



Facilitate Open Science Training for European Research

RESEARCH DATA MANAGEMENT AND OPEN DATA

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RIGSARKIVET

REUSE OF RESEARCH DATA – WRITING THE ECONOMIC HISTORY OF DENMARK USING RESEARCH DATA

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National Archive of Denmark



Setting the scene

- Danish Data Archive (DDA) founded 1973
- Since 1993 DDA has been part of the National Archive
- 1993-April 2014 DDA has been working as a (small) European style data archive
- May 2014: Implementation of a new organisational strategy and structure
 - Working across public records/administrative data and research data

	National archive	Data archive
Time perspective for data dissemination	From future to eternity	From now to nearby future
Market for data /designated community	The national public Incl. public authorities	Research and Education
The collection	Public records/administrative data (<i>born digital</i>)	Research data
Experience in providing service for born digital material	Relatively short app. 10 years (first collections from 70's)	Relatively long since 1973 (data sets from mid 60's)
Open access to data	By legislation: 20 years for non-sensitive information 75 years for sensitive information Possibility for access by application to the data protection agency and the NA	By agreement with depositor: App. 50 pct. open access Possibility for access by application to the data protection agency But this is changing!

Research Data

- The data for this project is collected by DDA
- It includes statistics, surveys and research data
- Surveys: Value Surveys 1970-2008, 1990s Scenario Survey
- Research Data: Economic data collected by historians and political scientists
- How can you use research data to come up with new conclusions about recent economic development?



Danish Capitalism

- The intention to identify a "label" of Danish capitalism
- Chandler: American Capitalism: Managerial Capitalism
- Sejersted: Norway as "Democratic Capitalism"

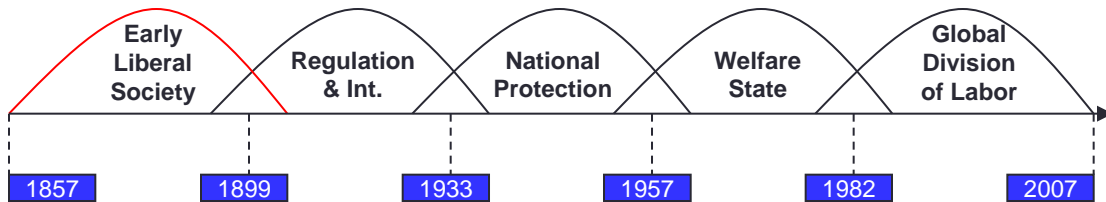
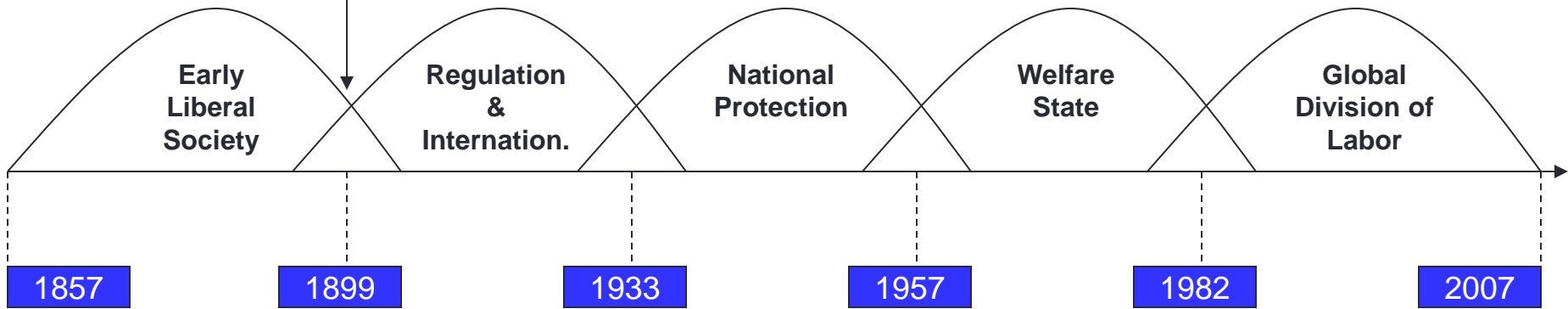
- Danish capitalism as "Cooperative Liberalism"

- The 5 periods:
 - 1857-1899
 - 1899-1933
 - 1933-1957
 - 1957-1982
 - 1982-2008

