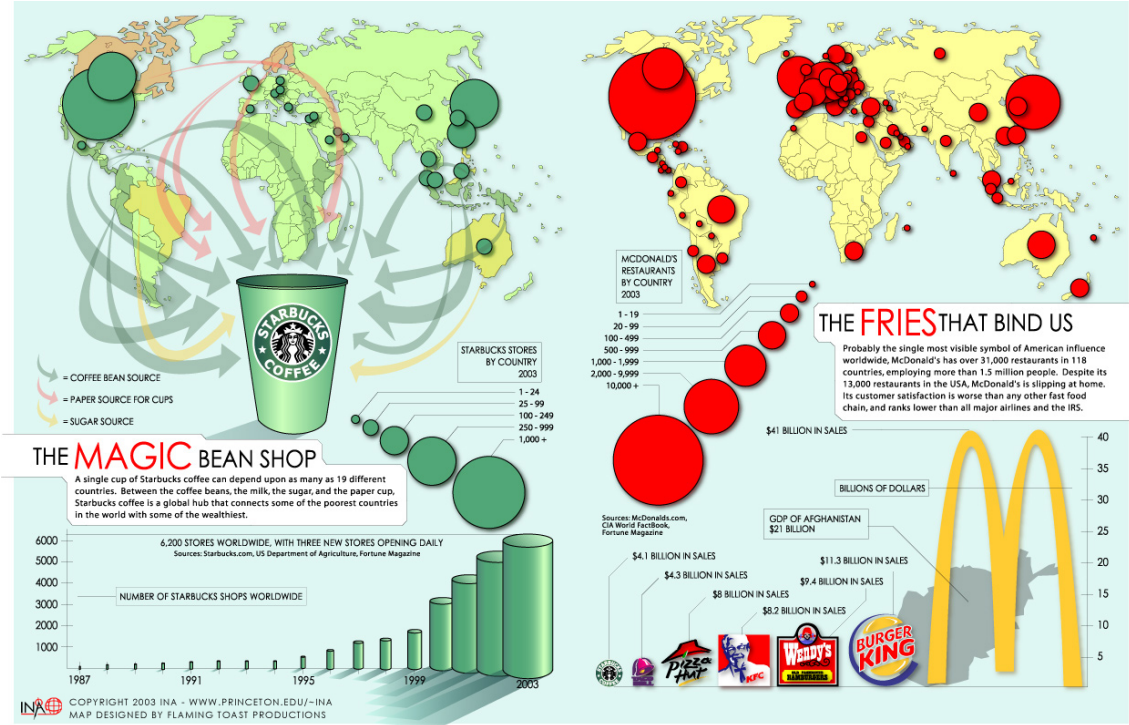


Globalization



<http://www.princeton.edu/~ina/info>
[graphics/starbucks.html](http://www.princeton.edu/~ina/info/graphics/starbucks.html)

Karel Mulder

January 4, 2010

Globalization

Globalization is NOT:

Increased trade

Increased exchange of capital



<http://psdblog.worldbank.org/photo>



Globalization

Trade in figures

Imports and exports as percentage of GNP (current prices)

	1913	1950	1973	1994
France	30	21.4	29.2	34.2
Germany	36.1	20.1	35.3	39.3
UK	47.2	37.1	37.6	41.8
Netherlands	100	70.9	74.8	89.2
USA	11.2	6.9	10.8	17.8
Japan	30.1	16.4	18.2	14.6



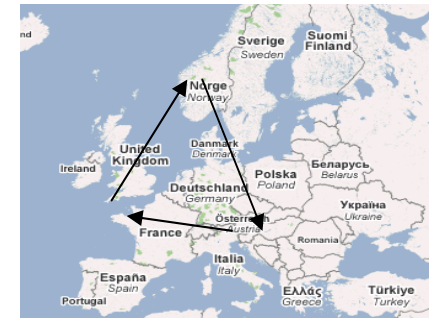
maps.google.com

Globalization

Trade in figures

Export of goods from EU countries to other EU countries (% of GDP)

