



Bundesministerium
für Bildung
und Forschung

OECD Global Forum on the Knowledge Economy

Recent Developements in the German Innovation System

E. Beyer

September 2002

bmb+f

I. Key Factors to Innovation

Regulatory and financial framework conditions

Conditions for start-ups and venture-capital

Openness to international cooperation

Patent law and practice

Investment in human capital

Qualification level of workforce

Mobilizing ICT in production and services

and

R&D

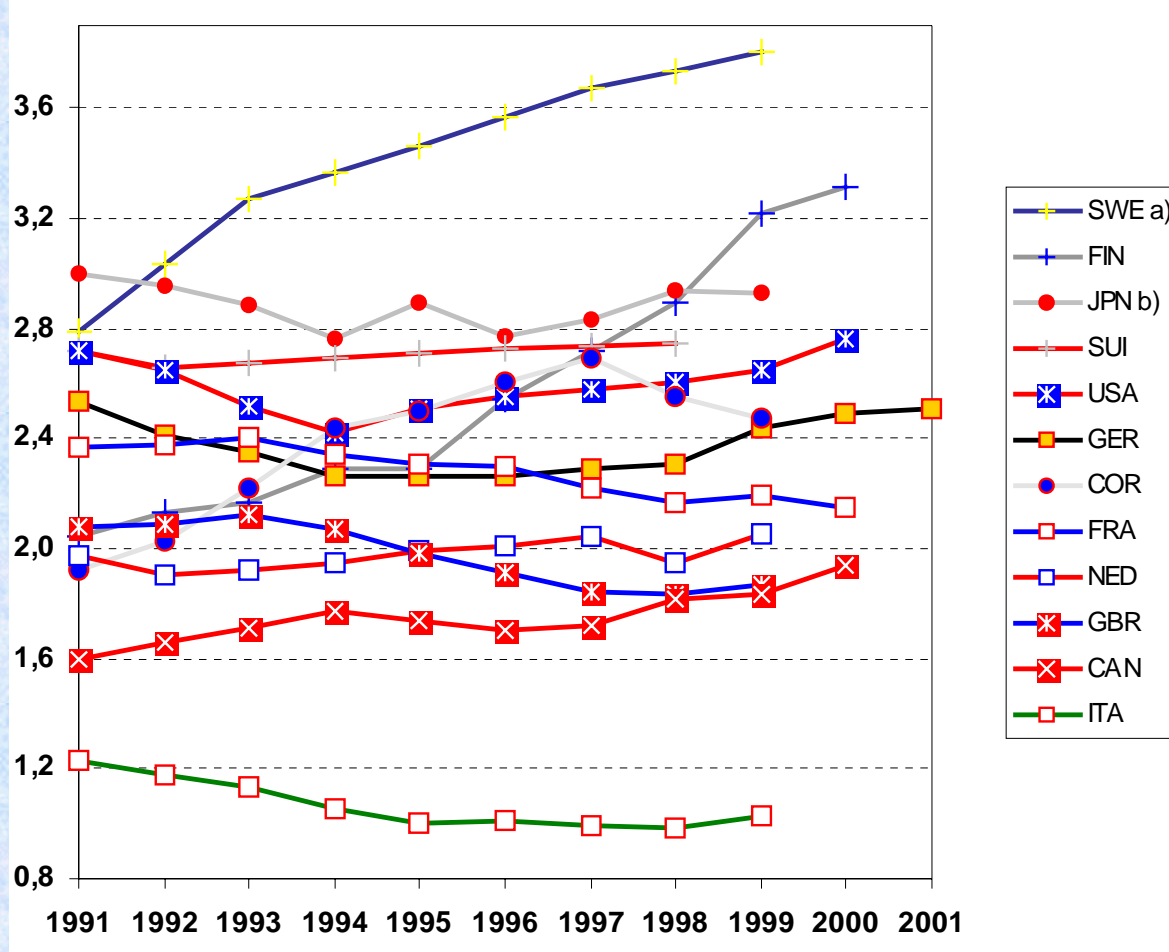


Bundesministerium
für Bildung
und Forschung



bmb+f

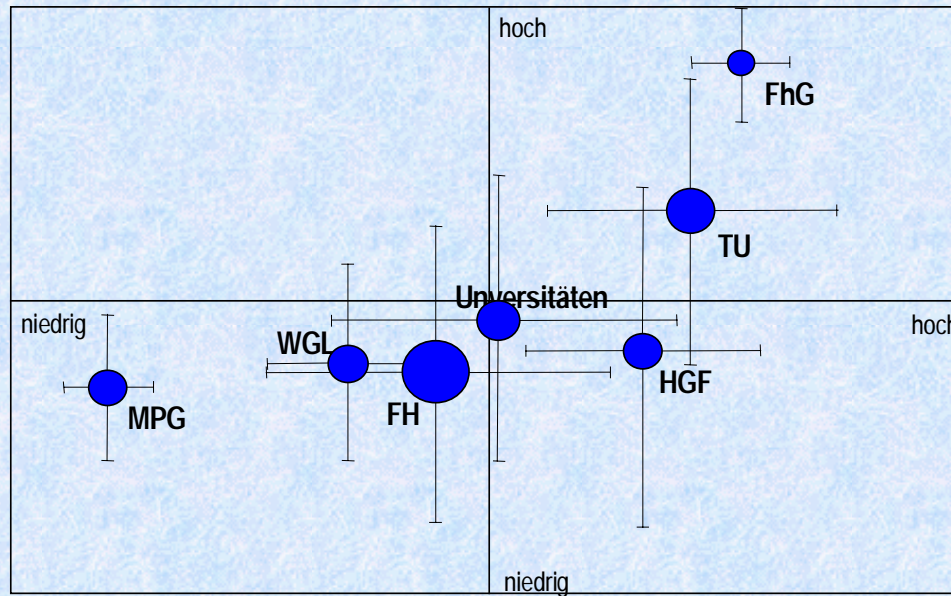
FuE-Intensities in Selected OECD-Countries 1991 to 2001* R&D-Expenditures in Percentages of the GDP



Source: OECD: Main Science And Technology Indicators. - SV-Wissenschaftsstatistik. - Sachverständigenrat zur Begutachtung der gesamtwirtschaftlichen Entwicklung (2001). - Calculations and Estimates of the NIW.

II. Innovation through institutional flexibility Typology of public research institutions in Germany

Intensity of Transfer-Activities with Companies
 (Companies as Source for the R&D-Orientation of the
 Institution,
 Interaction with Companies, Mobility of the Personnel,
 Funding from Industry)



Conditions for Technology Transfer with Companies
 (R&D-Orientation, Financial Situation, Size of the Research Institution)

MPG: Max Planck Gesellschaft
 WGL: Wissenschaftsgemeinschaft Gottfried Leibniz
 FH: Fachhochschulen
 Uni: Univeersities

HGF: Helmholtz-Gemeinschaft
 TU: Technische Universitäten
 FhG: Fraunhofer Gesellschaft

Recent Policy Initiatives: Exploitation Offensive

Creating a professional patent and exploitation infrastructure in Germany

- e.g. establishment of patent and exploitation agencies (PVA)

Reform of the university teachers privilege

- incentive to patent inventions

Specific training for patenting and exploitation

Support of legal protection of research results

Introduction of a period of grace in patent law

Networking the exploitation environment



Bundesministerium
für Bildung
und Forschung



Recent Policy Initiatives: Partnership Offensive

- Φ Promoting collaboration between institutes doing basic research and application-oriented institutes
- Φ Strengthening the participation of industry in selecting research goals for National Research Centres
- Φ Opening co-operation between universities and industry for open-purpose research