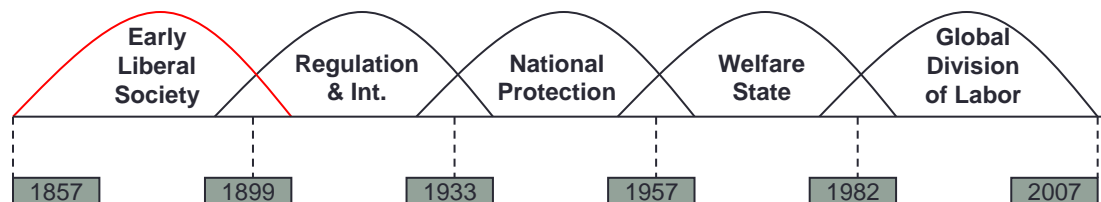
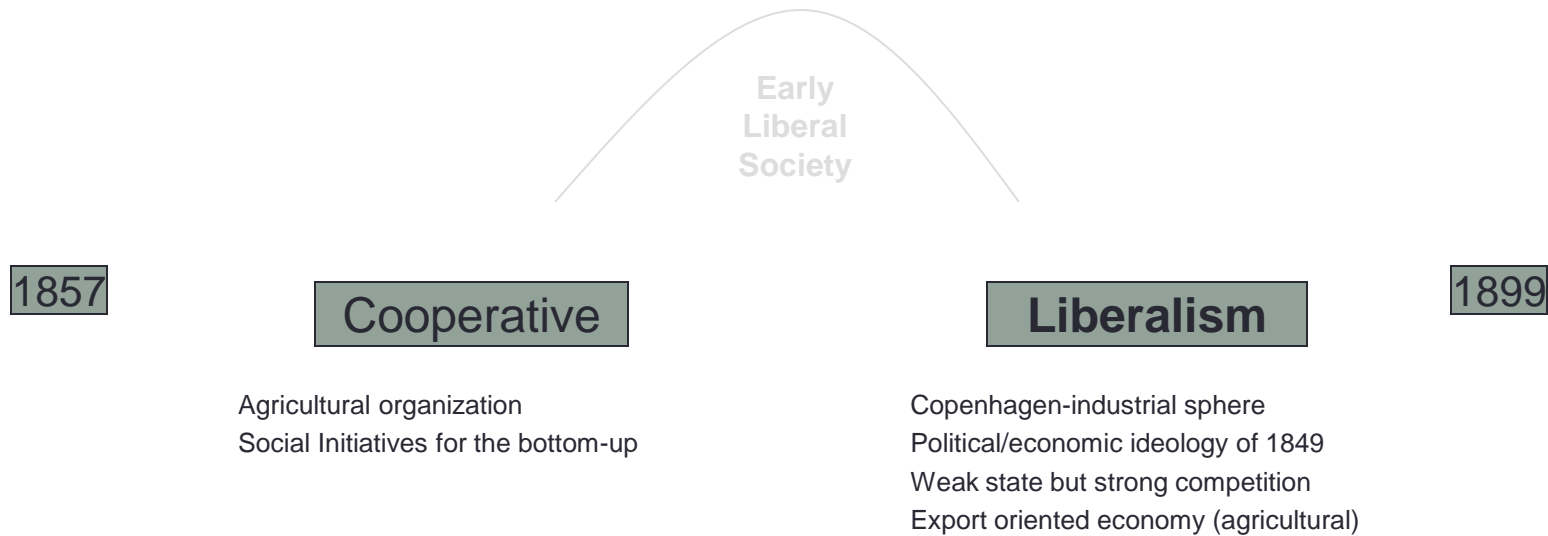
Research Data - Danish Capitalism

- Main questions:
 - Why and how did Denmark move from the economic periphery
 - in 18th-century to the economic centre of the mid-20th century?
 - How can we explain the economic upswing
 - in Denmark from 1993 to 2007?
 - Relations between the two questions?

