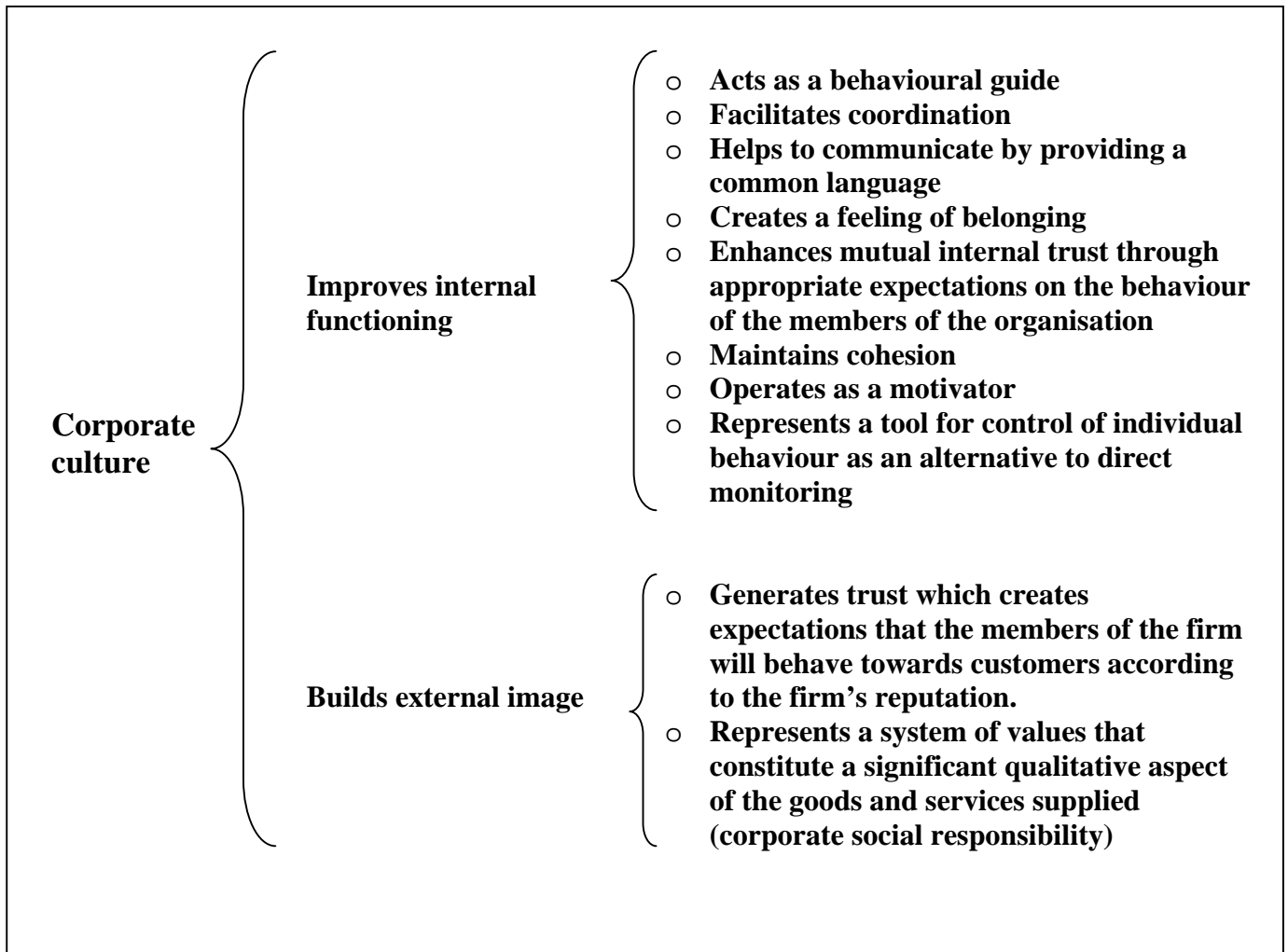


Figure 3.4 Individual abilities, contracts and transaction costs (T.C.)

