SESSÃO 6
EMPRESAS MULTINACIONAIS, SISTEMAS NACIONAIS DE INOVAÇÃO E ESTRATÉGIAS TECNOLÓGICAS

TEORIAS DO INVESTIMENTO INTERNACIONAL

TEORIAS DO INVESTIMENTO INTERNACIONAL

- **Imperfeições do Mercado:**
  Hymer-Kindleberger
- **Ciclo de Vida do Produto:**
  R. Vernon
- **Reacção Oligopolística:**
  F. Knickerbocker
- **Teoria Japonesa:**
  K. Kojima
- **Internalização:**
  P. Buckley & M. Casson
- **Paradigma Ecléctico:**
  J. Dunning
- **Perspectiva Evolucionista:**
  J. Cantwell; B. Kogut & U. Zander

CICLO DE VIDA
(Vermon)

Hipóteses de Base

1) Alteração temporal das condições de produção e comercialização dos produtos

2) Conhecimento tecnológico limitado fora das fronteiras nacionais

3) Existência de economias de escala

4) Os gostos variam com o rendimento e os produtos podem ser estandardizados e vários níveis de rendimento

3 fases no ciclo

1) Produto Novo

2) Produto em Desenvolvimento

3) Produto Estandardizado

TEORIA DA INTERNALIZAÇÃO (Buckley & Casson)

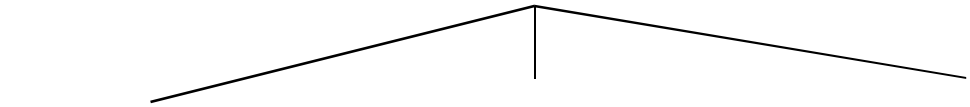
Vantagens

- Controle e planeamento da produção e comercialização
- Exploração do poder de mercado pela prática de preços discriminatórios
- Evitar situações de monopólio bilateral
- Evitar os problemas da transferência de conhecimentos
- Evitar a intervenção governamental

→ A Informação como bem Intermédio

PARADIGMA ECLÉCTICO (J. Dunning)

Paradigma O.L.I.



3 Condições para Investir no Exterior

1. A empresa dispões de **Vantagens Específicas**

2. É preferível explorar tais vantagems por si própria que transmiti-las a outros **(Internalização)**

3. A exploração é mais vantajosa fora do país de origem. O país de destino deverá ter **Vantagens de Localização**

EVOLUÇÃO DA CONCEPTUALIZAÇÃO DA EMPRESA MULTINACIONAL

EVOLUÇÃO DA CONCEPTUALIZAÇÃO DA EMPRESA MULTINACIONAL (EMN)

- **Perspectiva Tradicional:**

  A Empresa Hierárquica

- **Perspectiva Actual:**

  A EMN como Rede de Unidades Dispersas Geograficamente

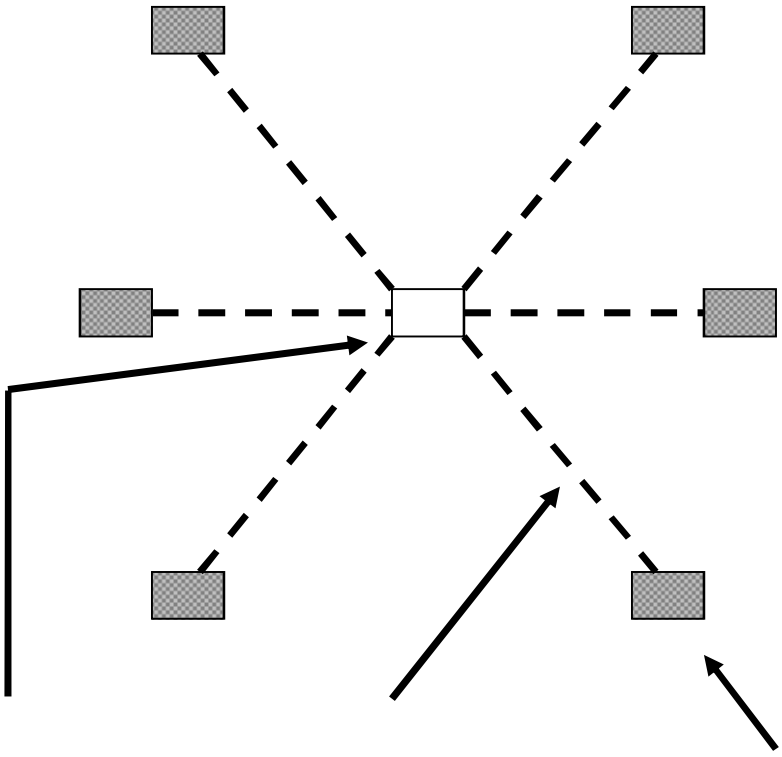
A CONTRIBUIÇÃO DE BARTLETT & GHOSHAL

- Imperativos de Gestão
  - Flexibilidade/Adaptação Local
  - Eficiência
  - Aprendizagem à Escala Mundial

- Tipos de Organização
  - Multinacional
  - Internacional
  - Global
  - → A Transnacional como Solução

MODELO DE ORGANIZAÇÃO MULTINACIONAL

FEDERAÇÃO DESCENTRALIZADA



Mentalidade Multinacional

Operações no estrangeiro como uma carteira de negócios independentes

Relações Sede - Filiais

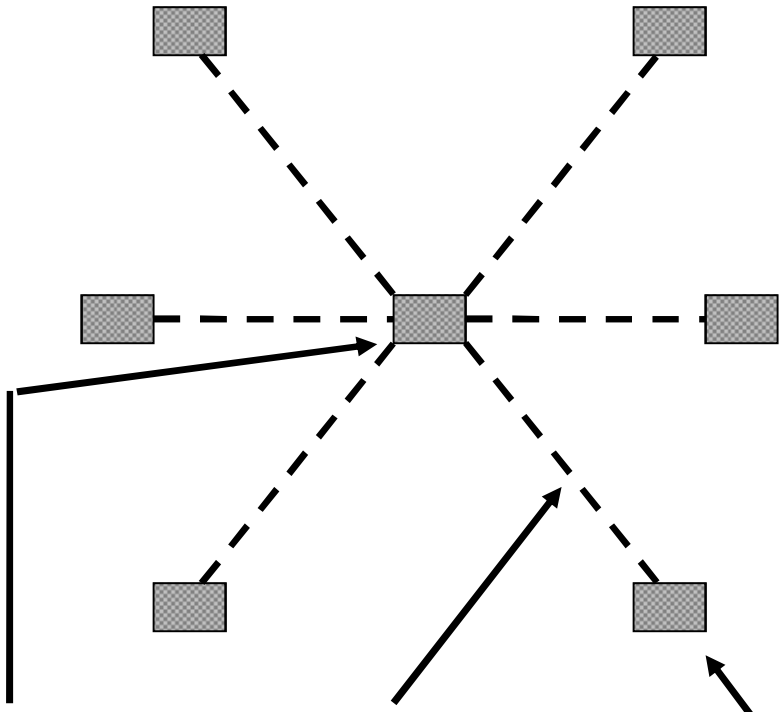
Controlo pessoal, informal complementado com controlos financeiros simples

Muito Activos, Responsabilidades e decisões chave descentralizadas

Fonte: Bartlett & Ghoshal (1991)

MODELO DE ORGANIZAÇÃO INTERNACIONAL

FEDERAÇÃO COORDENADA



Mentalidade Internacional

Operações mo estrangeiro como apêndices de uma actividade central no país de origem

Controlo

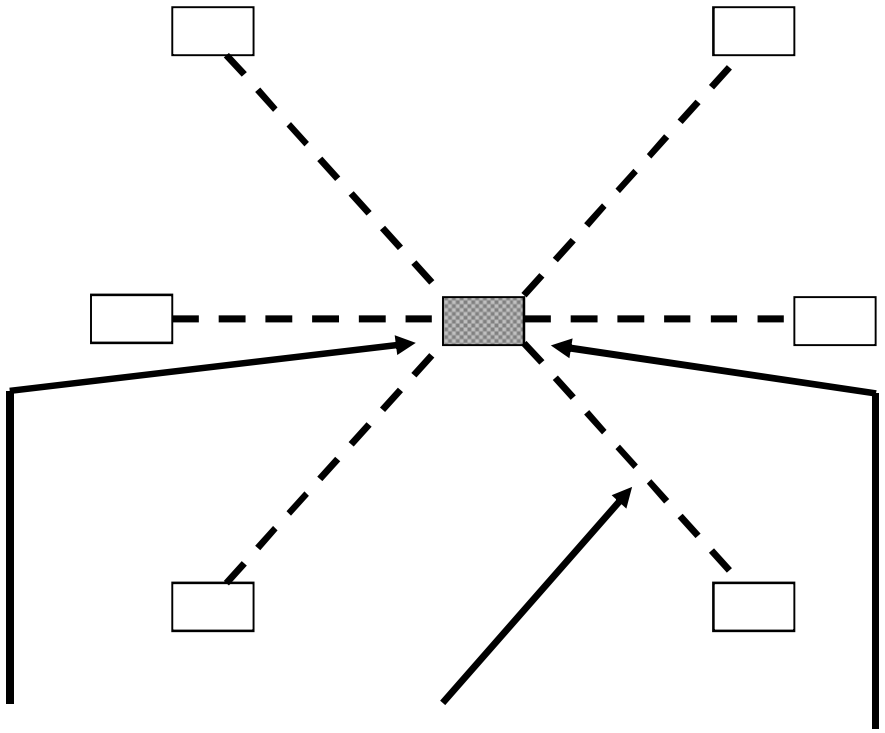
Sistemas formais de planeamento e controlo

Há activos, recursos, responsabilidades e decisões descentralizadas, mas controlados pela sede

Fonte: Bartlett & Ghoshal (1991)

MODELO DE ORGANIZAÇÃO GLOBAL

"CENTRO DA RODA"



Mentalidade Global

Operações no estrangeiro encaradas como canais de distribuição para um mercado global unificado

Controlo Operacional

Forte controlo central das decisões, recursos e informação

A maioria dos activos, recursos responsabilidades e decisões estratégicas está centralizada

Fonte: Bartlett & Ghoshal (1991)

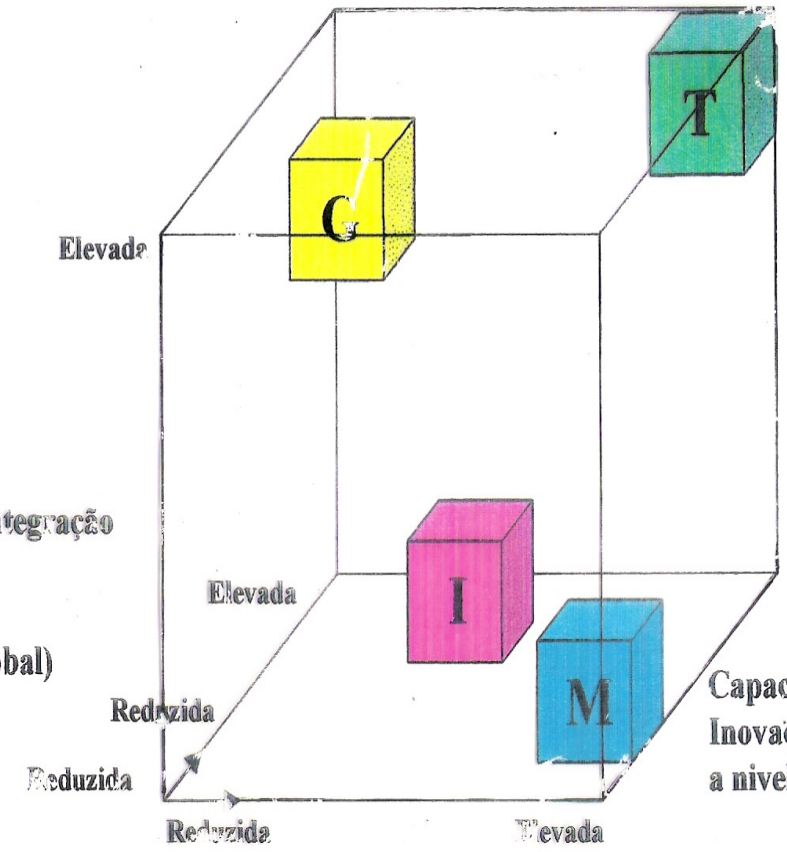
HOW FIRMS ENVISAGE INTERNATIONAL BUSINESS: MANAGEMENT MENTALITIES

- **International**
  - Domestic market as the core
  - Foreign Businesses (and affiliates) as appendages

- **Multinational**
  - Awareness of differences between domestic and international environments
  - Adaptation to local requirements: responsive marketing