Bundesministerium
für Bildung
und Forschung



Recent Policy Initiatives: Spin-off Offensive

Supporting scientists who want to set up in business

- all technology areas, all higher education and research institutions

Creating a favourable start-up environment

- e.g. founding labs

Upgrading of spin-offs, support for attracting venture capital

- increased co-operation of research institutions with private VC companies

Support of an entrepreneurial culture in Germany

- “education for future entrepreneurs”; chairs for entrepreneurship

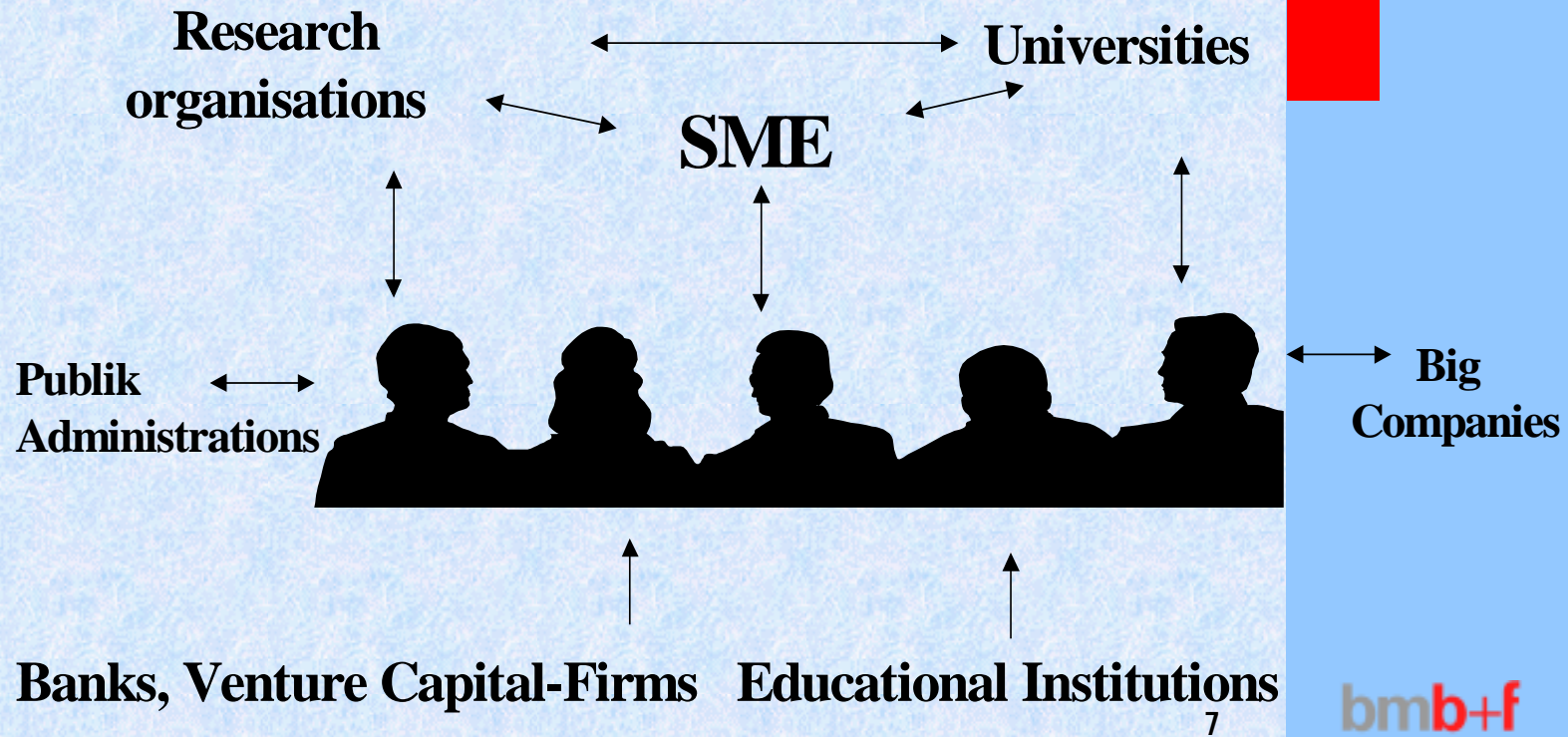


Bundesministerium
für Bildung
und Forschung



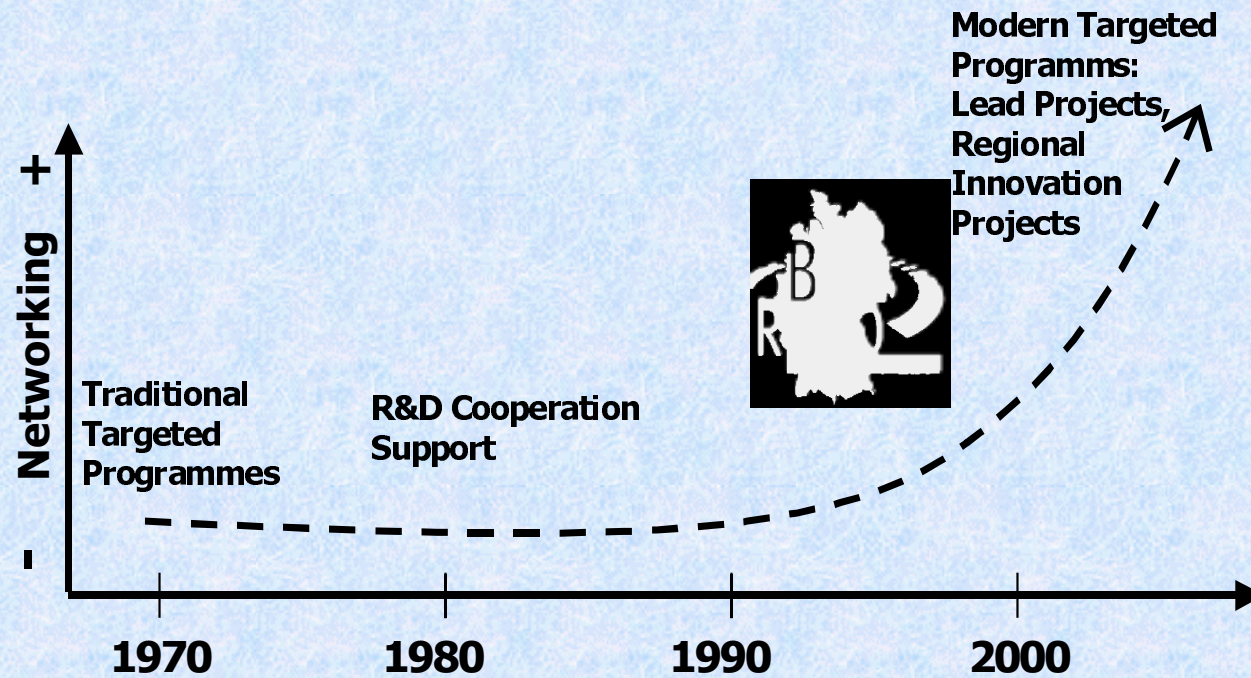


III. Innovation through networking: New R&D-programmes in Germany



Development of policy approaches:

From funding of single projects...
... to support of networks and competitions



Bundesministerium
für Bildung
und Forschung



IV. Innovation through international cooperation

Bilateral Cooperation

Partnerships of Universities and Research Institutions

Exchange of students and scientists

International participation in the VI. EU-Framework-Programme

Multilateral Cooperation

5. References:

Mittelstand Innovativ

(BMBF 2002; gives you a comprehensive overview about BMBF-approaches to support innovative SME´s)

Innovation Policy in Germany

(BMBF, BMWi 2002; gives you a comprehensive overview about innovation policy in Germany)

Report of the Federal Government on Research 2000

(BMBF 2000; gives you an overview about the German R&D-system)

Germany´s Technological Performance 2001

(BMBF 2002; gives you a set of indicators an analysis about the performance of Germany´s Innovation System)

Innovationsförderung -

Hilfen für Forschung und Entwicklung

(BMBF, BMWi 2001; gives you a reference guide for all R&D-support schemes with relevance for industry with contact addresses to get more detailed information)

Contacts:

BMBF publications in downloadable format:

- www.bmbf.de
- www.kmu-info.bmbf.de

Information about single programms:

- www.dlr.de/ib
- www.kmu-info.bunbf.de

Personal contact:

- Engelbert.Beyer@bmbf.bund.de