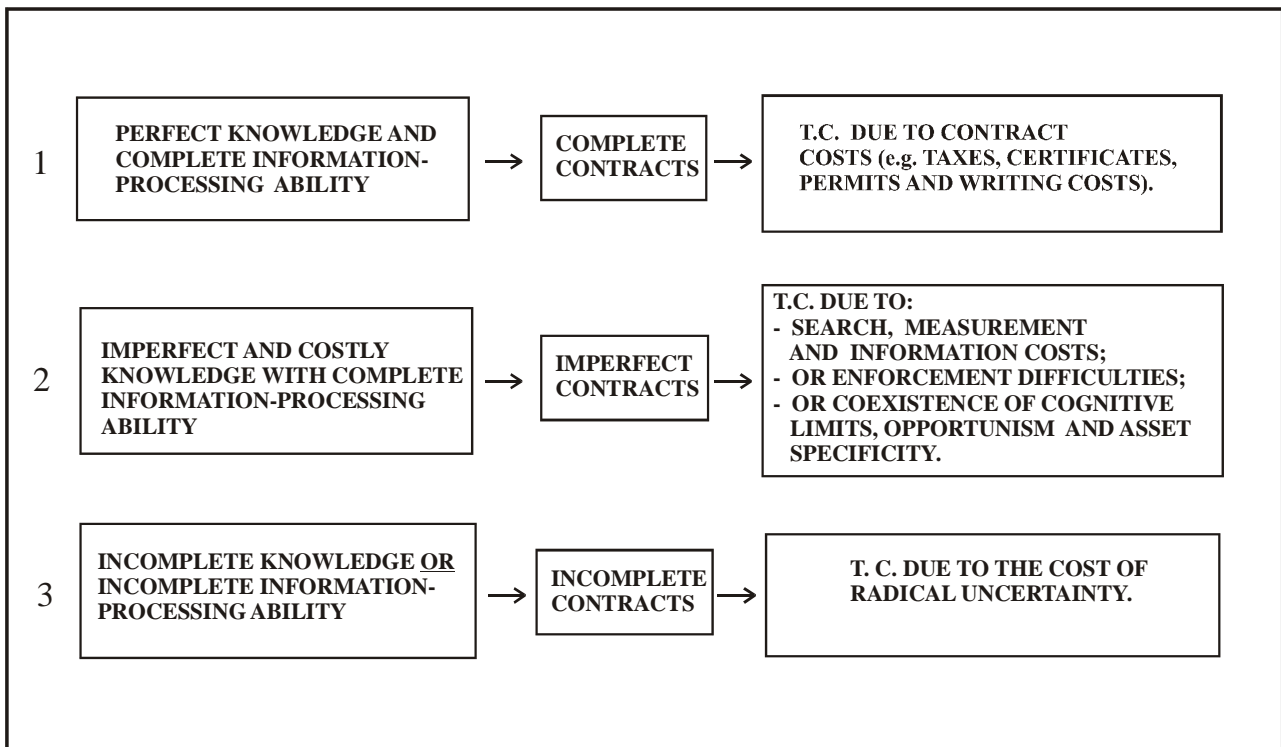


Figure 3.5 Economies of scale, learning and growth

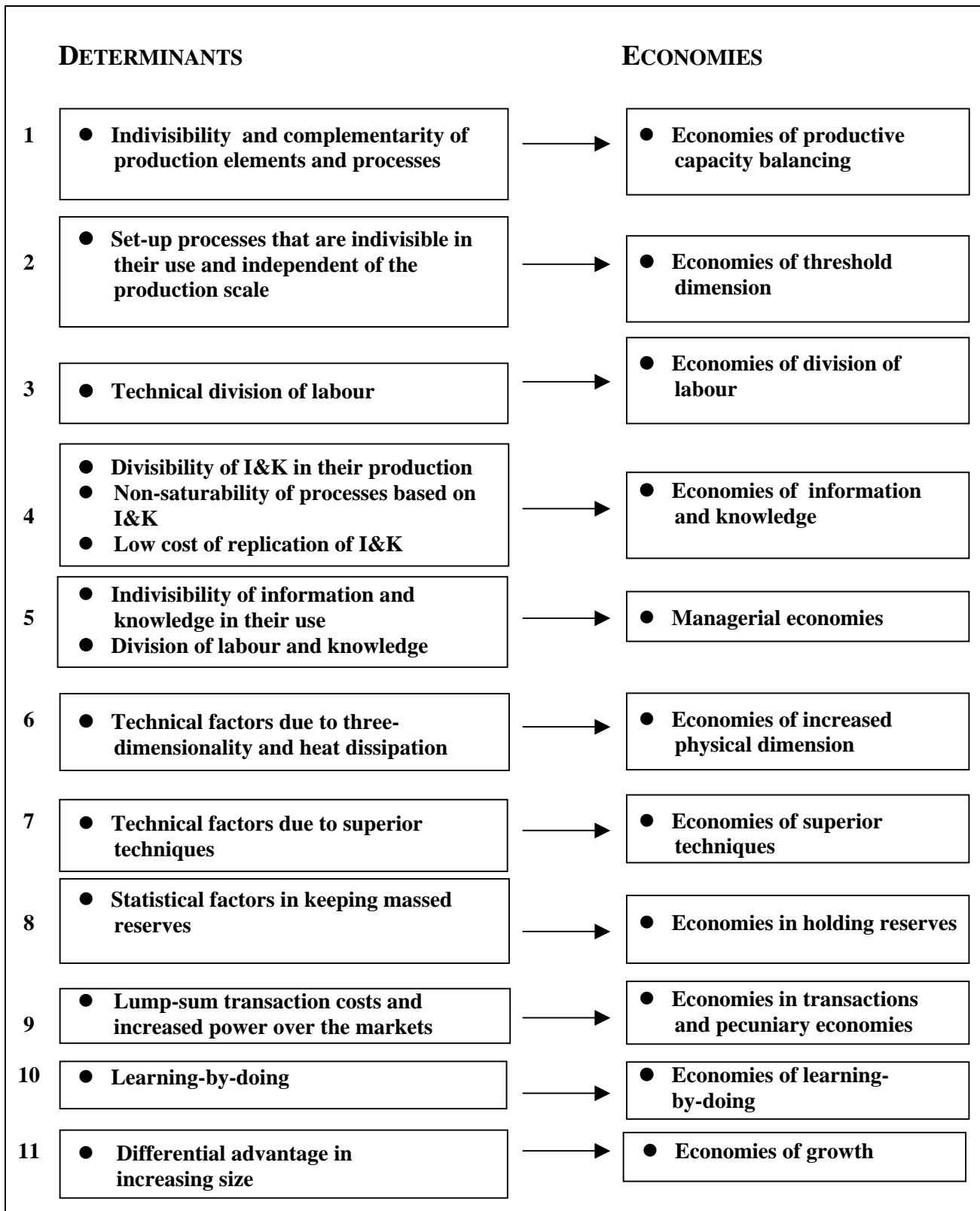


Figure 3.6 Interaction