- **Global**
  - The World as the unit of analysis
  - Product standardization promotting /exploiting similar “ways of life”
  - “The same thing, the same way, everywhere”

O Cubo da Tipologia de Estratégias



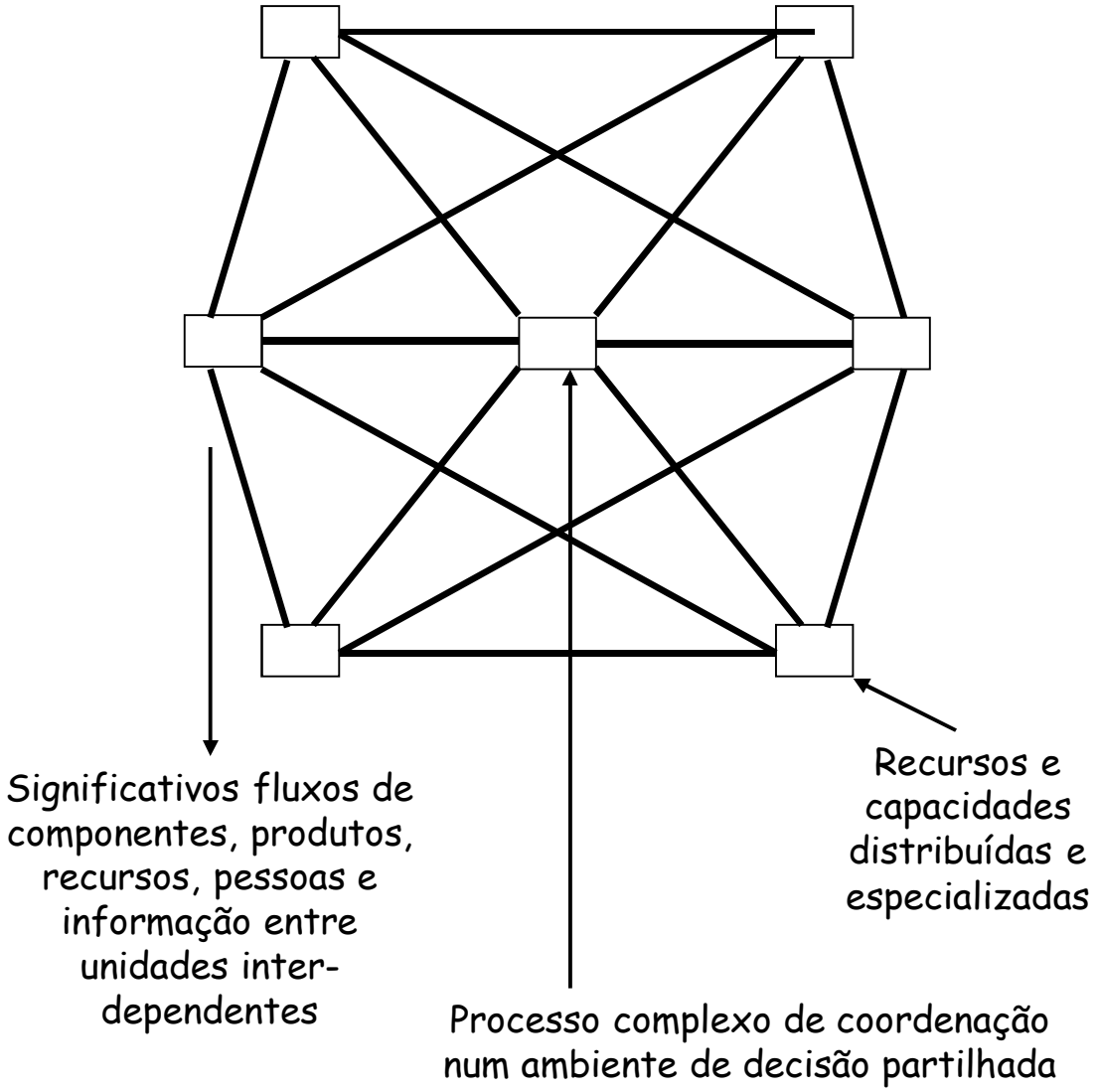
Forças para a Coordenação/Integração global.
(Eficiência Global)

Capacidade para a Inovação/Aprendizagem a nivel mundial.

Forças para a Sensibilidade / Diferenciação local
(Flexibilidade Multinacional)

Fonte: Elaboração conjunta de Jorge Silva Miranda e Vitor Corado Simões, com base em Bartlett e Ghoshal (1989)

A “Rede Integrada”



Fonte: Bartlett & Ghoshal (1991)

TRANSNATIONAL PROCESSES

1. **From Symmetry to Differentiation:**
   Integrating and Exploiting capabilities, knowledge bases and linkages

2. **From Dependence or Independence to Interdependence:**
   →Dispersed and specialized configuration of resources: the integrated network
   →Inter-unit integration mechanisms to promote synergies

   Movement of personnel as a tool for promoting inter-dependence

3. **From Unidimentional Control to Differentiated Coordination:**
   Reccourse to different mechanisms to coordinate flows of goods, resources and information

4. **Linking National Competences to achieve Worldwide Learning and Competitiveness**

A GESTÃO DA INOVAÇÃO À ESCALA MUNDIAL: NOVAS DINÂMICAS

THE CORE QUESTIONS

1. Fostering **Intra-Firm Cross-Border** communication of specific knowledge

2. Promoting external communication to absorb other's knowledge while preventing the "leakage" of firm's specific knowledge

3. How to avoid knowledge accumulation paths leading to "Deadlocks"

THE MNE AS A REPOSITORY OF KNOWLEDGE

1) Existence of Specific Advantages (knowledge or knowledge-based rights)

2) International Exploitation (across borders, within firm's boundaries)

R&D EXPENDITURES OF FOREIGN AFFILIATES AS A % OF TOTAL R&D EXPENDITURES

Canada	34.2
Finland (1999)	14.9
France	16.4
Japan	1.7
Netherlands	21.8
Spain (1999)	32.8
UK (1999)	31.2
US	14.9
Czech Republic (1999)	6.4
Hungary	78.5
India (1994)	1.6
Turkey	10.1

Fonte: R. Narula (2005), *The Globalisation of Innovation,* http://www.unctad.org/sections/meetings/docs/narula_en.pdf

Main forms of internationalisation of industrial R&D

Establishment of R&D activities in the host country by foreign-controlled affiliates (inward investment)

Setting up R&D laboratories abroad by investing countries (outward investment)

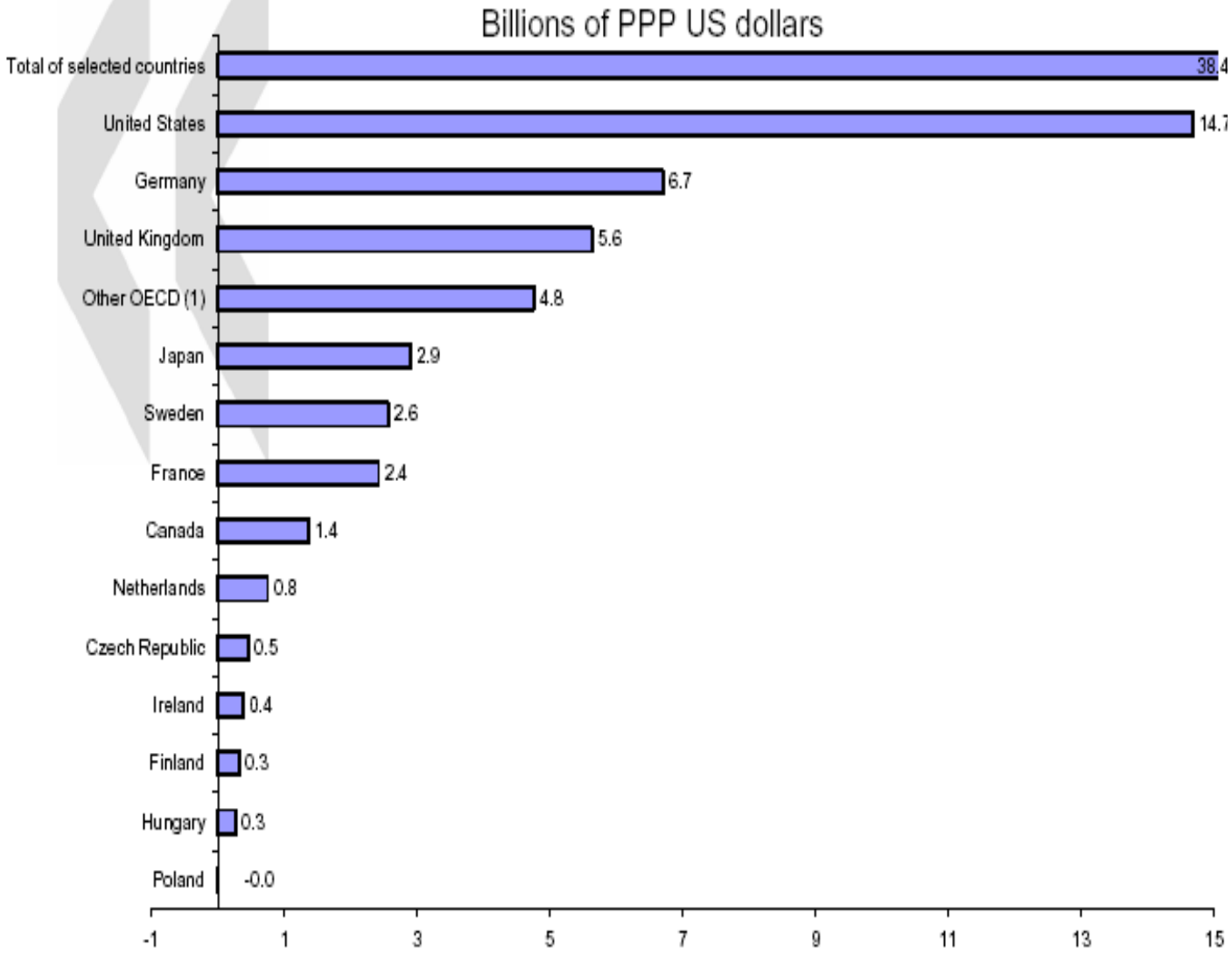
Creation of joint ventures

Co-operation agreements or technological alliances

International R&D subcontrating

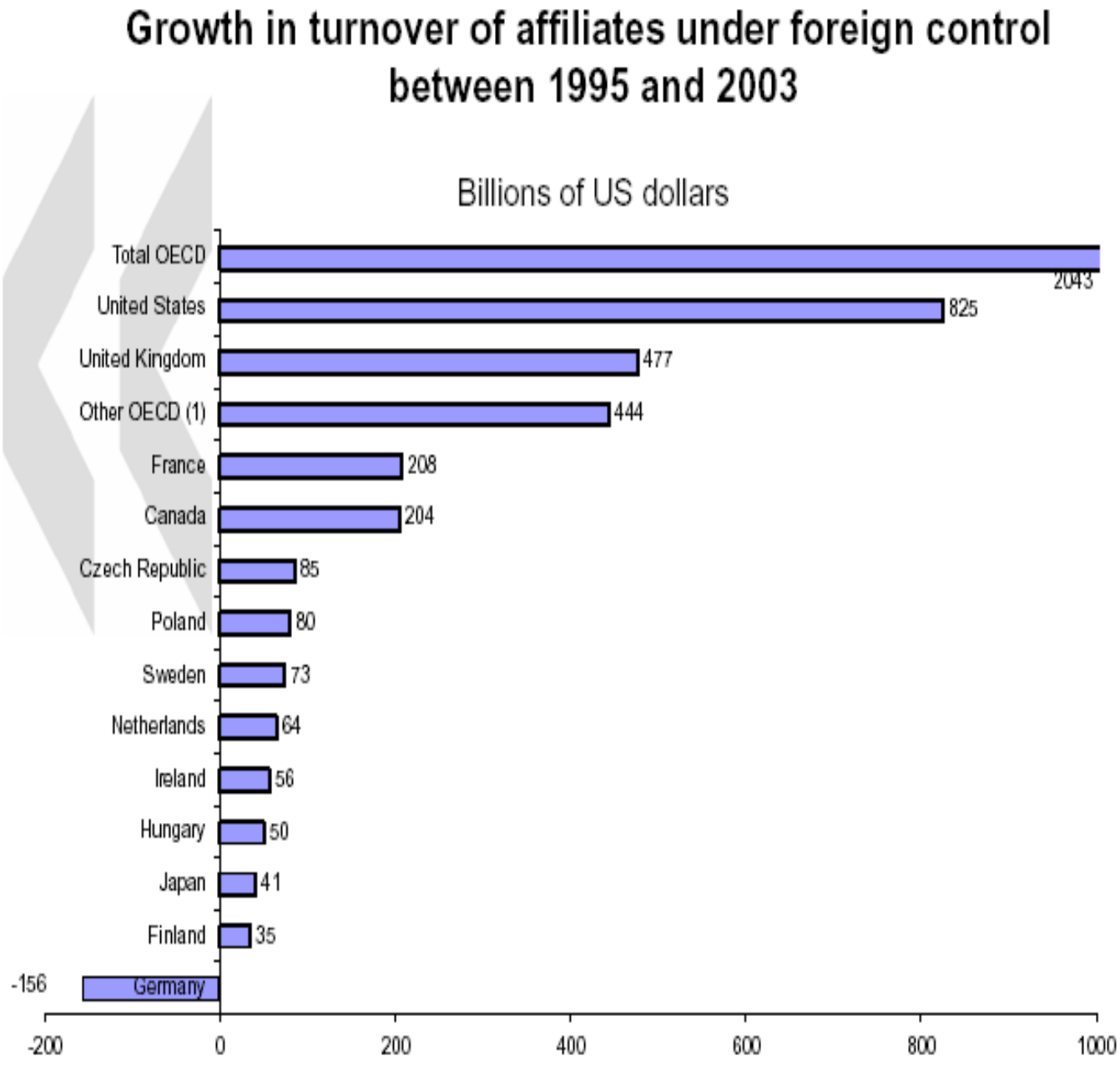
Fonte: Thomas Hatzichronoglou (2006), *Recent Trends in the internationalisationof R&D in the enterprise sectot*,OCDE

Growth in R&D expenditure by affiliates under foreign control between 1995 and 2003



1. Consists of the Czech Republic, Finland, Hungary, Ireland, Poland, the Netherlands and Sweden.
Source: OECD, AFA database, June 2006.