Formative Phases



Cooperative Liberalism



1857-1899: "Early Liberal Capitalism" –divided business spheres

- The cooperative sphere:
- Finance: Saving banks
- Education: village schools
- & agricultural schools

- From vegetarian towards
- animal production

- Animal export:
- Ca. 1870 5.000 tons
- Ca. 1900 70.000 tons

- First cooperative dairy in
- Hjedding 1882
- in 1909 = 1.157 mejerier

- The Copenhagen sphere:
- Finans: The three Copenhagen banks

- Business structure: many SMEs and in the 1870s and 1890s many M&As:

- 1889 De Forenede Papirfabrikker
- 1890 De forenede Bryggerier
- 1895 Trækompagniet i København
- 1895 De Forenede Maltfabrikker
- 1896 De forenede Sæbefabrikker
- 1896 Sodafabrikkerne
- 1897 De forenede Bygningssnedkerier A/S
- 1897 De forenede Kaffebrænderier A/S
- 1897 De danske Dampmøller A/S
- 1897 Dansk Svovlsyre- og Superphosphat-fabrik
- 1899 Silvan
- 1901 De forenede Conservesfabrikker A/S

1857-1899: "Early Liberal Capitalism" - the agricultural economy

	1870	1880	1890	1900	1910
• Export agriculture	103	152	172	250	438
• Export industry	8	8	10	14	25
• Export other	2	12	14	18	27
• Export total	113	152	195	282	490

Table 3. The Danish export and liabilities and assets in relation to foreign countries (mill. DKK)



1882



1885



1887



1890



1857-1899: "Early Liberal Capitalism"

•Three important points from early Danish capitalism:

1. The weak state

- a) Infrastructure (railways, telephone connections)
- b) The labour market (unregulated until "Factory law" 1873 & "September agreement" 1899)
- c) Health insurance (inspired by Bismarck, Danish system 1892: based on guild - "help to self help")

• 2. Important changes came from below: agriculture, education, health insurance

- 3. The modernization of Denmark was dependent on the surrounding world: Free trade imitation, etc.