among the three aspects of organisational coordination

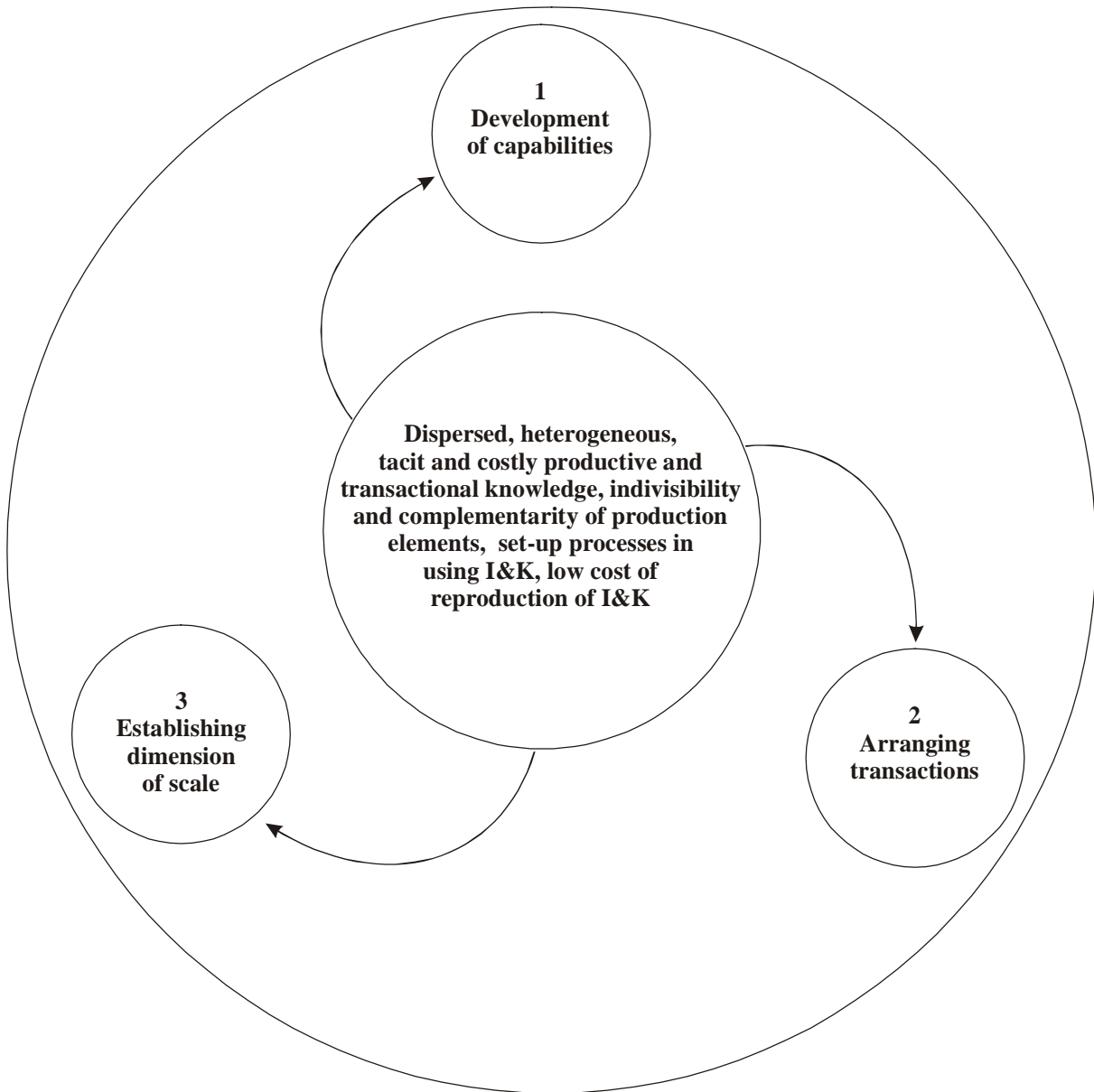


Figure 4.1 Wrestling with uncertainty

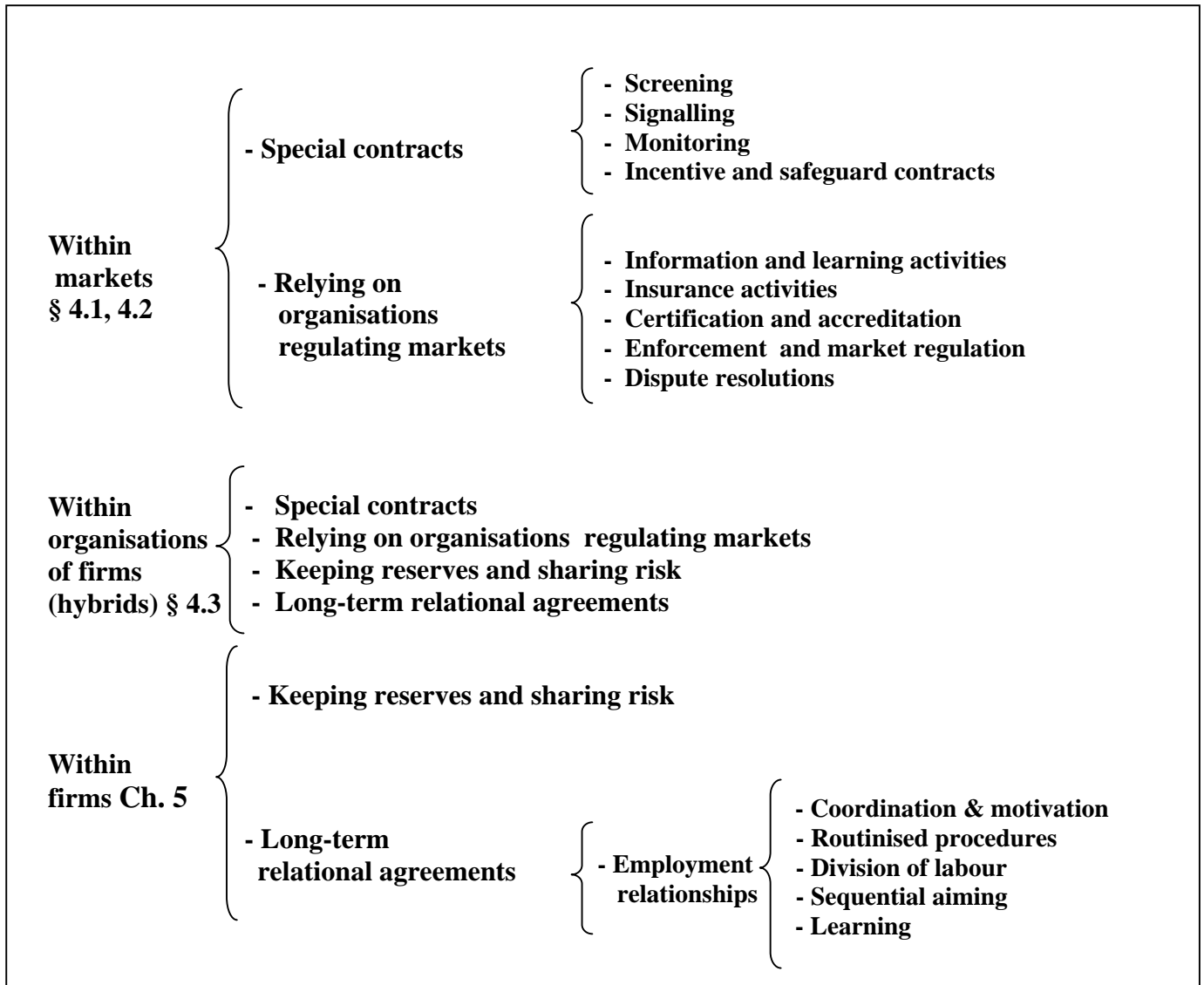