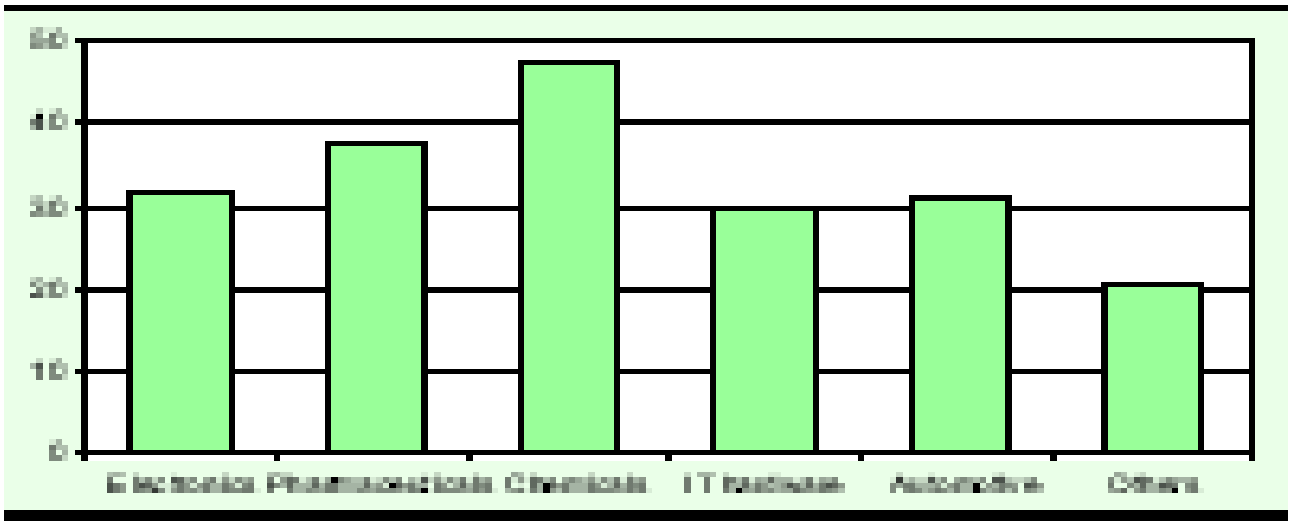
Fonte: Thomas Hatzichronoglou (2006), *Recent Trends in the internationalisationof R&D in the enterprise sectot*,OCDE



1. Consists of the Czech Republic, Finland, Hungary, Ireland, Poland, the Netherlands and Sweder
Source: OECD, AFA database, June 2006.

Fonte: Thomas Hatzichronoglou (2006), *Recent Trends in the internationalisationof R&D in the enterprise sectot*,OCDE

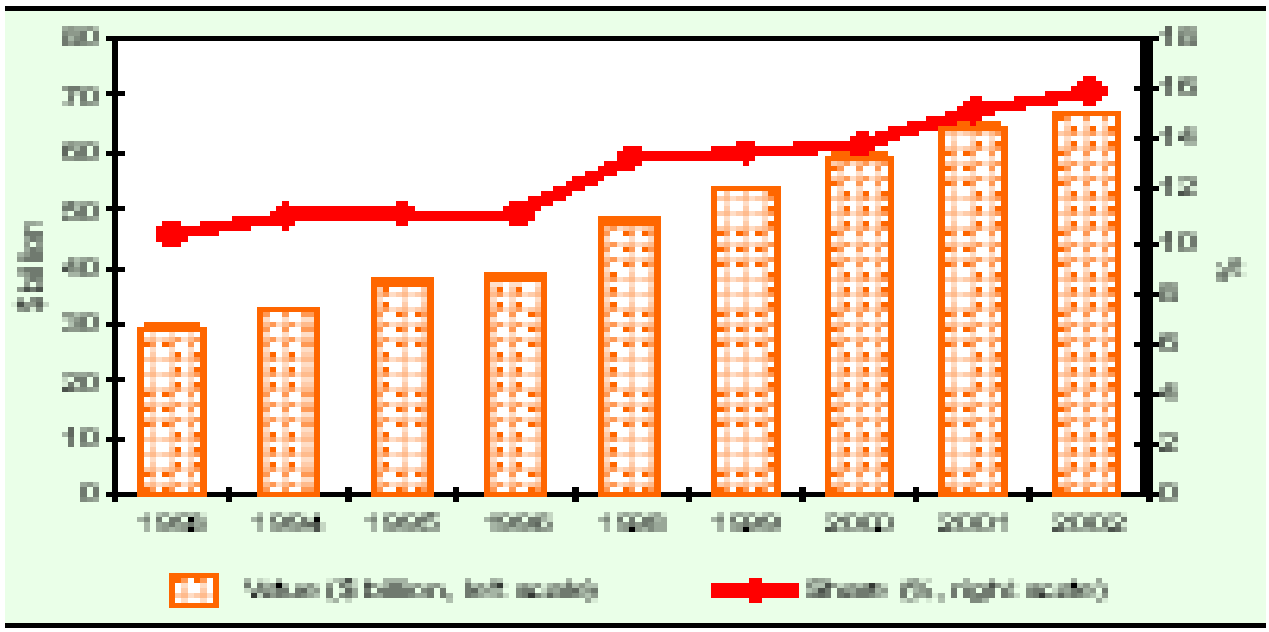
Figure IV.4. Degree of R&D internationalization by industry, 2004–2005
(Per cent)



Source: UNCTAD survey

Fonte: UNCTAD, WIR (2005)

Figure IV.5. R&D expenditure by foreign affiliates, based on a sample of 30 economies, value and share in business R&D, 1993-2002
(Billions of dollars and per cent)

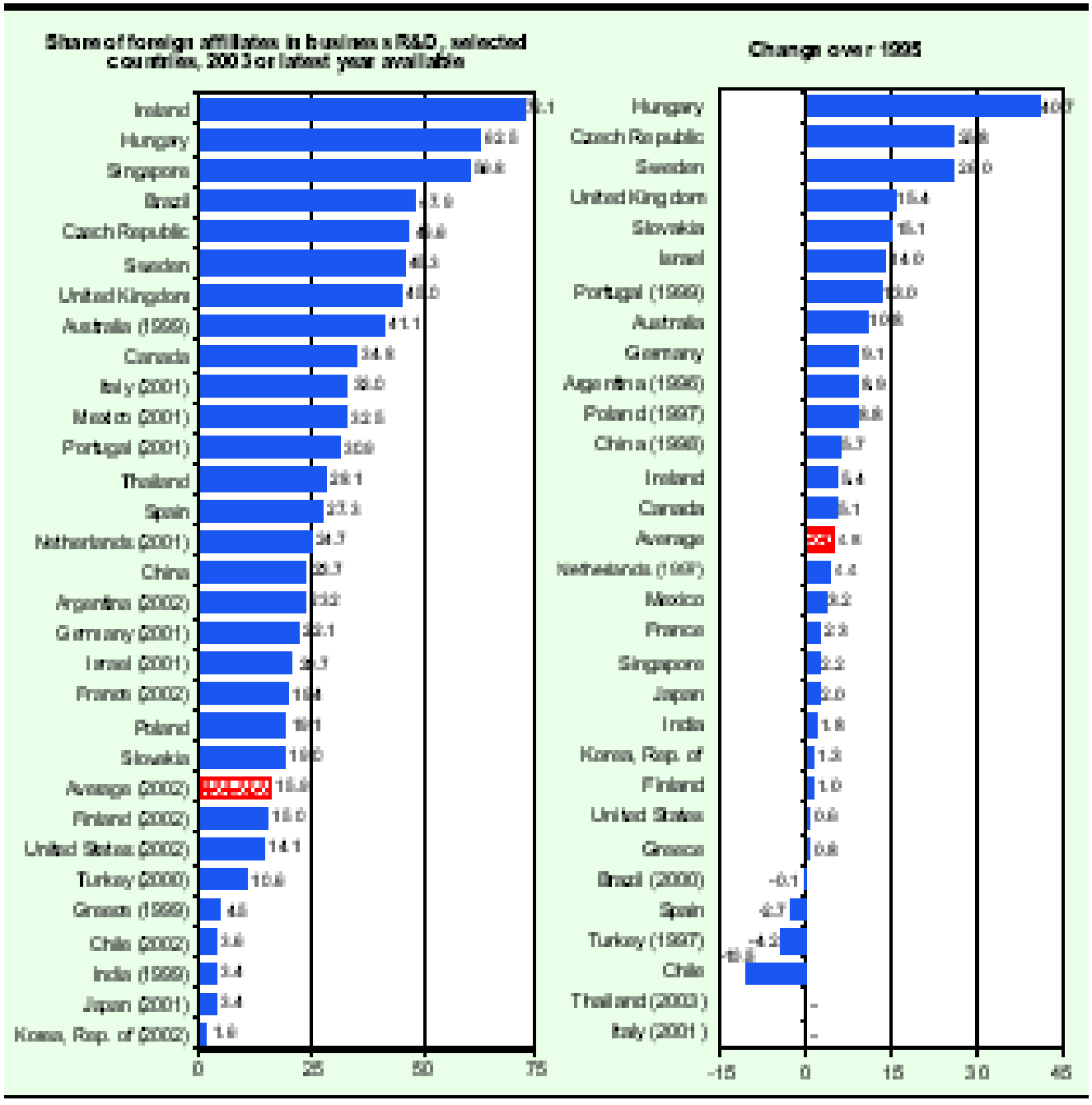


Source: UNCTAD, based on annex table A.IV.1.

Fonte: UNCTAD, WIR (2005)

Figure IV. 6. Trends in R&D spending by foreign affiliates, selected economies, 1995-2003

(Per cent)



Source: UNCTAD's calculations, based on national sources and data provided from the OECD AFA database.

Note: In Argentina, Chile, Israel, the Republic of Korea and Mexico, the R&D expenditure of United States-owned affiliates has been used as a proxy for the R&D spending of all foreign affiliates. In India, the share of foreign affiliates in total R&D spending has been used as a proxy for their share in business R&D spending.