	1960	1970	1980	1990
France	4.3	7.5	9.7	11.4
Germany	6.4	11.0	14.3	16.9
UK	3.3	6.1	10.6	10.9
Netherlands	20.8	26.5	32.9	34.8



maps.google.com

Globalization

Trade in figures

Export of goods from EU countries to non-EU countries (% of GDP)

	1960	1970	1980	1990
France	6.9	4.9	7.0	6.1
Germany	9.5	7.5	9.3	9.5
UK	11.0	9.5	10.7	8.1
Netherlands	13.2	8.1	9.9	11.4



maps.google.com

Globalization

Trade in figures

The figures for Europe reflect the developments in global trade:

The **growth** of **internal** European capital exchange
(direct foreign investments)

is **greater** than

The growth of investments made **outside** the EU

Globalization

Or not?

Monetization

Raw materials relatively cheap?

Concentration and specialisation?

Globalization

Trend

With a limited number of products DSM strives for a top world-ranking after

With these products DSM has a number 1 or 2 position. To maintain this position, presence on the European, Japanese and US market is necessary.

“We want fewer goals and more internationalization”,

(free translation from Selman, RvB DSM, NRC
15-11-1990)



<http://www.dsm.com>

Globalization

Background

Knowledge based, intensive production has a **higher yield** on an **increased scale**

Core competencies are **easier** to manage (better span of control)

It is more **efficient** to deal with **fluctuations** in sales

Possibilities of a **free market**

Globalization

Core Business

High fixed costs and low variable costs in product and system designs

Therefore:

- Core business

- Market leadership

Concentrating on a core business is necessary to be a market leader in that business

Globalization

Background

Knowledge based, intensive products create **larger profits** with increased **market shares**

Core competencies can be managed **better** and **faster** (span of control)

Flexibility to deal with changes

Liberalization of trade

Paradox of Multiformity; locally products and cultures diversify, globally they become more uniform.

Globalization

Television

In 1949 there were:

78 US TV brands

12 UK TV brands

7 Franse TV brands

1948 Sentinel 405 7" (USA)



© 2002 TVhistory.TV (Dunedin)

Globalization

Emerging Television Brands

Akai	Japan	?
Curtis Mathes	USA	1960
Hitachi	Japan	1975
JVC	Japan	1976
Philips Magnavox	Netherlands	1976
Matsushita Panasonic	Japan	1975
Mitsubishi	Japan	1980
Thomson RCA	France	1987 (1946)
SAMPO	Taiwan	1981
SAMSUNG	Korea	1989
Sanyo	Japan	1977
SANSUI	Japan	1987
Sharp	Japan	1983
Sony	Japan	1961
Tatung	Taiwan	1979
Toshiba	Japan	1976
LGE Zenith	Korea	1999 (1948)



early Zenith



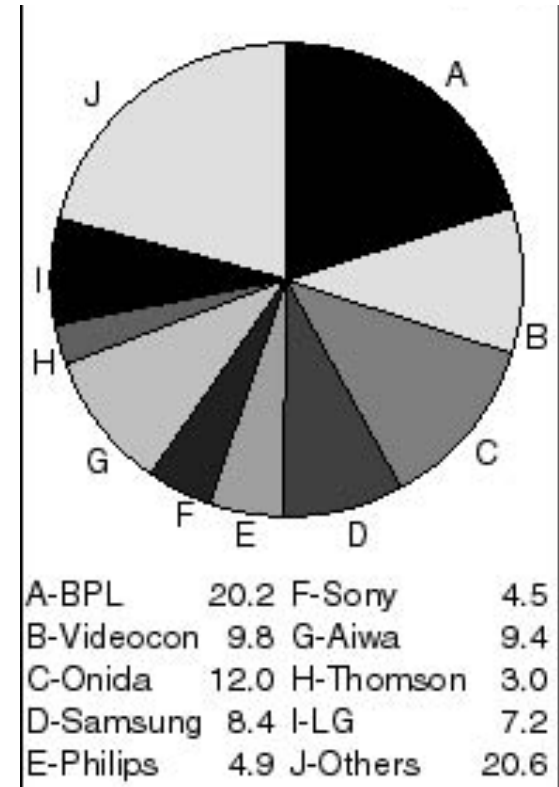
early Sony

Figures from <http://www.tvhistory.tv/>

Globalization

Market Share Television Brands

Market shares 1999-2000



Source: MIRC Electronics annual report 1999-2000

Globalization

Different Markets and their Television Brands

TV-brands in a random Belgian online store:



TV-brands in a random US online store:



Images from
company
websites

Globalization

LCD's

Sony 15%
Philips 14%
Sharp 14%



21.2 million units sold in 2005 growth 141 %
46.4 million units sold in 2006 growth 119%

Price decreases, e.g 16 % in the 4th quarter of 2005

Globalization

Results

More global oligopolies

Lower product variation

Cultural uniformity

Less room for de Maverick

Less experimentation and innovation?