Figure 5.1 Uncertainty-decreasing strategies within the employment relationship

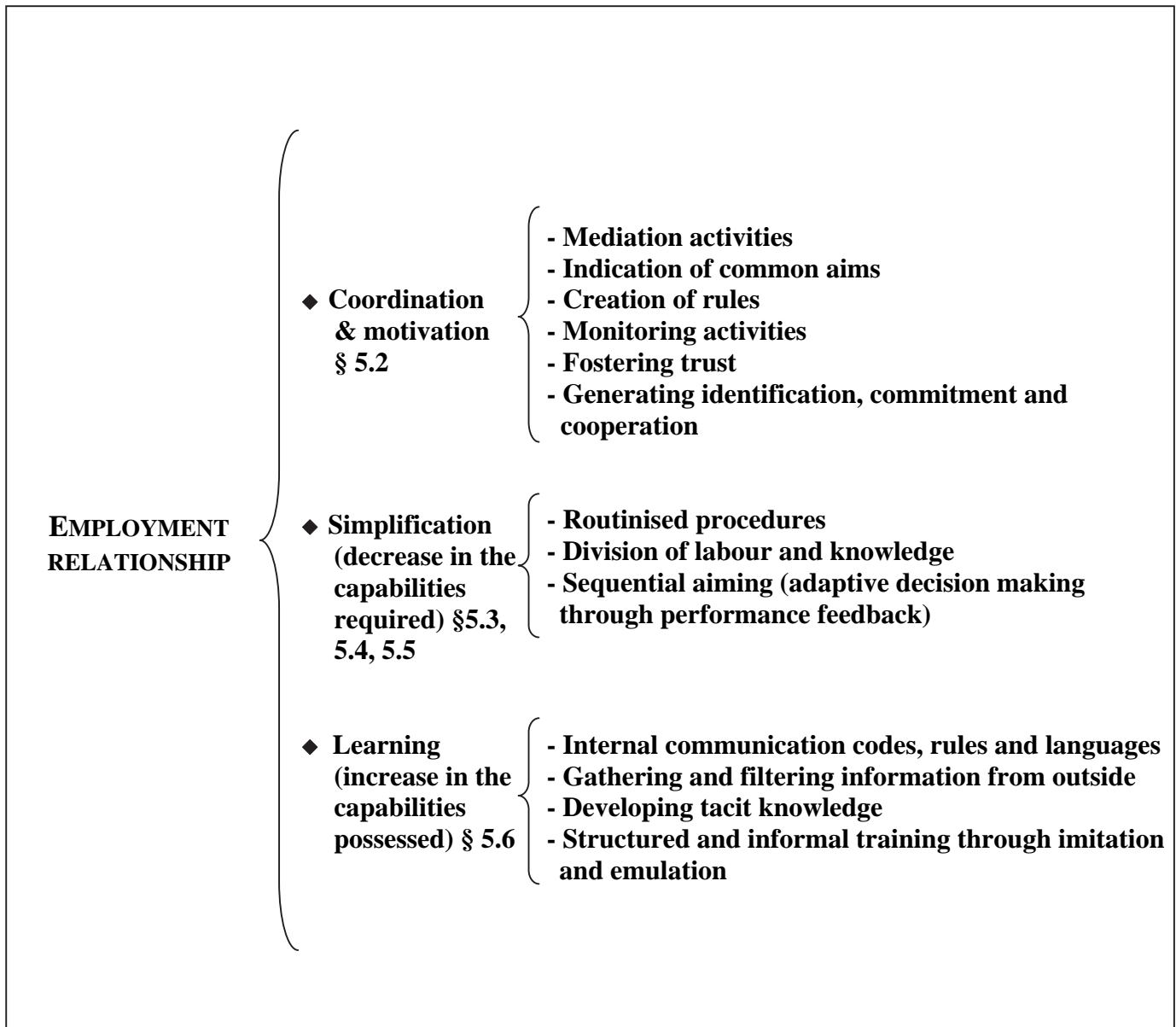