Fonte: UNCTAD, WIR (2005)

Table IV.6. R&D expenditure abroad by majority-owned foreign affiliates of United States parent companies, by selected region/country, 1994–2002

(Millions of dollars)

Region/economy	Year									Share of total (%)	
	1994	1995	1996	1997	1998	1999	2000	2001	2002[a]	1994	2002
Total	**11 622**	**12 582**	**14 039**	**14 592**	**14 664**	**18 144**	**20 452**	**19 202**	**21 151**	**100.0**	**100.0**
Developed economies	**10 905**	**11 851**	**13 152**	**13 518**	**13 545**	**16 113**	**17 751**	**16 720**	**17 844**	**92.4**	**84.4**
of which:											
Canada	836	1 868	1 563	1 823	1 350	1 681	2 332	2 131	2 345	7.8	11.1
EU[b]	8 231	8 852	9 386	9 691	10 058	11 900	12 432	11 536	[b]	69.6	58.8
Switzerland	191	242	190	238	223	231	286	392	405	1.6	1.9
Israel	56	93	169	288	141	389	638	326	889	0.8	4.2
Japan	1 138	1 286	1 333	1 889	1 362	1 525	1 638	1 502	1 433	9.5	6.8
Australia	258	282	409	369	290	294	349	286	329	1.9	1.6
New Zealand	3	9	16	18	15	9	8	10	6	0.1	-
Developing economies	**502**	**651**	**886**	**1 062**	**1 119**	**2 031**	**2 623**	**2 382**	**2 855**	**7.6**	**13.5**
Developing Asia	**488**	**283**	**318**	**387**	**336**	**1 400**	**1 949**	**2 391**	**2 113**	**3.4**	**10.8**
of which:											
China	2	13	25	35	52	319	586	[b]	646	0.1	3.1
Hong Kong, China	51	55	38	82	66	214	[b]	289	[b]	0.4	[b]
India	5	5	9	22	23	20	[b]	[b]	80	-	0.4
Indonesia	5	9	6	5	4	1	2	3	3	-	-
Korea, Republic of	13	29	34	41	29	101	143	157	167	0.1	0.8
Malaysia	23	21	23	32	30	161	218	[b]	[b]	0.2	[b]
Philippines	14	23	14	12	10	31	48	48	50	0.1	0.2
Singapore	162	63	88	33	62	426	551	355	569	1.4	2.8
Taiwan Province of China	118	61	75	84	55	122	143	139	110	0.9	0.5
Thailand	3	5	5	5	4	7	13	18	22	-	0.1
Latin America and the Caribbean	**422**	**389**	**546**	**662**	**748**	**613**	**662**	**562**	[b]	**4.8**	**3.2[c]**
of which:											
Argentina	21	22	42	43	56	26	38	43	24	0.2	0.1
Brazil	258	249	346	433	446	288	253	193	306	2.8	1.4
Chile	2	15	6	3	6	4	11	8	6	-	-
Colombia	8	9	9	12	11	6	18	11	10	0.1	0.1
Costa Rica	2	2	2	4	6	2	[b]	4	7	-	-
Mexico	103	58	121	126	191	238	303	248	284	1.5	1.3
Venezuela	13	25	9	11	14	40	22	24	42	0.1	0.2
West Asia and North Africa	**15**	**19**	**21**	**26**	**25**	**16**	**25**	**29**	[b]	**0.1**	[b]
Sub-Saharan Africa	**15**	**19**	**21**	**26**	**25**	**16**	**25**	**29**	[b]	**0.1**	[b]
of which:											
South Africa	14	13	18	22	20	14	21	24	[b]	0.1	0.1
Economies in transition[d]	**5**	**18**	**36**	**48**	**79**	**54**	**87**	**38**	**68**	**-**	**0.3**

Source: UNCTAD, adapted from Moris 2005a, based on data from United States Department of Commerce, Bureau of Economic Analysis, *Survey of U.S. Direct Investment Abroad*, www.bea.gov/bea.

[a] Estimates for 2002 are preliminary.

[b] Withheld to avoid disclosing operations of individual companies. Note that due to undisclosed data, shares do not add up to 100%.

[c] EU covers 12 countries for 1994 and 15 countries thereafter.

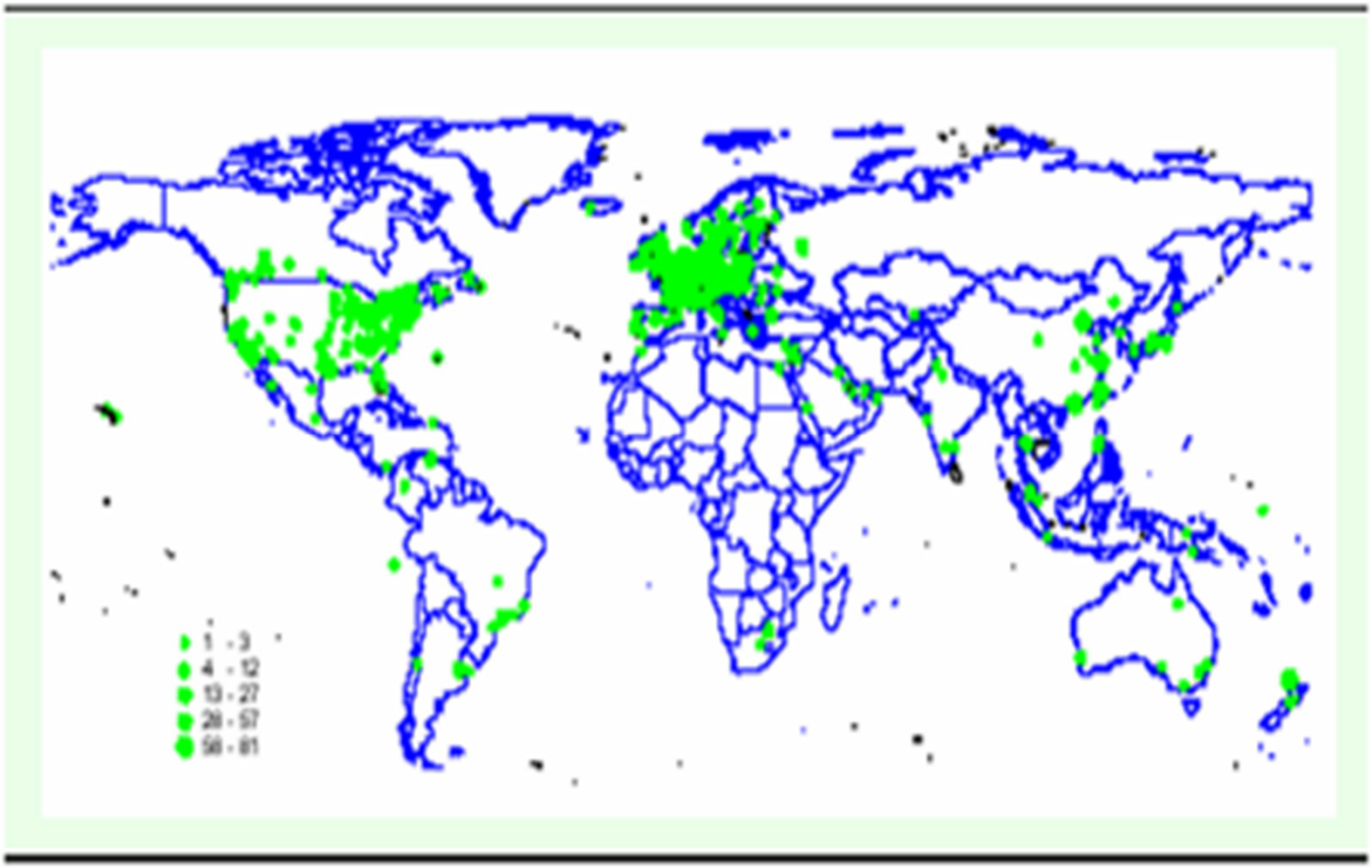
[d] Including new EU members.

[e] Based on data for countries listed below.

Note: Data are for majority-owned foreign affiliates of United States parent companies. Majority-owned affiliates are those in which the combined ownership of all United States parents is more than 50%.

Fonte: UNCTAD, WIR (2005)

Figure IV.7. Worldwide location of majority-owned foreign affiliates engaged in R&D, 2004



Source: UNCTAD, based on the Who Owns Whom database (Dun & Bradstreet).
Note: On the basis of 2,603 majority owned foreign affiliates engaged in R&D.

Fonte: UNCTAD, WIR (2005)

AS EMN E OS SNI

EMPRESAS MULTINACIONAIS E SISTEMAS NACIONAIS DE INOVAÇÃO

- Uma inter-relação cada vez mais intensa
- A concorrência internacional para atracção IDE intensivo em conhecimento...

  ...mas grande selectividade nas escolhas
- A actividade de I&D como algo de adquirido e não como dado (mas há excepções)
- A crescente importância do cruzamento de saberes e de bases de conhecimento (conjugando global e local)

EMPRESAS MULTINACIONAIS E SNI EM PAÍSES MENOS AVANÇADOS

- Qual o papel desempenhado pelas filiais de EMN?

  → 'Abafando' a dinâmica inovadora local?

  (por aquisições, p. exº.) ou

  → Filiais como tutoras e mobilizadoras de redes?

- A internacionalização das ligações locais: papel das filiais na internacionalização das empresas nacionais

- Relacionamento e exigência de novos patamares

PROCESSOS DE INOVAÇÃO TRANSNACIONAL

FDI, NETWORKS AND LEARNING

1. The relevance of learning about transcational activities: “We learned the way how VW works”

2. The creation of relational grounds: Internationally Replicable?

3. The importance of mutual expectations: “The motivation for exceeding customer’s expectations”

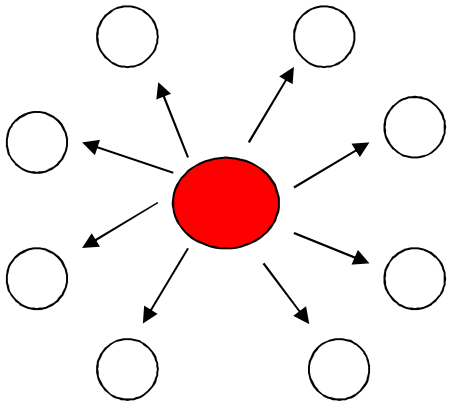
4. Forbearance attitudes and past performance

5. Escaping from a dyadic logic and from a purely conflitual perspective: playing the “collaborative manufacturing” game

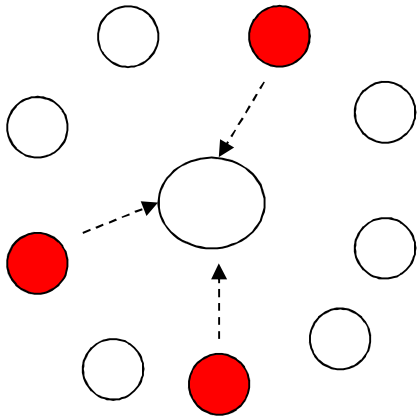
6. Learning and networking positioning as a never-ending process:
    - Blending exploiting and exploring
    - Up-grading internal competencies and relational capital

INNOVATION PROCESS

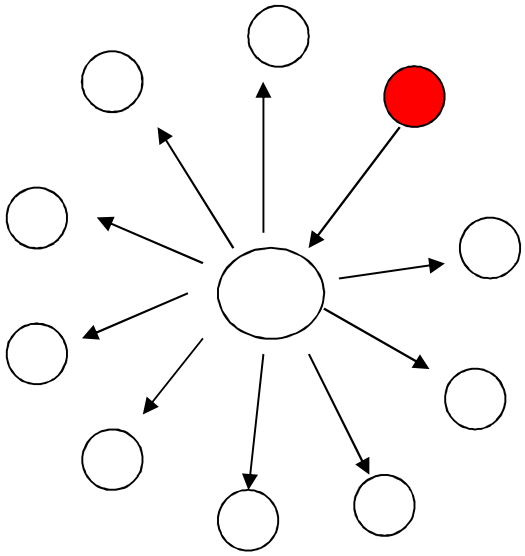
CENTRAL



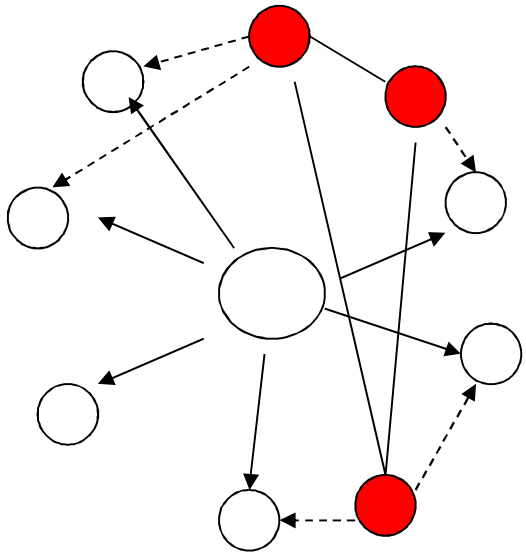
LOCAL



LOCALLY LEVERAGED



GLOBALLY LINKED



Fonte: Adaptado de Bartlett & Ghoshall (1989)

INOVAÇÃO LOCAL

Vantagens

- Adaptação às Condições Locais
- Aproveitamento e Estímulo das Competências das Filiais

Riscos

- Duplicação de Esforços

  (Multiplicidade de “Reinvenções da Roda”)

INOVAÇÃO CENTRAL

Vantagens

- Controlo da Tecnologia (Garantias de Apropriabilidade)
- Relacionamento Inter-Departamental (Inter-acção, desenvolvimento, Produção, comercialização)
- Rapidez de Desenvolvimento e Lançamento de Novos Produtos

Riscos

- Conflitos Casa Mãe / Subsidiária
- Insensibilidade às Necessidades Diversificadas dos Mercados

LOCALLY LEVERAGED

Vantagens

- Estímulo da Criatividade das Filiais em Proveito de Toda a Empresa

Riscos

- Dificuldade de Transferência devida às Especificidades Nacionais
- Reacções Negativas devidas ao Síndroma NIH

GLOBALLY LINKED

Vantagens

- Estimular e Aproveitar de forma Integrada as Capacidades das Filiais
- Obter Economias de Gama à escala Mundial
- Resposta Comum a Estímulos (eventualmente) Localizados
- Potenciar Aprendizagem à escala Mundial

Riscos

- Elevados Custos de Coordenação
- Ambiguidade, Falta de Integração e Excessiva Difusão da Autoridade

NOVOS MODOS DE ORGANIZAÇÃO

- Mandatos Globais
- Plataformas de Produção
- Centros de Excelência

PAPEL DOS CENTROS DE EXCELÊNCIA

- DESENVOLVIMENTO CONHECIMENTOS
- INTEGRAÇÃO DE CONHECIMENTOS
- INSERÇÃO NA REDE

EMPRESAS MULTINACIONAIS E SISTEMA DE INOVAÇÃO EM PORTUGAL: DOIS EXEMPLOS

MNE CENTRES OF EXCELLENCE AND ACQUISITIONS: LONG EVOLUTIONARY PATHS OR CAPTURING OPPORTUNITIES?