<http://www.micheloud.com>

Globalization

From Autarky to 'Global Village'

Ibieca is a village community in Aragon, Spain

1910- High degree of autarky (meat, bread, vegetables, fruit, smith, carpenter, clothing)
Surplus goes to the national market
Stable social structure: CASA as social unity

1980- Production is for the market
No local produce
Commuting
Individualisation



www.altoaragon.org

Globalization

Knowledge-based Society

Higher degree of knowledge in the economy

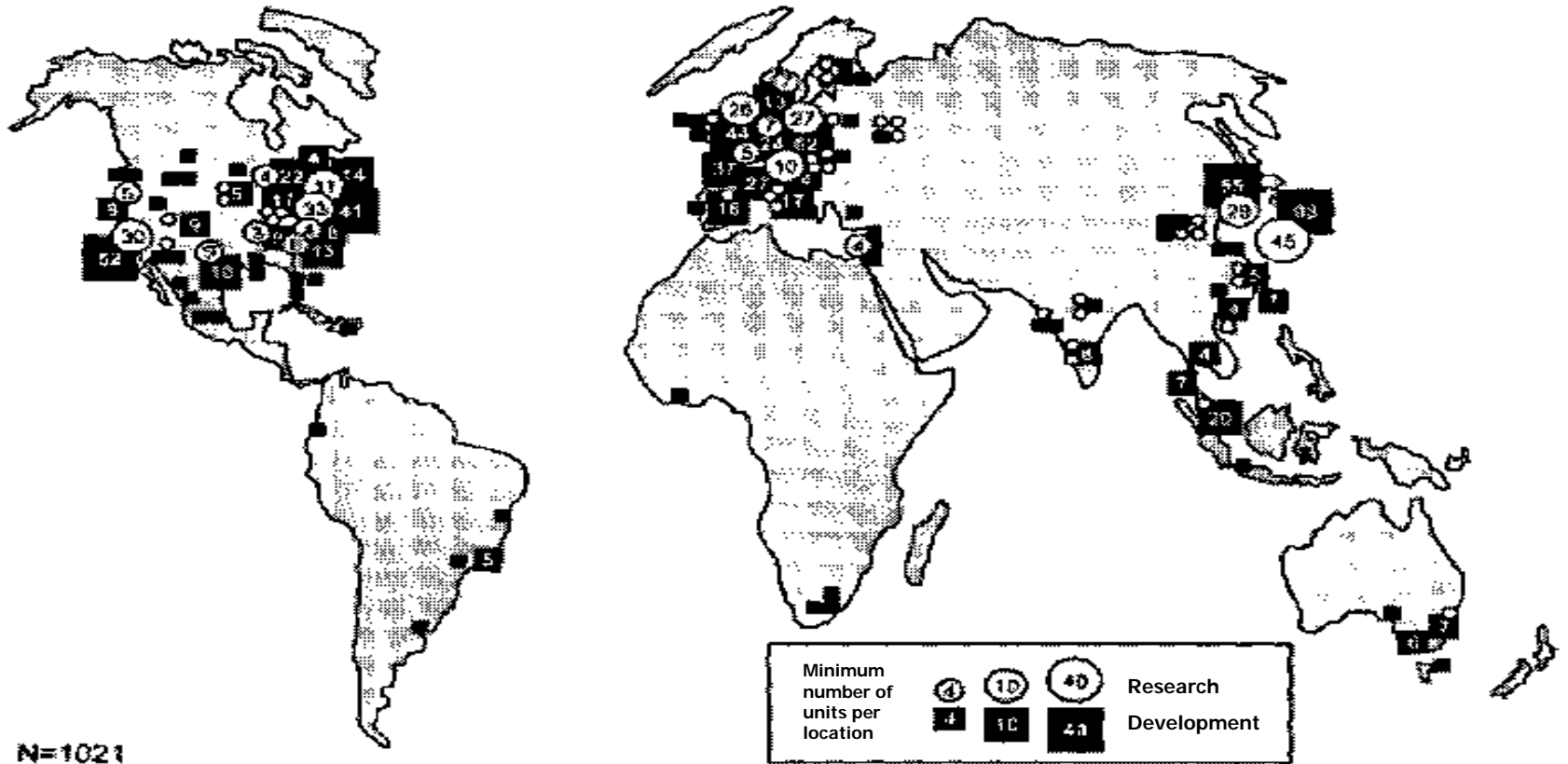
Costs need to be recovered over a larger turnover