Figure 5.2 Information and knowledge transmission

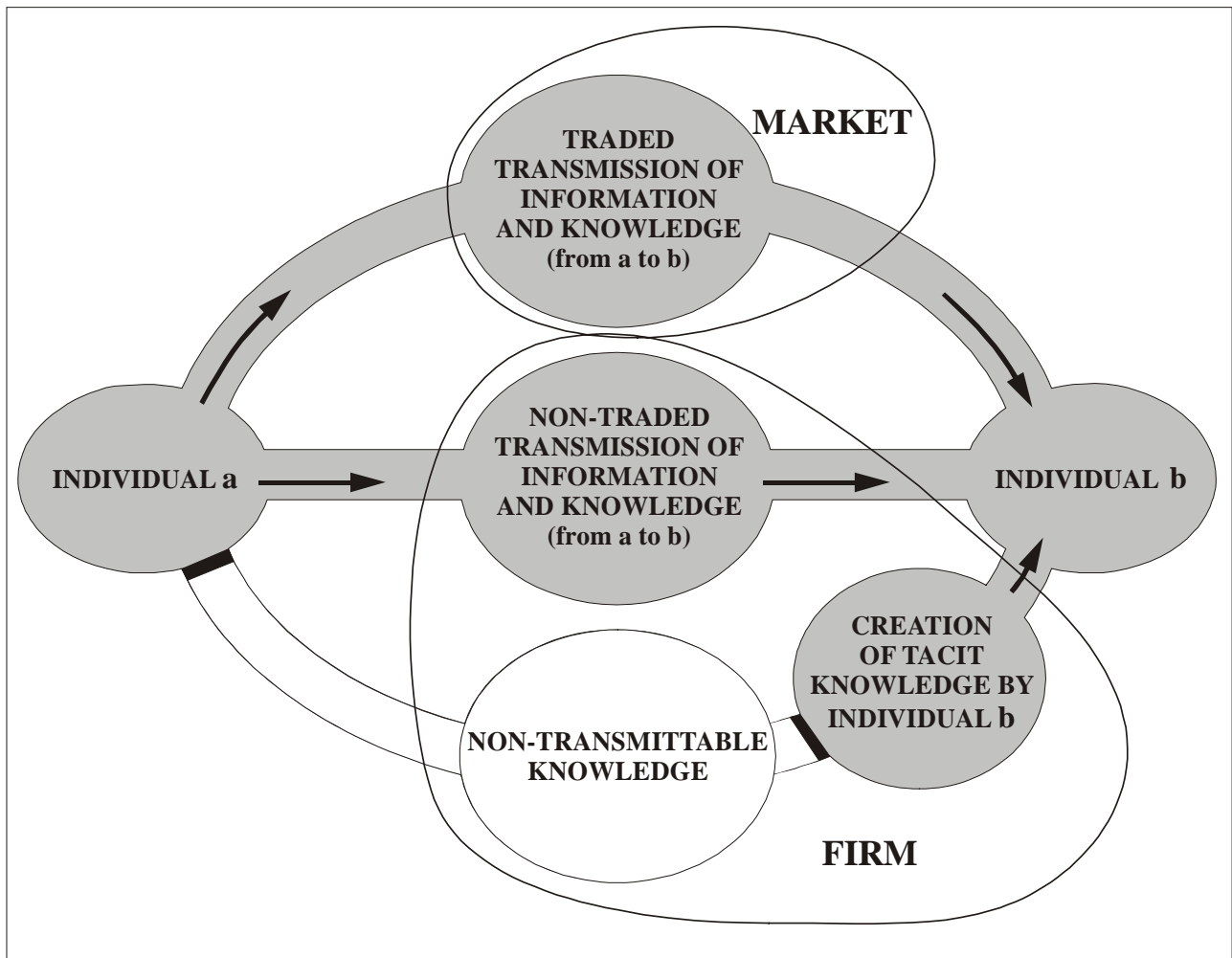


Figure 6.1 Cross-linked effects between the three aspects of organisational coordination