Vitor Corado Simões
Pedro Nevado

2001

SUBSIDIARY DEVELOPMENT PROCESSES AND GAINING CoE MANDATES

- **EVOLUTIONARY, TIME-CONSUMING PROCESS**

  (FORSGREN, JOHANSON AND SHARMA, 2000)

- **DOES IT STILL HOLD FOR ACQUISITIONS?**

  (FRATOCCHI AND LORENZONI, 2000)

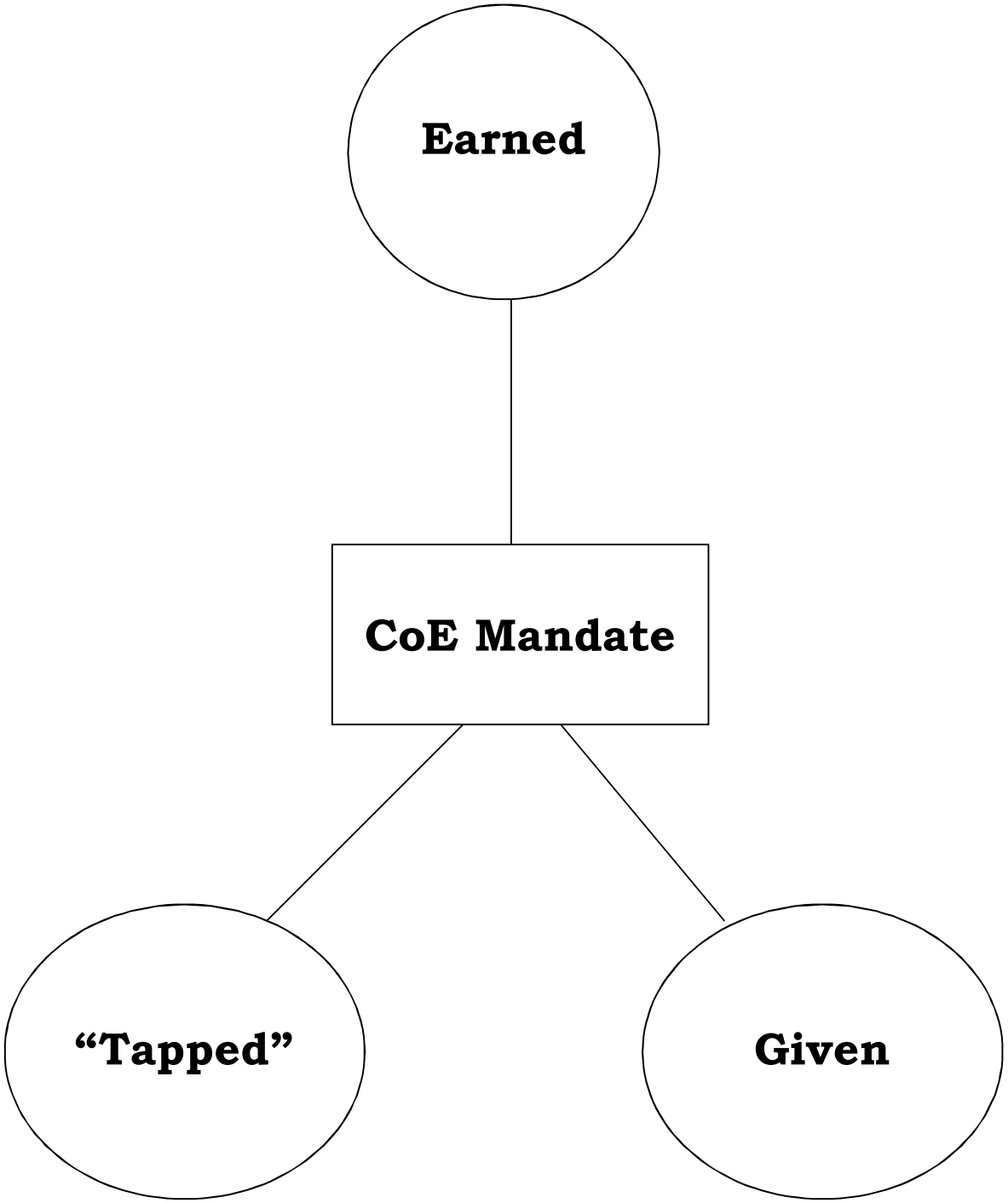
DEFINITION OF CoE

A CoE is "an area of expertise for which the subsidiary is recognized by the corporation, and which other parts of the corporation draw on"

(Birkinshaw, 1998: 291)

3 MAIN FEATURES

- **Competences**
- **Use of such competences by other units**
- **Recognition**


Earned
CoE Mandate
“Tapped”
Given

AUTONOMY *VERSUS* INTEGRATION

- Autonomy is Needed for the Subsidiary to Create, Develop and Strengthen its Capabilities

- Integration is Needed to have Influence over other Units of the MNE Network

  "Too much autonomy makes the subsidiary mandate potentially vulnerable to divestment (as a spin-off company) or decline (because of a lack of corporate investment)"

  (Birkinshaw, 1996: 488)

- How to Balance Knowledge Development with Knowledge Sharing?

THE ROLE OF ACQUISITIONS

- Is an historical process of competence development and interrelationships with other MNE units needed?

  ("Acquired Subsidiaries cannot become CoEs Overnight", Fratocchi & Holm, 1998)

- **Or can CoE rapidly stem from acquisitions (picking up potential "leaders)?**

3 CASE STUDIES

1. ABB PORTUGAL
2. ALCATEL PORTUGAL
3. VULCANO (R. Bosch Group)

1 ABB PORTUGAL

- **1990: SENETE**
  JOINT VENTURE BETWEEN ABB (40%), MAGUE AND IPE (SOREFAME))

SOREFAME HISTORY:

- **CREATED IN 1943**
- **HYDROELECTRICAL POWER INVESTMENTS**
- **POWER AGREEMENT: SPECIALIZATION**

- **1992: HIDRO-SOREFAME**
  SOLE PRODUCER OF HYDROMECHANIC EQUIPMENT WITHIN ABB

- **1994: ABB CONTROLS 70% OF SENETE**

- **1995: HIDRO-SOREFAME CHANGED INTO ABB HIDRO**

- **1997: FULL CONTROL OF SENETE BY ABB**
  ABB HIDRO BECOMES"LEAD CENTRE"

- **1999: POWER BUSINESS INCLUDED IN A JV WITH FRENCH PARTNER**

- **2000: EQUITY STAKE SOLD TO FRENCH PARTNER**
  (THE PORTUGUESE COMPANY STILL A CoE)

2 ALCATEL PORTUGAL

- **1987: DEAL ALCATEL/ITT ON TELECOMUNICATIONS EQUIPMENT**

  PORTUGUESE SUBSIDIARY “INHERITED”

- **1988: PORTUGUESE SUBSIDIARY ACTIVITY CHANGED FROM SEMICONDUCTORS AND CONSUMER GOODS TO TELECOMMUNICATIONS EQUIPMENT**

- **1989: LOCAL SOFTWARE CENTRE ESTABLISHED**

- **2000: 5 CoEs IN ALCATEL PORTUGAL**
  - **COILS AND TRANSFORMERS**
  - **CALL CENTRES (FOR SOUTHERN EUROPE)**
  - **NETWORK MANAGEMENT**
  - **COMMUNICATIONS FOR RAILWAY**
  - **APPLICATIONS**
  - **GSM NETWORKS PLANNING AND**
  - **OPTIMIZATION**

“NETWORK MANAGEMENT COMPETENCE CENTRE”

- Original Opportunity (1991):
  Services for Portuguese GSM Operator
  - Capability Development
  - Reference

- MNE Network Involvement: Participation in Development of Products for France Telecom and Deutche Telekom

- Capability Demonstration (1996): Development of a New Traffic Management System for the Whole Ggroup

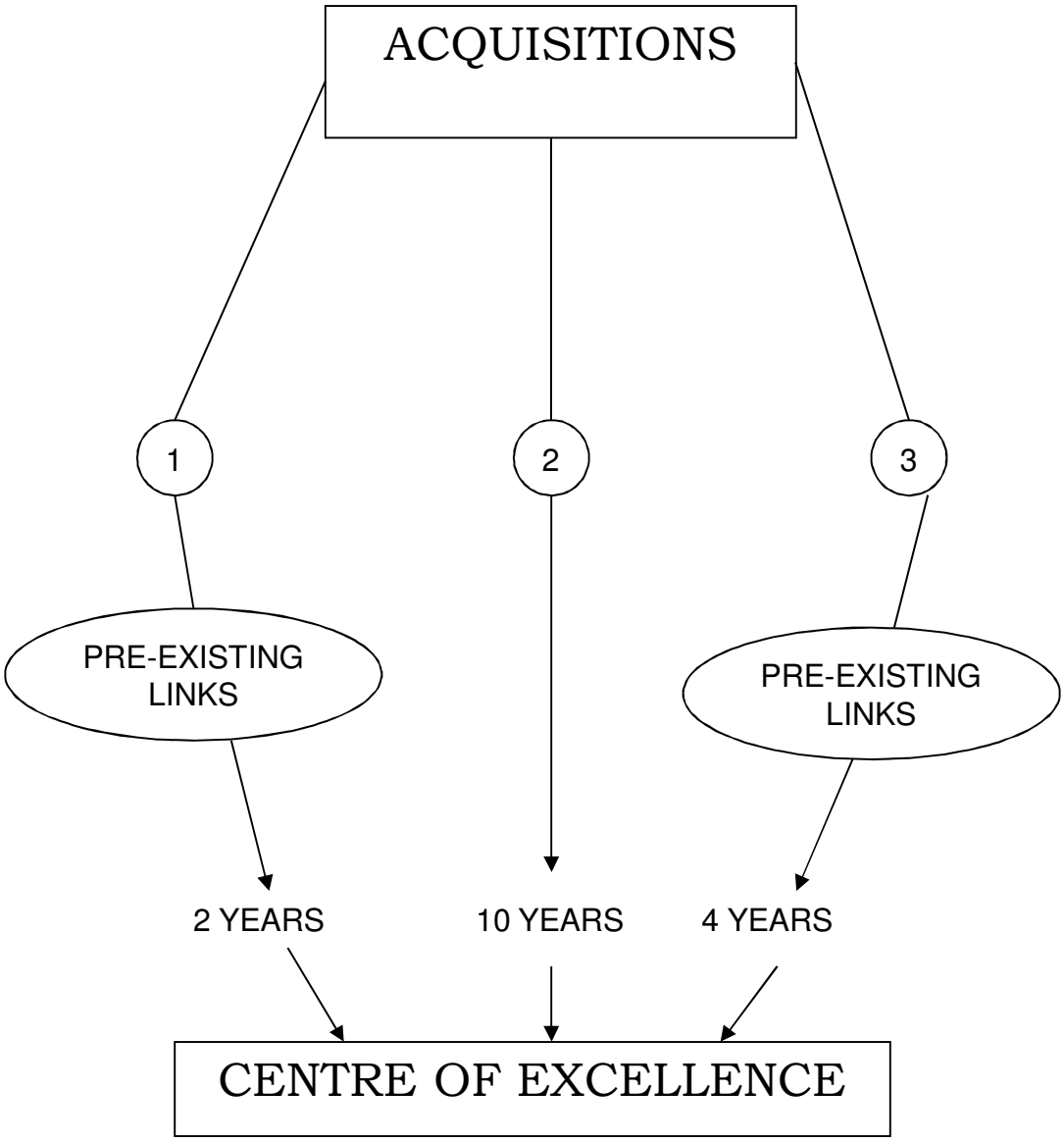
- **CoE Recognition (1997): Network Management Competence Centre**

3 VULCANO

- Born as a Licensee OF Robert Bosch Gmbh (1977)
- Own Brand Lauching – Vulcano (1983)
- 50% of Portuguese Market; 8TH Largest European Water Boller Manufacturer (1988)
- Licensing Agreements about to Eexprire:

Options
- A) Stand alone
- B) Renew
- C) Strengthen Relationship

- Majority Equity share Acquired by R. Bosch
- Market Leader in Europe (1992)
- Group Competence Centre in Water Boller
- Internationalization Drive
  - Licensing: Morocco, Tunisia, Egypt and Brazil
  - Direct Investments: China, Chile and Australia



THINGS TAKE TIME…

…BUT NOT TOO MUCH!