Research and Design (R&D) requires co-operation and many external contacts

Creates a concentration of knowledge

Globalization

Global Spread of R&D



Globalization

Clusters of Knowledge and their consequences

Poor countries lag behind in development even more

(national companies are taken over by multinationals and R&D dissipates, unless there is a strong focus on a knowledge-based infrastructure)

Also happens in 'rich' areas that lag behind in development

e.g. the South of Italy, parts of Eastern Europe

Government interference is usually impossible due to international obligations

Globalization

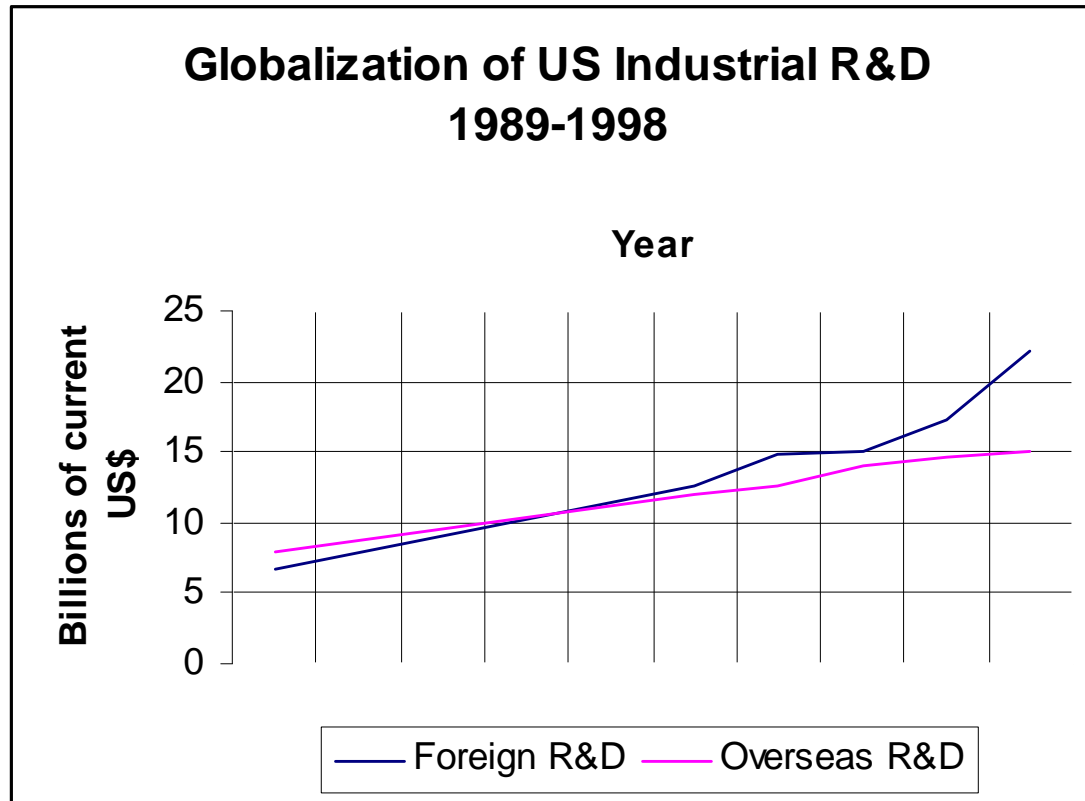
Other Trends

Technological complexity

Emancipation of stakeholders

Globalization

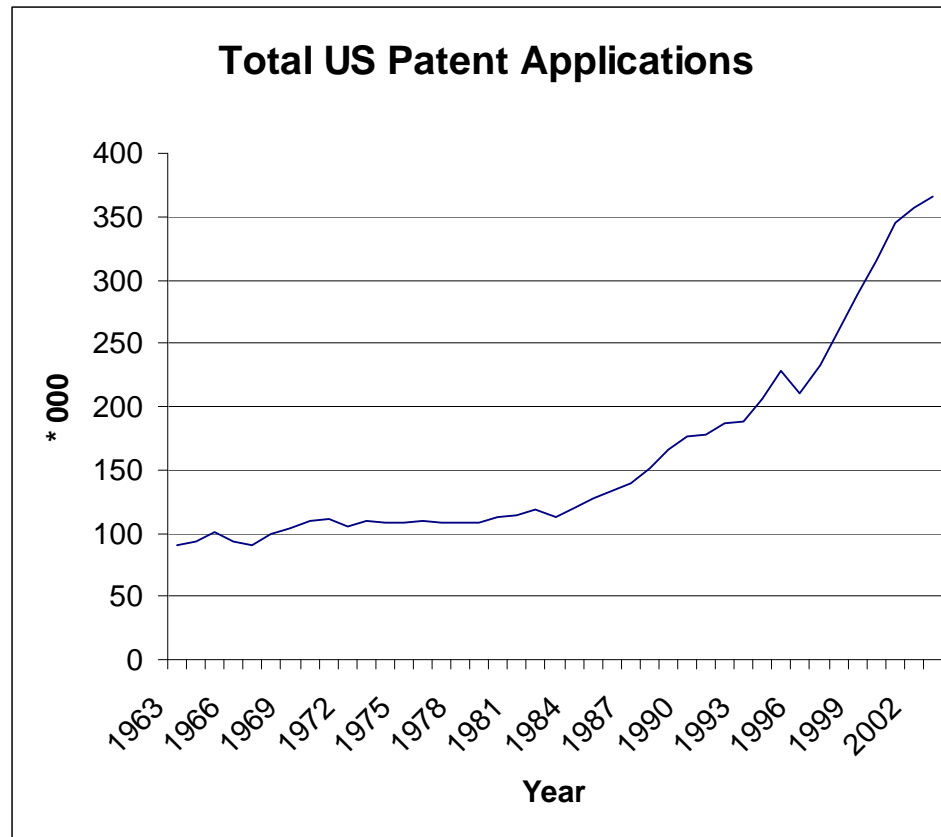
Globalization of US Industrial R&D



Karel Mulder, Managing the dynamics of Technology in Modern day society, In: Robert Verburg, Roland Ort, Willemijn Dicke
2006, Managing Technology and Innovation, An Introduction, London/New York: Routledge