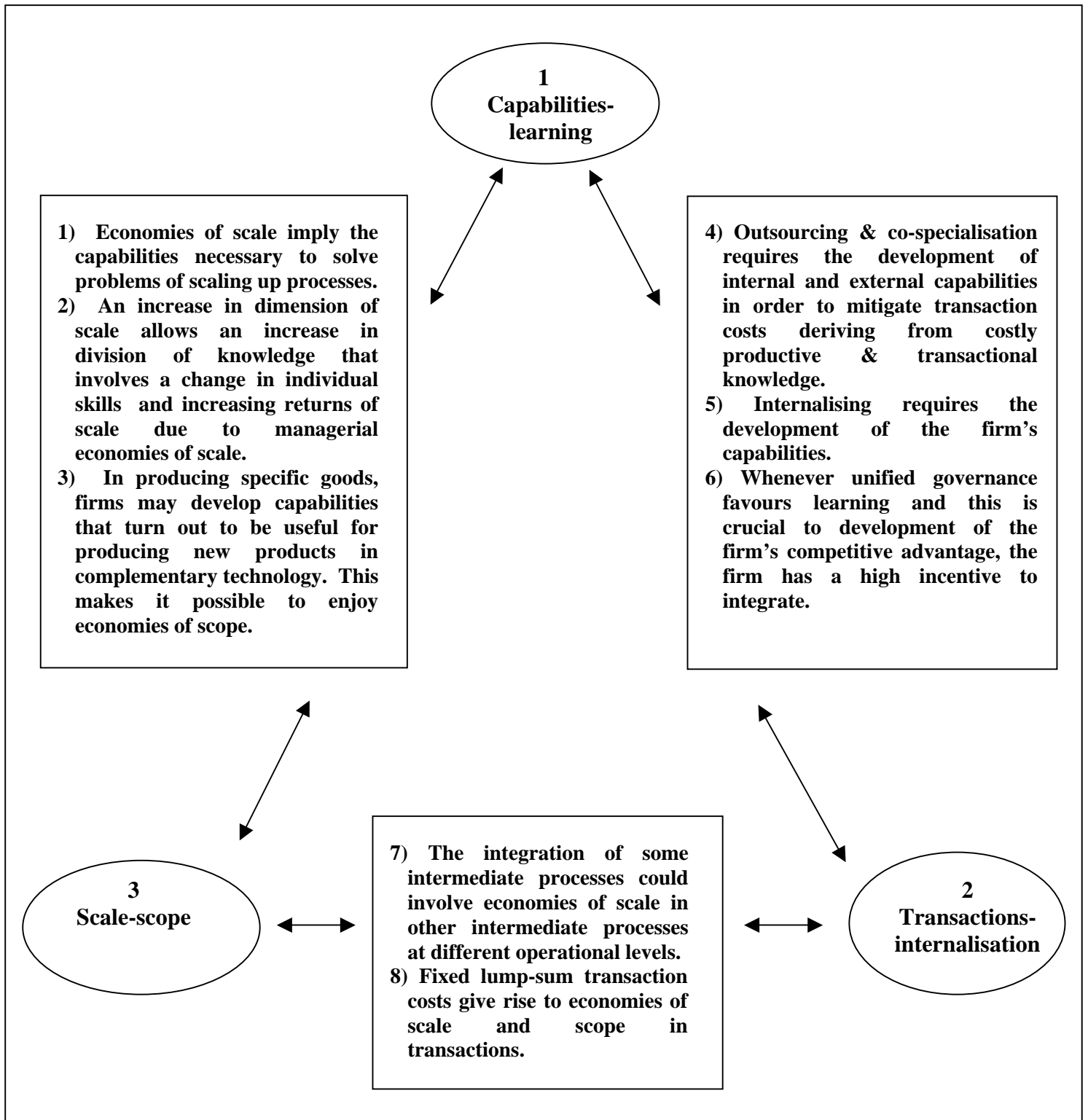


Table 1.1 Transmittability and tradability of information and knowledge (I&K)

TRANSMITTABILITY OF I&K	TRADABILITY OF I&K	TYPE OF LEARNING
Transmittable (explicit and replicable knowledge, common language and cognitive map)	Traded transmission (appropriability and trust) { Market transmission	Learning based on: <ul style="list-style-type: none"> - exchange of I&K as commodities (direct purchase) - information incorporated in the goods or services - information acquired during the exchange activity
	Non-traded transmission (non appropriab., no interest in exchanging I&K or lack of trust) { Free transmission within communities and social networks { Coordinated transmission within organisation	Learning by imitation, replication, emulation and informal contacts Organisational learning (learning based on organisational coordination through the identification of common interests and creation of mutual trust)
Non-transmittable (tacit knowledge, different languages, heterogeneous cognitive maps)	Non-tradable transmission	Learning based on personal experience (learning by doing and by using) within organisations, communities and social networks

Table 1.2 Forecasting ability and uncertainty

FORECASTING ABILITY		THEORETICAL KNOWLEDGE		INFORMATION-PROCESSING ABILITY (IPA)	DEGREE OF UNCERTAINTY	
Complete forecasting	Perfect forecasting	Perfect knowledge about the actual outcome		Complete IPA	Nil uncertainty	
	Imperfect forecasting	Imperfect knowledge	Knowledge of the objective probability distribution of possible events	Complete IPA	Objective risk (e.g. dice or roulette games)	Weak uncertainty
			Knowledge of the subjective probability distribution of possible events	Complete IPA	Subjective risk (e.g. horse race or football match)	
Incomplete forecasting	Incomplete knowledge of the list of possible events due to transmutable future		Complete IPA	Substantive uncertainty	Radical uncertainty	
	Complete knowledge of the list of possible events		Incomplete IPA	Procedural uncertainty		

Table. 1.3 Some references on the definitions of risk (weak uncertainty)