IMPORTANCE OF LOCAL ENVIRONMENT

	1	2	3
Market opportunities	√√√	√√√	√
Market performance	√√	√	√√√
Government Policy	√√√	√	
Technology/ Knowledge Linkages	√√	√√√	√

CONCLUSIONS

1) ACQUISITION DRIVEN CoEs ARE DIFFERENT

2) HEADQUARTERS RECOGNITION (AND “PICKING UP”) IS OFTEN FASTER THAN PEER RECOGNITION

3) LOCAL ENVIRONMENT RELATIONSHIPS MATTER

4) TO LEVERAGE THOSE RELATIONSHIPS AT GROUP LEVEL, STRATEGIC INTENT AND MANAGERIAL INITIATIVE ARE RELEVANT INGREDIENTS

NETWORKS AND LEARNING PROCESSES: A CASE STUDY ON THE AUTOMOTIVE INDUSTRY IN PORTUGAL

Vitor Corado Simões

2002

THE AUTOMOTIVE INDUSTRY

- Globalisation
- Complexity and Changing Relationship Patterns
- Strategic Alliances

FDI IN THE PORTUGUESE AUTOMOTIVE INDUSTRY: AN HISTORICAL RETROSPECT

1963: “Assemblying Law”

1972: Revision of the Assemblying Régime

1979: “Framework Law” on the Automotive Sector

⟹ RENAULT PROJECT (1980)

1986: EC Accession

⟹ AUTO-EUROPA PROJECT (1991)
[FORD + VOLKSWAGEN]

CONCEPTUAL FRAMEWORK

- The automotive supply chain as a network

- Business Networks Approach:
  The Framwork of Haakansson (1987)
  [Actors– Resources– Actibities]

- The “Flagship Firm”:
  The five partners
  Framework of Rugman & D’Cruz (2000)

- The five dimensions of Inter-Organizational Networks (Ebbers, 1997)
  [Resource Flows, Information Flows, Assignment of Property Rights, Coordination Mechanisms and Mutual Expectations

METHOD

- Working out the Sytructure of Focal Networks
- Selection of Companies
- Undertaking of Case Studies
- Comparative Inter-Case Analysis

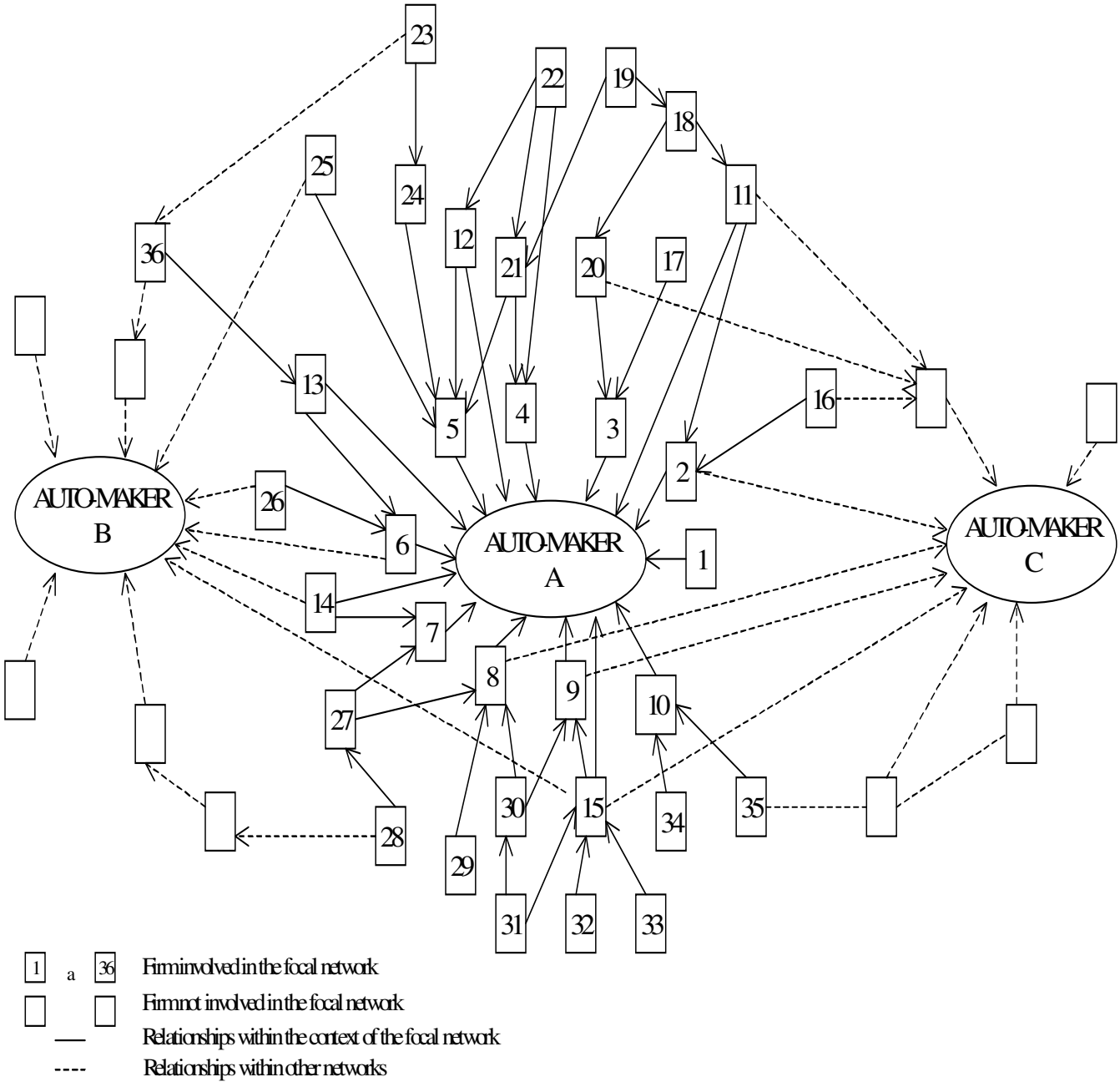
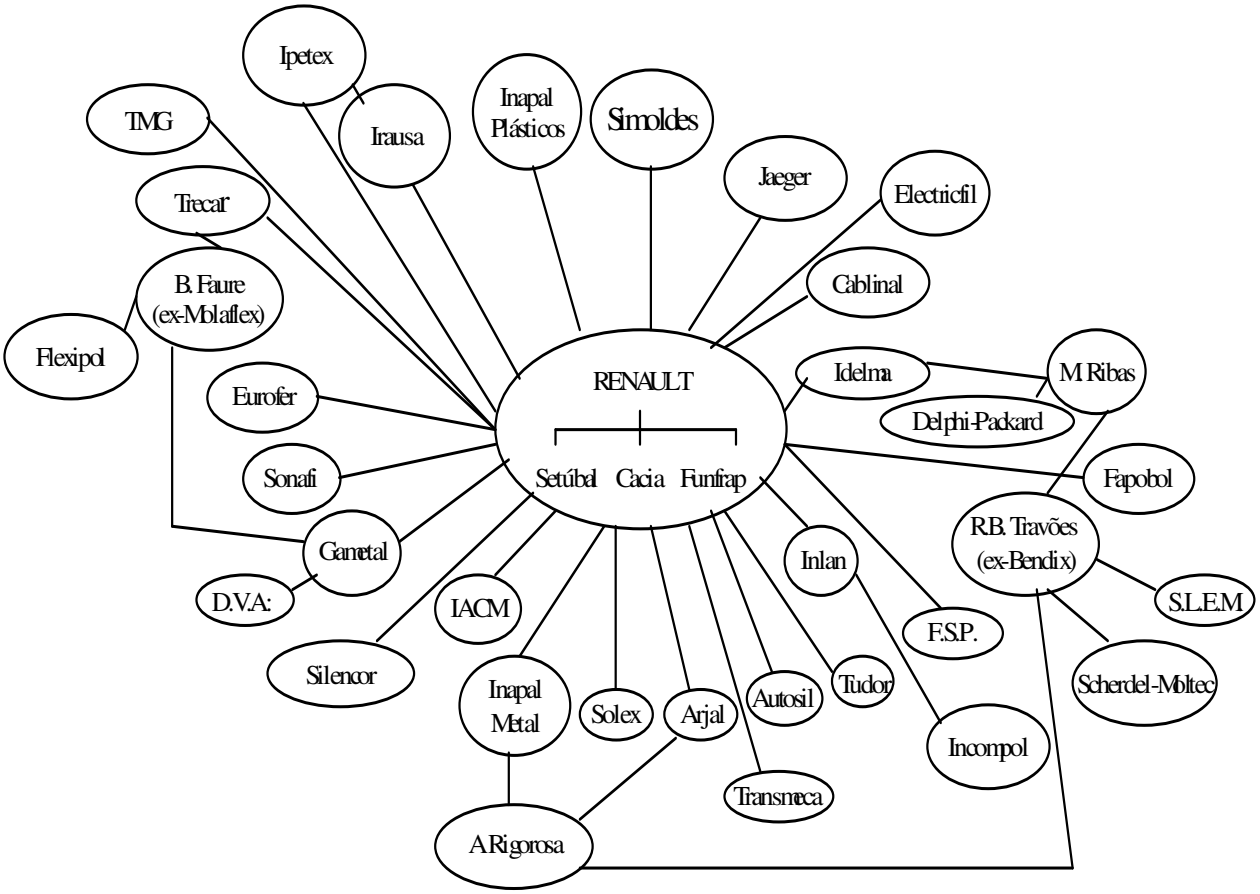