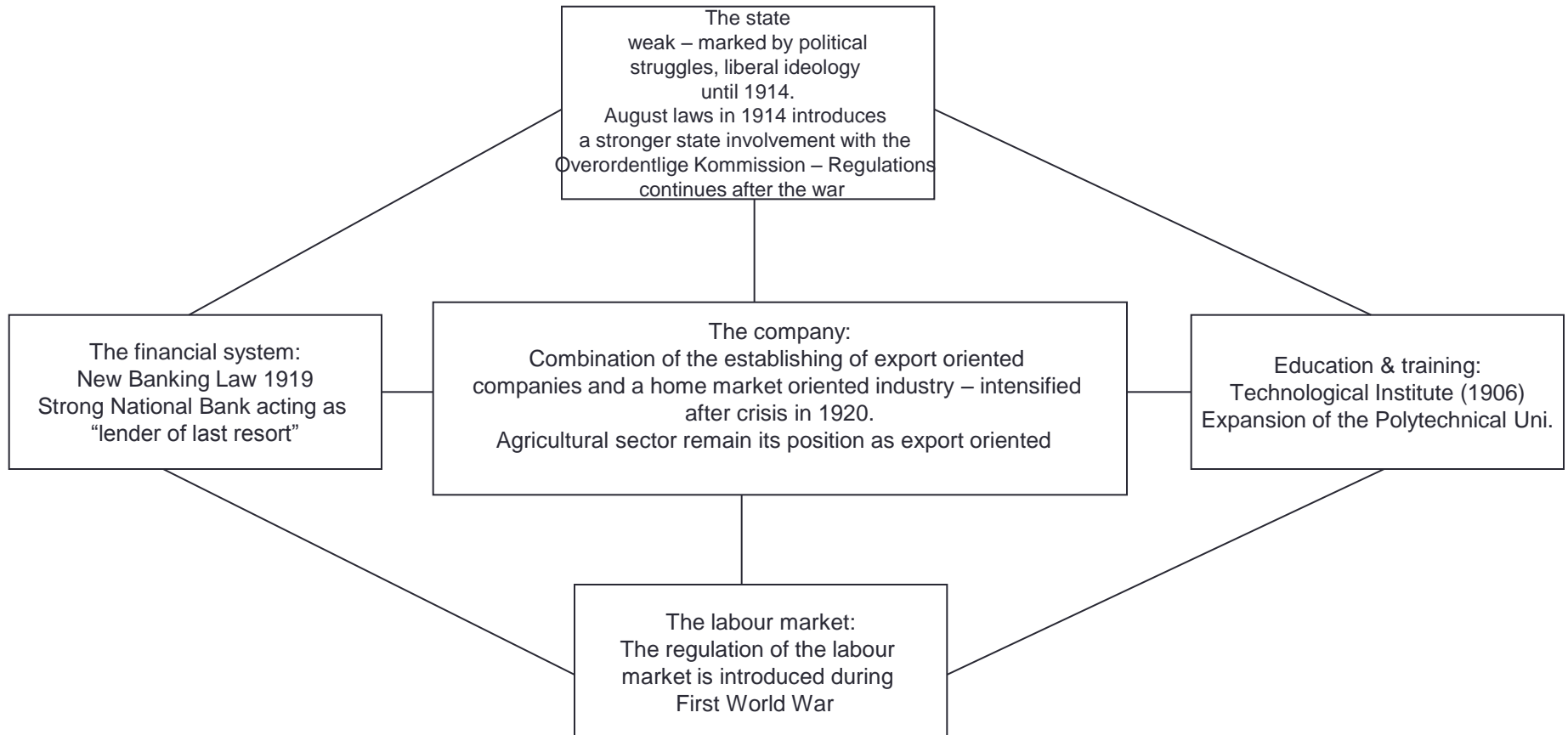


Workshop at Klingenberg, 1895

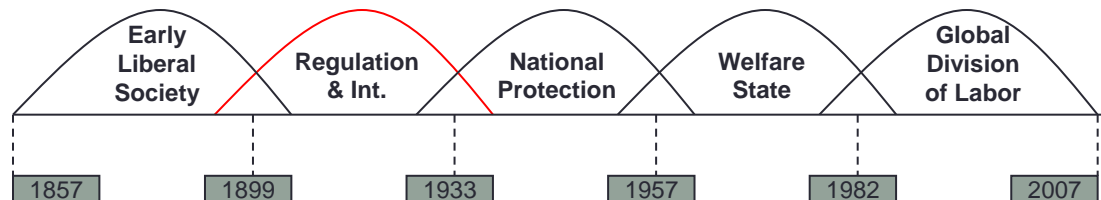
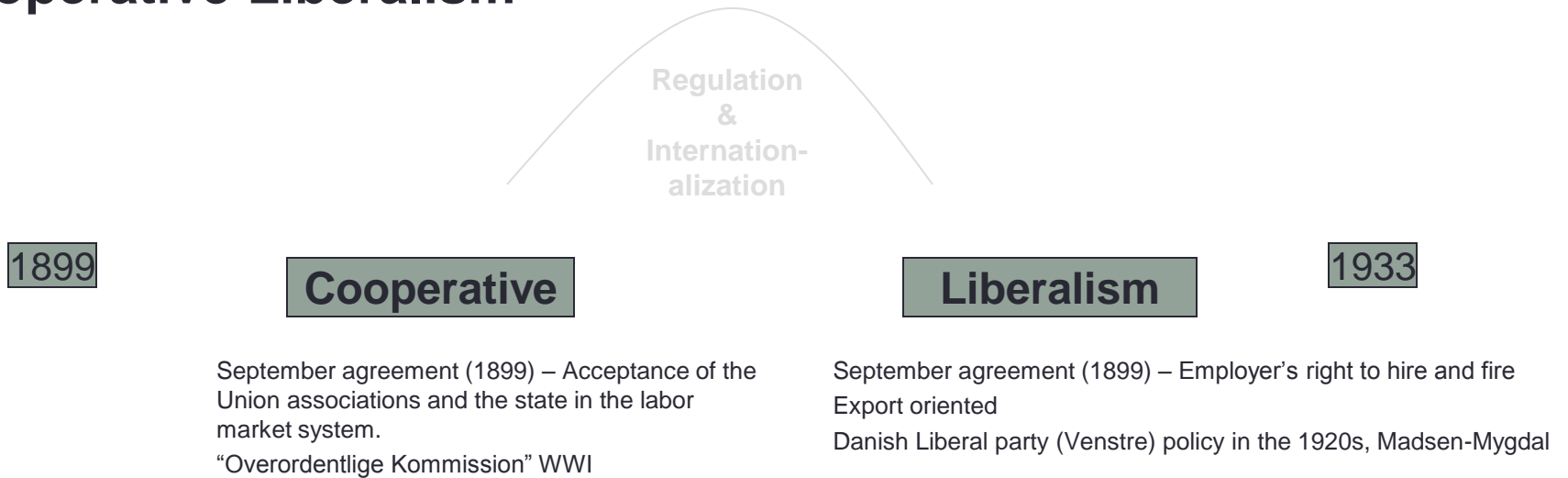