	CORRESPONDING EXPRESSIONS	REFERENCES
Objective risk	<p>Objective risk</p> <p>Risk or measurable uncertainty</p> <p>Arrovian, measurable uncertainty</p> <p>Risk</p> <p>Soft uncertainty</p>	<p>Hargreaves Heap <i>et al.</i> (1992: pp. 53, 349).</p> <p>Knight (1921: pp. 20, 233).</p> <p>Rosenberg (1996: p. 340).</p> <p>Hey (1991: p. 253); Tversky and Fox (1995: p. 93).</p> <p>Vercelli (1995: pp. 256-257; 1999: p. 242ff.).</p>
Subjective risk	<p>Subjective risk</p> <p>Uncertainty</p>	<p>Hargreaves Heap <i>et al.</i> (1992: pp. 53, 349).</p> <p>Hey (1997: p. 258); Tversky and Fox (1995: p. 93); Fox and Tversky (1998: p. 118f.).</p>

Table 1.4 Cognitive anomalies

EFFECT	DESCRIPTION
A) CONTEXT	
Anchoring	Judgements are influenced by quantitative cues contained in the starting statement
Context	History and presentation of the decision task influence perception and motivation
Framing	Equivalent lotteries, presented differently, are evaluated differently
Prominence	The format in which a decision task is stated influences the weight given to different aspects
Saliency	Subjects are inconsistent in selecting and weighting the information judged salient to a decision task
B) REFERENCE POINT	
Asymmetry	Subjects show risk aversion for gains, risk preference for losses, and weigh losses more heavily
Reference point	Choices are evaluated in terms of changes from a reference point
Status quo/endowment	Current status and history are favoured compared to alternatives not experienced
C) AVAILABILITY	
Availability	Responses rely too heavily on readily retrieved information, and too little on background information
Certainty	Sure outcomes are given more weight than uncertain outcomes
Focal	Quantitative information is retrieved or reported categorically
Isolation	The elements of a multiple-part or multi-stage lottery are evaluated separately
Primacy and recency	Initial and recently experienced events are the most easily recalled
Regression	Idiosyncratic causes are attached to past fluctuations, and regression to the mean is underestimated
Representativeness	High conditional probabilities induce overestimates of unconditional probabilities
Segregation	Lotteries are decomposed into a sure outcome and a gamble relative to this sure outcome
D) SUPERSTITION	
Credulity	Evidence that supports patterns and causal explanations for coincidences is accepted too readily
Disjunctive	Consumers fail to accept the logical consequences of actions
Superstition	Causal structures are attached to coincidences
Suspicion	Consumers mistrust offers particularly in unfamiliar situations
E) PROCESS	
Rule-driven	Behaviour is guided by principles and analogies rather than utilitarian calculus
Process	Evaluation of outcomes is sensitive to process and change
Temporal	Time discontinuity is temporally inconsistent, with short delays discounted too sharply relative to long delays
F) PROJECTION	
Misrepresentation	Subjects may misrepresent judgments for real or perceived strategic advantage.
Projection	Judgements are altered to reinforce a self-image internally or project it to others

Source: Adapted from McFadden (1999: p. 84ff. and Table 1 on p. 85) who provides further explanation and discussion on these definitions.

Table 2.1 Incentives and sanctions

Kind of incentives and sanctions (I&S)		Area	Examples
1.	Market I&S	Within the market	Profits and losses
2.	I&S contracts between independent contracting parties	Within the market	Explicit contractual incentives. Insurance contracts with deductible clause or experience rated. Posting a bond that is forfeited or setting penalties if the counterpart does not respect the terms spelled out in the contract
3.	I&S provided by organisations that regulate market functioning	Within the market	Incentives and sanctions provided by courts, anti-trust bodies, central banks, Security and Exchange Commission, etc.
4.	Organisational I&S	Within organisations	Explicit contractual incentives; for instance, piece rate, higher wages paid to more senior workers, stock options, and so on. Implicit and discretionary (extra-contractual) incentives; for example, access to resources and equipment, possibilities of learning and career advancement, flexible timetables, shifts and holiday periods, location and type of workplace, status symbols, facilities, and so on.

Table 2.2 Ability-based rationality

	ABILITY-BASED RATIONALITY	
	1 Perfect rationality	2 Cognitive rationality
Abilities	Complete	Incomplete
Forecasting	Complete forecasting under certainty, objective or subjective probabilistic risk (weak uncertainty)	Incomplete forecasting under radical uncertainty
Situation at hand	Possible alternatives and outcomes fully specified. Immutable, ergodic, closed systems	Incomplete knowledge of alternatives and outcomes. Transmutable, non-ergodic, open systems. The future may be different from the past in an unexpected way
Decision-making processes aimed toward	“The best”	“The better”
Behaviour	<u>Optimisation:</u> Anticipatory, calculated and consequential action	1) <u>Simplification:</u> action based on routinised procedures, division of L&K, and sequential decisions. 2) <u>Learning:</u> searching for alternatives
Possibility of errors	No systematic errors	Possible systematic errors
Alternatives	Given	Created
Choice	No real choice	Real choice
Result of the analysis	Determination of “the one best way”	Determination of tendencies
Analysis of	States of equilibrium	Processes
Relevant analytical element	Constraints	Opportunities

Table 3.1 Components of transfer and transaction costs

TRANSFER COSTS (production costs)
1. Transfer management costs and physical movement costs <ul style="list-style-type: none">1.1 Costs of coordinating transport processes1.2 Costs of coordinating warehousing1.3 Accounting costs1.4 Costs of auxiliary transformation processes and packaging1.5 Transport costs1.6 Warehousing costs
TRANSACTION COSTS (exchange costs)
2. Contract and information-knowledge costs <ul style="list-style-type: none">2.1 Taxes2.2 Government certificates and permits2.3 Middlemen payments2.4 Legal fees2.5 Contract writing costs2.6 Costs of bargaining2.7 Information costs for the seller (signalling, advertising, marketing and information to potential buyers)2.8 Information and measurement costs for the buyer (screening, assessing qualities and recording prices)2.9 Costs arising from imperfectly specified contracts due to ignorance (radical uncertainty)2.10 Hold-up inefficiencies2.11 Costs of monitoring respect of the contract2.12 Enforcement costs