Figure 1 – Automotive Supply Network

RENAULT NEWORK



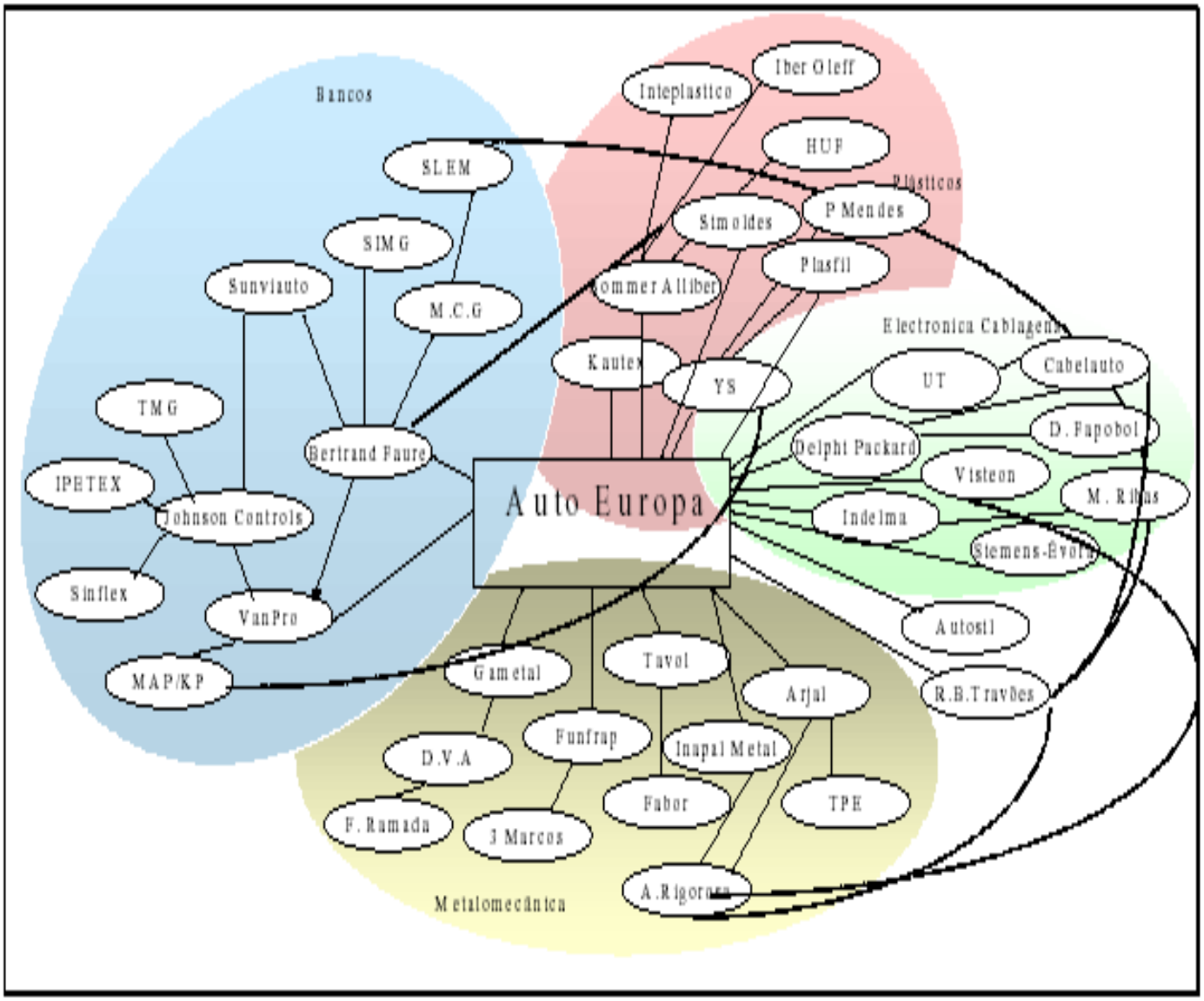


Figura 5.6. – Redes de Fornecedores da AutoEuropa

THE RENAULT NETWORK

- Local value added commitments ⇒
  Support to domestic suppliers' development

- Suppor = Provision of Technical Assistence + Training + Tolerance (Prices, Quality)

- EC Integration ⇒ Strategic Change

- Dismantling the Renault Complex

- Lasting effects:
  Stimulating of learning processes, CredibilityT
  Understanding how the industry works, and
  Sstrong relationships with a few suppliers

THE AUTO-EUROPA NETWORK

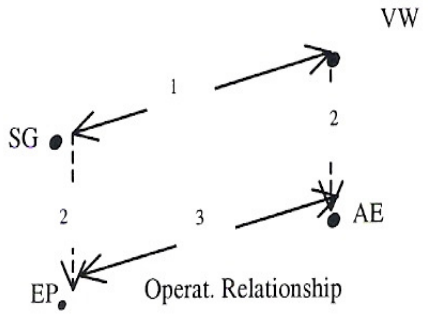
- Cooperative Spirit

- Autonomy Constraints:
  Different Relationships Modes

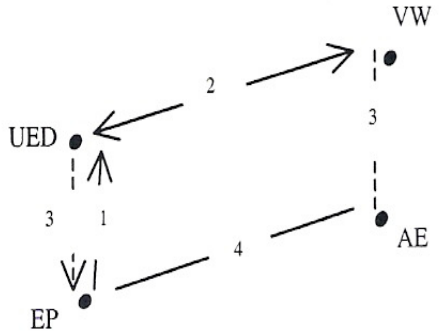
- Learning with Auto-Europa:
  1) Transformation Activities
     Quality Requirements and Support
     Help in Problem Solving
     Personal Exchange and Inter-action
     Engineering Dialogue

  2) Transactional Activities
     Immersion in a Lean Product Environment
     Understanding Auto-makers' Requirements
     Setting up of Relationships and Trus-Building Processes with Ford and VW

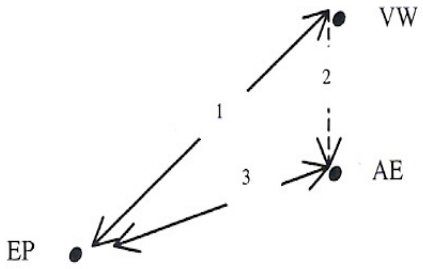
- Requirement to Succeed
  ⇒ Creating Proximity
  ⇒ Consistent Performance
  ⇒ "Good Surprises"



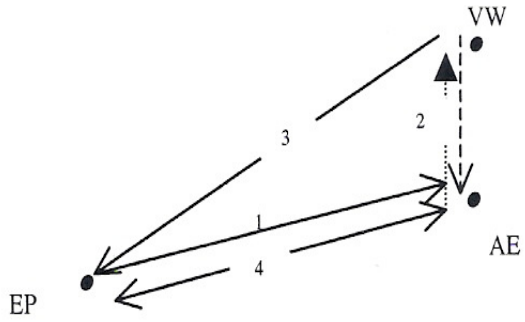
Mode 1: Multinationals' Subsidiaries



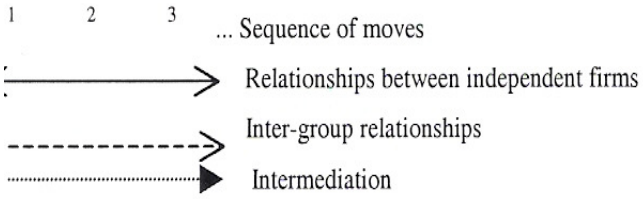
Mode 3: Portuguese firms with a development unit in Germany



Mode 2: Direct dialogue from Portugal



Mode 4: Intermediation by Auto-Europa



VW – Volkswagen (Wolfsburg)
AE – Auto-Europa
FP – Portuguese Subsidiary
SG – Headquarters
EP – Portuguese firm
UED – Engineering and Development Unit

Source: Empirical research

Figure 2 – Actors and Relationships Modes in Auto-Europa network

COMPARING THE TWO NETWORKS

Differences

Time + Context

⇩

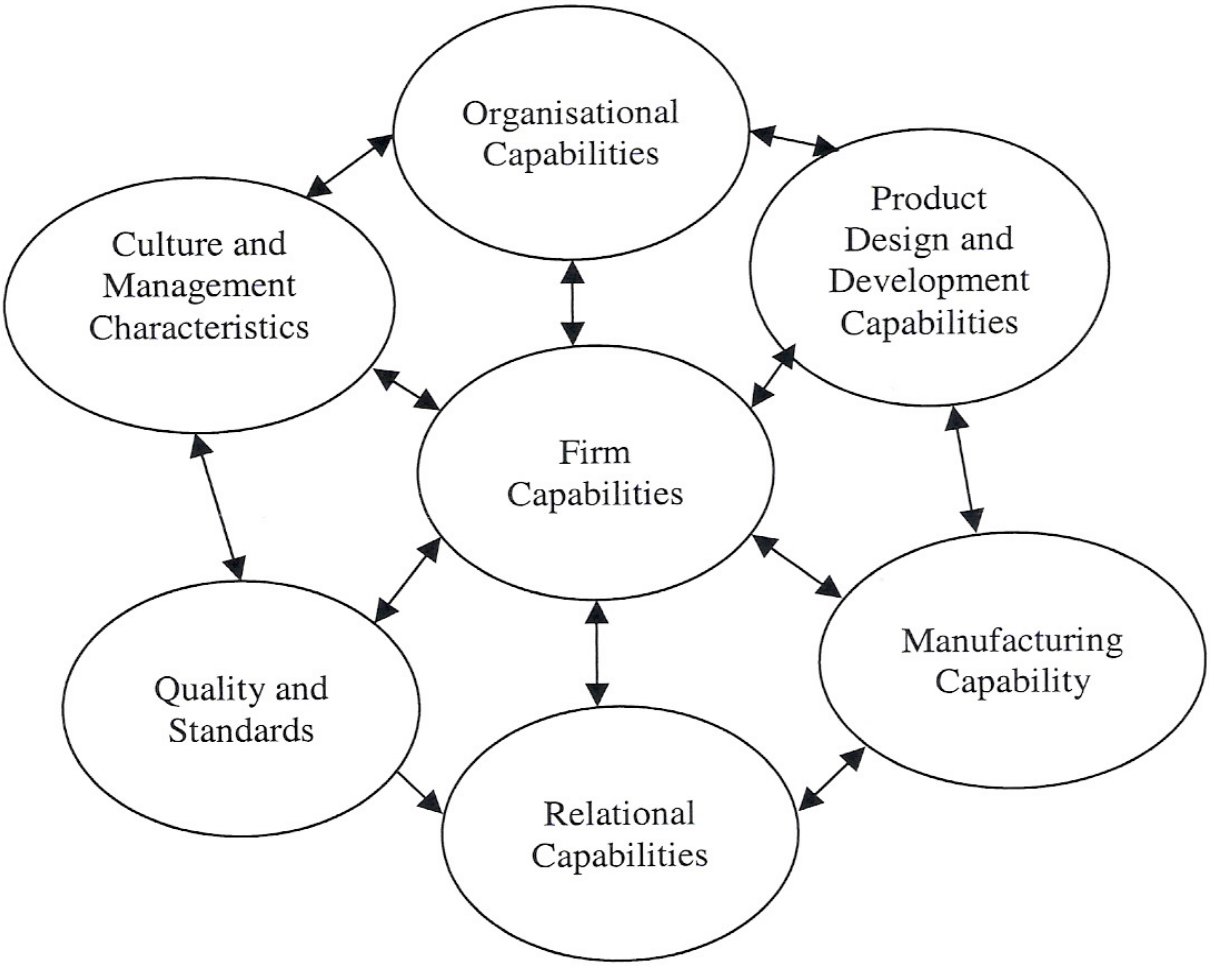
Evolution Relationships Model
Reduced Subsidiary Autonomy
Increased Performance Requir'ts

Similarities

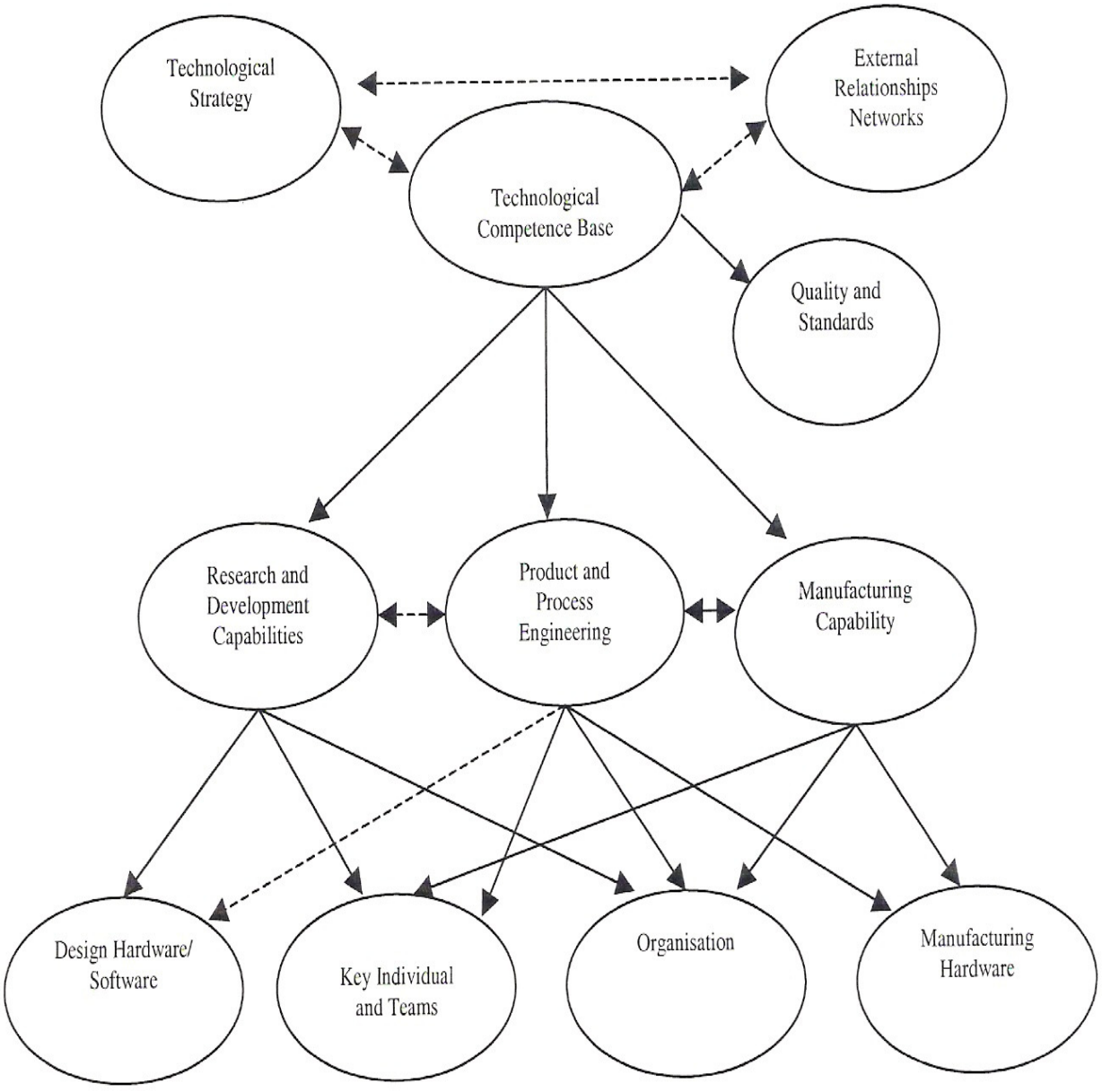
Networks led by a Subsidiary
FDI Attraction
Support (with some limitations) to local Suppliers