Globalization

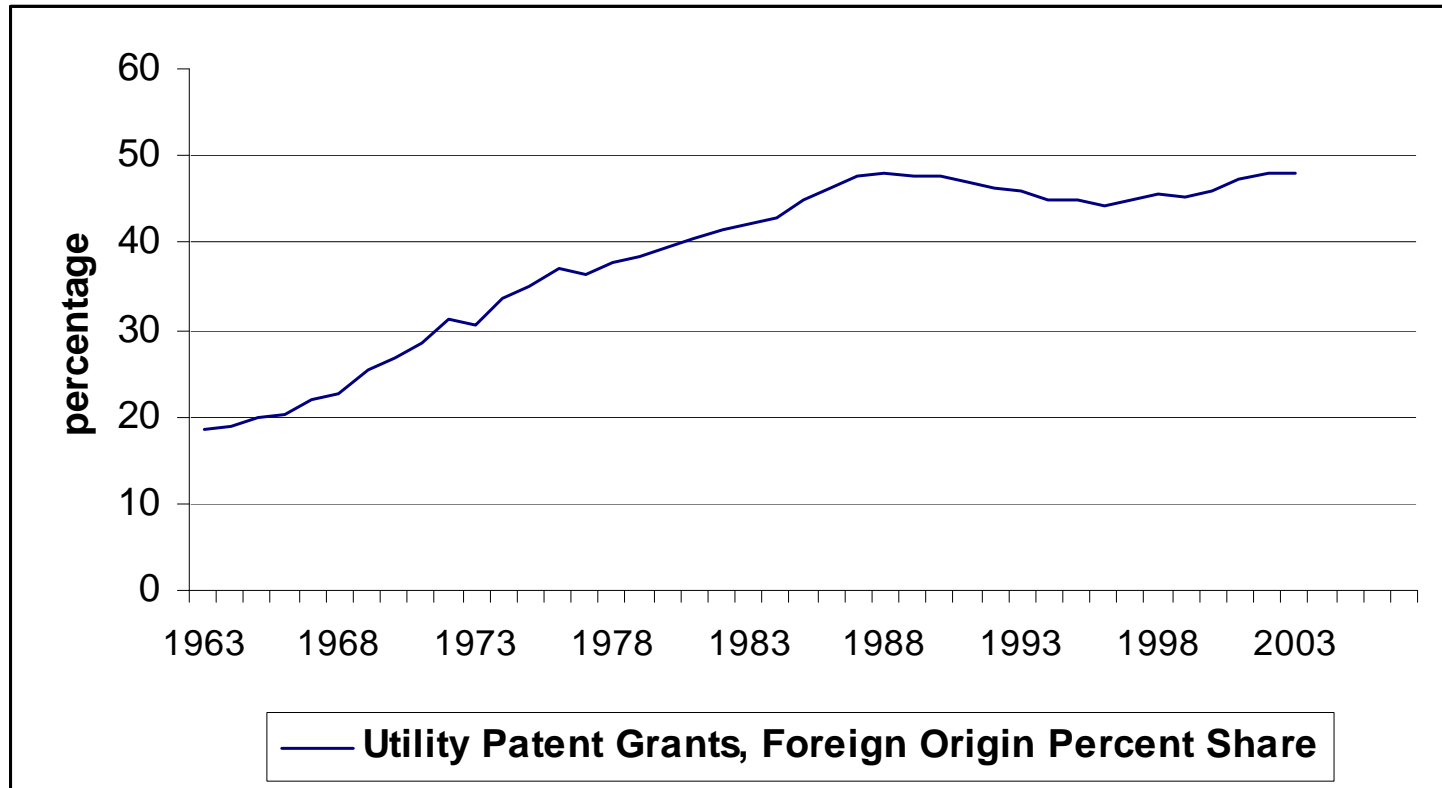
US Patent Applications



Based on: http://www.uspto.gov/go/taf/us_stat.htm

Globalization

Share of Foreign Utility Patent Grants



Based on: http://www.uspto.gov/go/taf/us_stat.htm

Globalization

Complex Innovations

Less redundancy in design:
lean design

Design is increasingly multidisciplinary:
In car design mechanical engineers
and designers are involved but also
experts in microelectronics,
plastics, software, aerodynamics ...

Innovations is usually only possible if
suppliers innovate simultaneously



c,mm,n
<http://www.autoindetoekomst.nl/>

Globalization

Participation in Higher Education

	1970	1996	Increase %
Albania	25469	34257	34,5
Austria	59778	293172	390,4
Bulgaria	99596	262757	163,8
Finland	59769	226458	278,9
Iceland	1706	7908	363,5
Italy	687242	1892542	175,4
Netherlands	231167	468970	102,9
Norway	50047	185320	270,3
Romania	151885	411687	171,1
Spain	224904	1684445	649,0
Sweden	144254	275217	90,8
United Kingdom	601300	1891450	214,6

Karel Mulder, Managing the dynamics of Technology in Modern day society, In: Robert Verburg, Roland Ort, Willemijn Dicke 2006, Managing Technology and Innovation, An Introduction, London/New York: Routledge

Globalization

Contributing to the Development of Knowledge

Civilians who are **well informed** imply that choices and developments should be **participatory**, and predictions should not just be made: Forecasting → Foresight

There is a need for **constructive** technology assessment, and **participation** of civilians that explores **quality** in **debating**