**Table 3.2 Williamson’s taxonomy on rationality and contracts.
A comparison with some ‘corresponding’ definitions**

Williamson’s taxonomy¹		‘Corresponding’ definitions - Type of rationality and contract		
Type of rationality and contract	School of thought	Radner’s taxonomy²	Hart’s taxonomy³	This book’s taxonomy
Hyperrationality – complete contracts	Orthodoxy	Perfect rationality	Perfect rationality	Perfect rationality with nil uncertainty
Bounded rationality with farsightedness – incomplete contracts	Transaction costs economics (and nearly-neoclassical theory of the firms)	Costly bounded rationality	Perfect rationality with lack of verifiability and enforcement difficulties – incomplete contracts	Perfect rationality with probabilistic risk (weak uncertainty) – imperfect contracts
Bounded rationality with myopia – incomplete contracts	Capabilities, behavioural and evolutionary approaches, and organisation theory	Truly bounded rationality (Simon’s bounded rationality)	Not considered	Cognitive rationality with radical uncertainty – incomplete contracts

Notes:

¹ Williamson (1999a: pp. 3, 24, Table 1).

² Radner (1996: p. 1372; and 2000: pp. 633, 643ff.).

³ Hart (1995a: pp. 23, 81).

Table 3.3 Different degrees of interaction among transaction, capability and scale considerations

		I ZERO INTERACTION	II ZERO INTERACTION	III INTENSE INTERACTION	IV VERY INTENSE INTERACTION
WEIGHT OF SINGLE ASPECTS	TRANSACTION	Insignificant	≠ Significant	= Significant	< Very significant
	CAPABILITY	Insignificant	= Insignificant	≠ Significant	< Very significant
	SCALE-SCOPE	Insignificant	= Insignificant	≠ Significant	< Very significant
CONDITIONS	TRANSACT. I&K*	Full and free	≠ Costly	= Costly	≠ Cognitive limitations
	TECHNICAL I&K	Full and free	= Full and free	≠ Costly	≠ Cognitive limitations
	ORGANIS. I&K	Full and free	= Full and free	≠ Costly	≠ Cognitive limitations
	I&K CHARACT.	Not considered	= Not considered	≠ Set-up processes and low cost of reproduction	= Set-up processes and low cost of reproduction
	IPA**	Complete	= Complete	= Complete	≠ Incomplete
	INPUT CHARACT.	Divisibility and substitutability	= Divisibility and substitutability	≠ Indivisibilities and complementarities	= Indivisibilities and complementarities
	CONTRACTS	Complete	≠ Imperfect	= Imperfect	≠ Incomplete
	UNCERTAINTY	Nil	≠ Weak	= Weak	≠ Radical
	RATIONALITY	Perfect	= Perfect (or bounded with farsightedness)	Perfect	≠ Cognitive rationality
BOUNDARIES OF THE FIRM		Full decentralisation	≠ Tendency toward vertical integration through unified ownership or toward forms of collaborations among firms	≠ Tendency toward expansion of the boundaries of organ. coordination within and among firms	< Strong tendency toward expansion of the boundaries of organ. coordination within and among firms

Notes: * I&K = Information and knowledge.
 ** IPA = Information processing ability.

Table 4.1 Screening, signalling, monitoring and incentive contracts

Tool	Definition	Examples
Screening	Activity undertaken by the uninformed party aiming to select the informed parties in order to attract only desirable buyers or sellers.	Positively-sloped experience-wage profile, offering a wage based on measured performance and price differentiation.
Signalling	Attempt by individuals who possess private information to communicate it.	Product warranties, money back guarantees, labelling and education.
Monitoring	Control activities.	Supervision, control of quality of good and services, sampling.
Incentive and safeguard contracts	Contracts that establish a reward or a penalty for output performance.	Contracts with deductible clause, experience rated contracts or contracts that involve posting a bond.

Table 4.2 Organisations regulating markets

	Activities	Organisations
Information	Dissemination of information and the creation of knowledge that enhances individual abilities and fosters the development of trust and cooperation.	Private and public organisations, such as consumer associations and cooperatives, specialised press, television shows dedicated to consumers, non-profit bodies, schools and Universities, etc.
Insurance	Insurance activities spread risk among the policy-holders and therefore reduce the costs of individual weak uncertainty in exchanging activities.	Insurance companies and public bodies.
Enforcement of market contracts	To oblige the parties either to respect the contract or to pay the injured party compensation.	Public bodies with legally established powers of investigation and sanction (e.g. anti-trust bodies, courts, police, etc.).
Dispute resolution	Possible forms of dispute resolution among contracting parties: 1) take a binding decision; 2) make a recommendation; 3) indicate a solution by common consent.	Public or private organisations according to different national laws and traditions, e.g., trade associations, professional organisations, on-line cross-border dispute resolution services, etc.
Certification	Aimed at increasing credibility of corporate information on compliance with standards regarding accounts, financial statements, product quality, safety performance, workplace conditions, occupational health, social and environmental records.	Certification organisations.
Accreditation	A process similar to licensing wherein an accreditation body evaluates the capability of an applicant organisation to perform certification audits.	Accreditation organisations.