Consequence: Learning Instruments

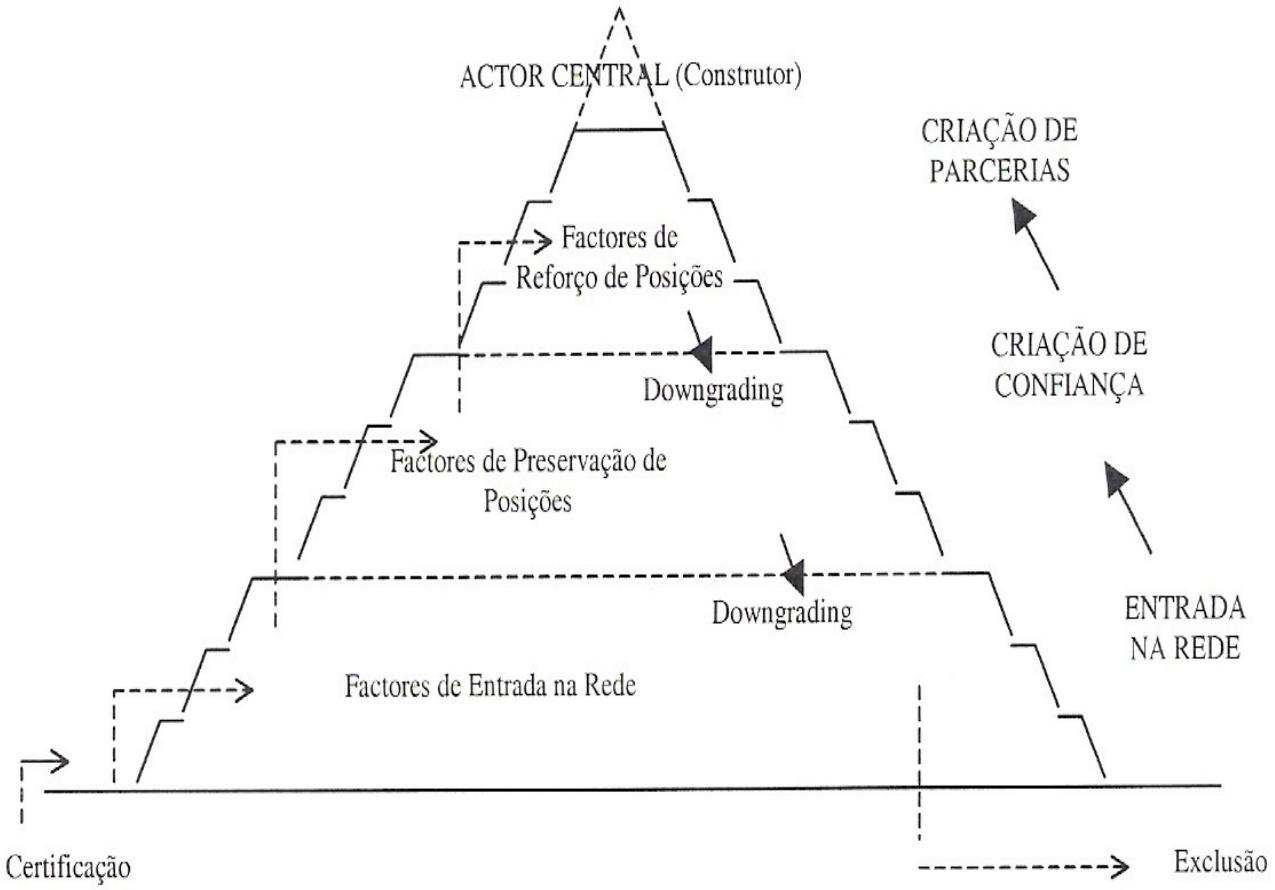
HOW DEEP WAS LEARNING?



A Simplified View of Firm Capabilities

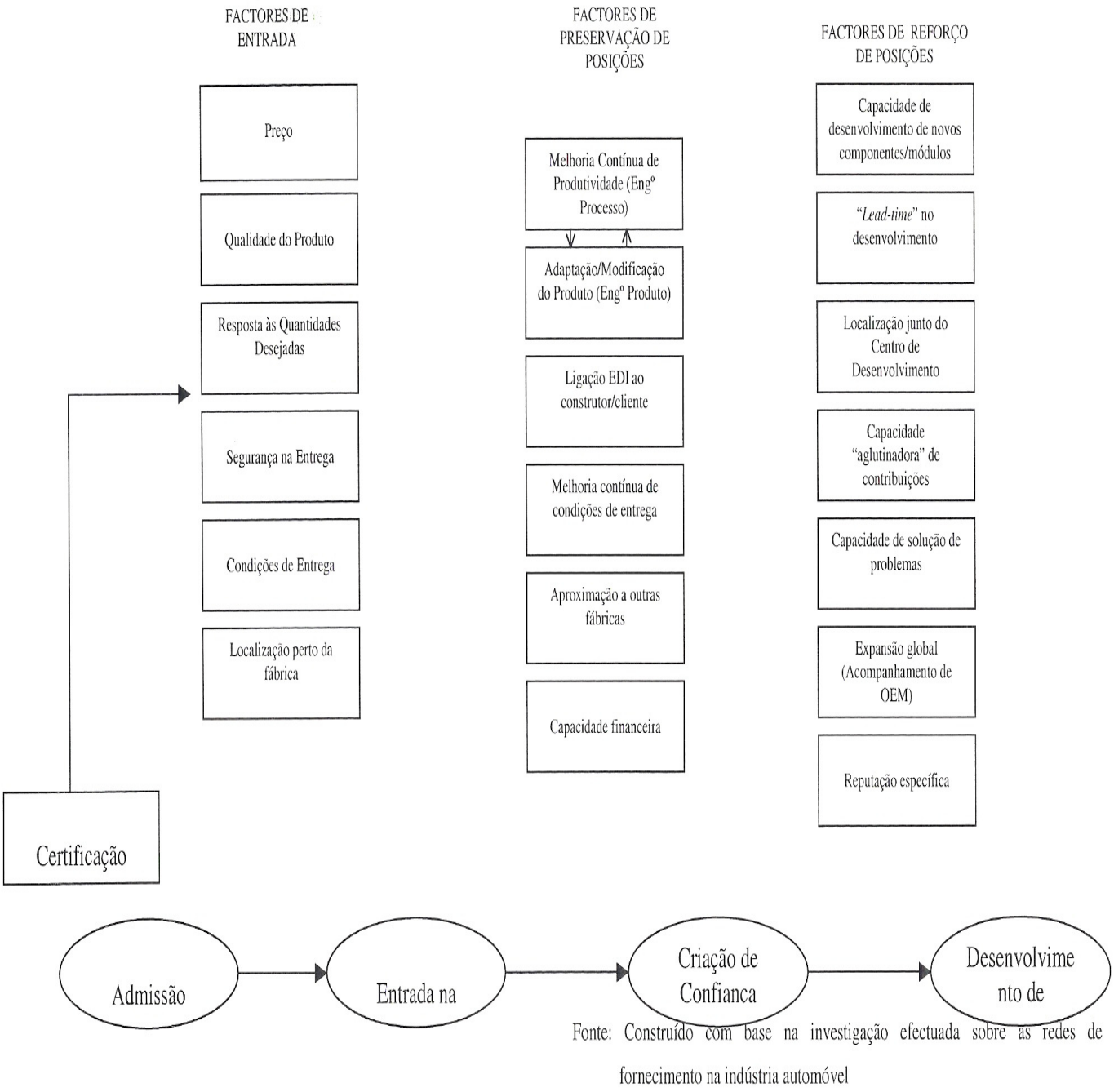


Firm Technological Competence Base



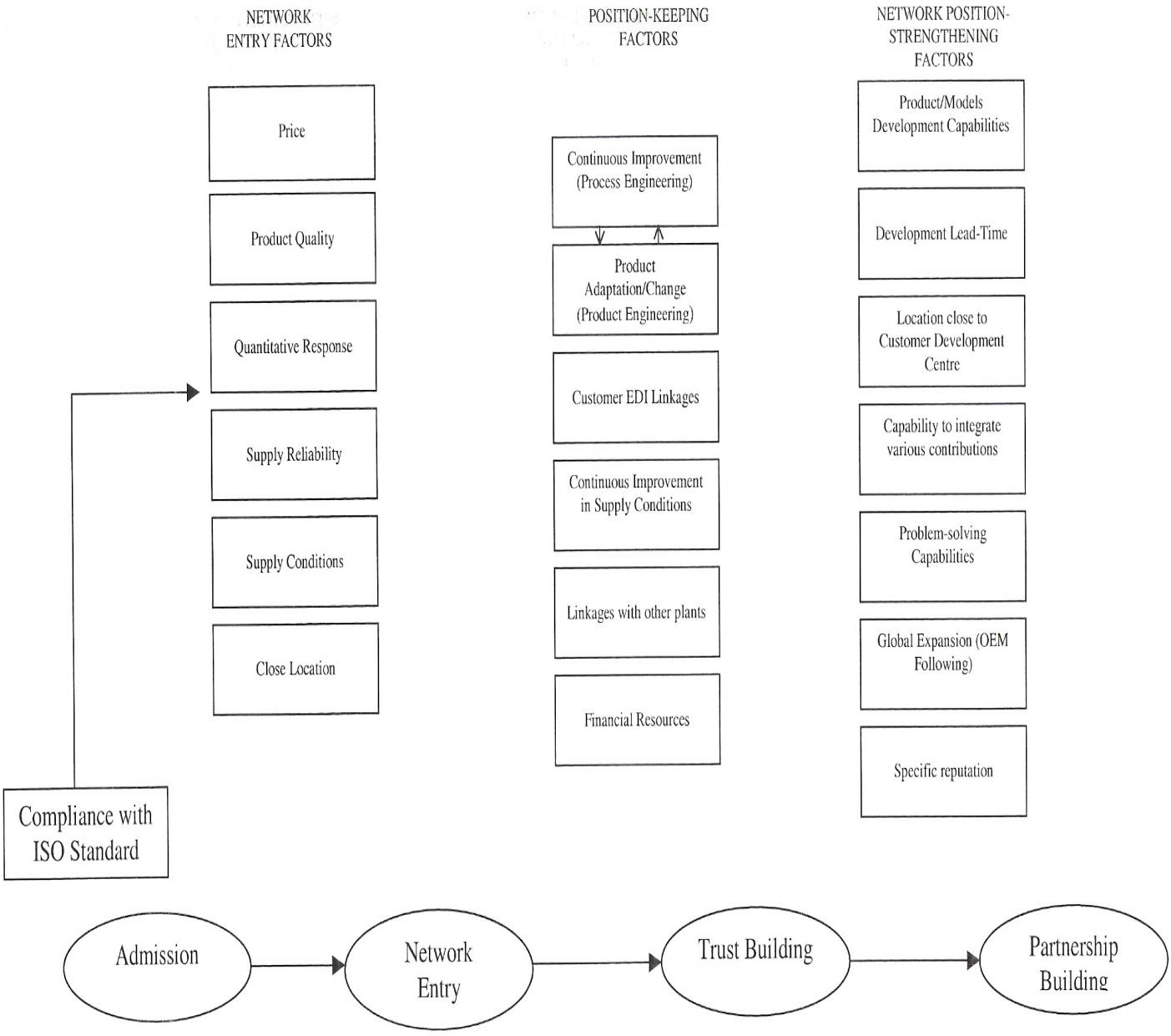
Fonte: Construído com base na investigação efectuada sobre as redes de fornecedores na indústria automóvel

Figura 8.1. – A Pirâmide de Posicionamento na Rede de Fornecedores



Fonte: Construído com base na investigação efectuada sobre as redes de fornecimento na indústria automóvel

Figura 8.2. – Factores de Evolução do Posicionamento nas Redes de Fornecedores



Source: Built on the basis of own field research

Supply Network Position Evolution Factors