Thomas B. Thrige, 1924

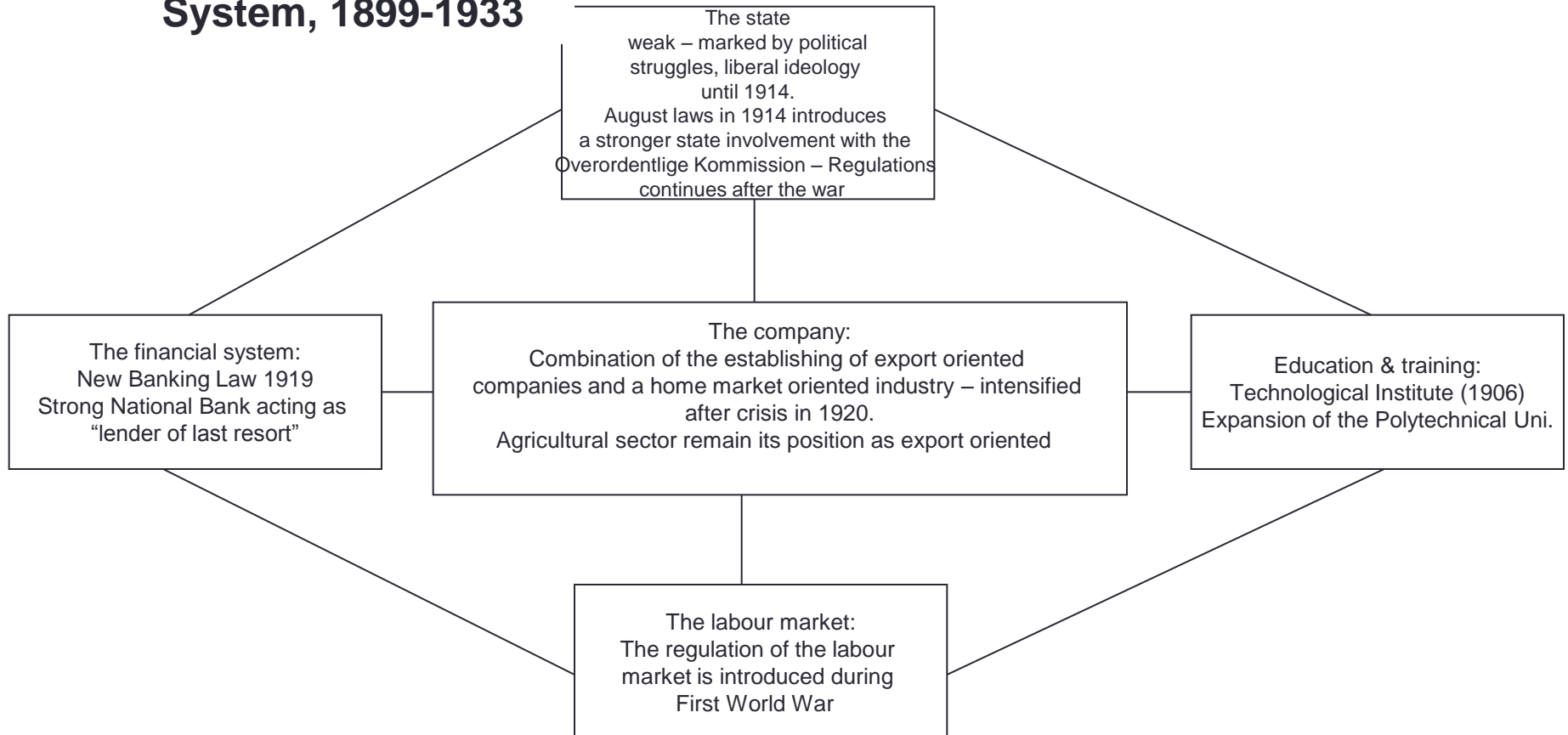
The Danish Business System, 1899-1932



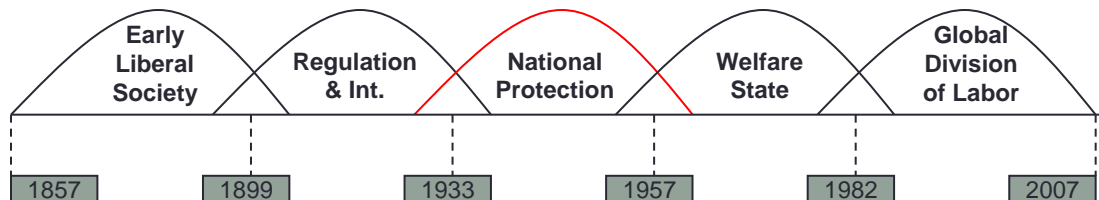
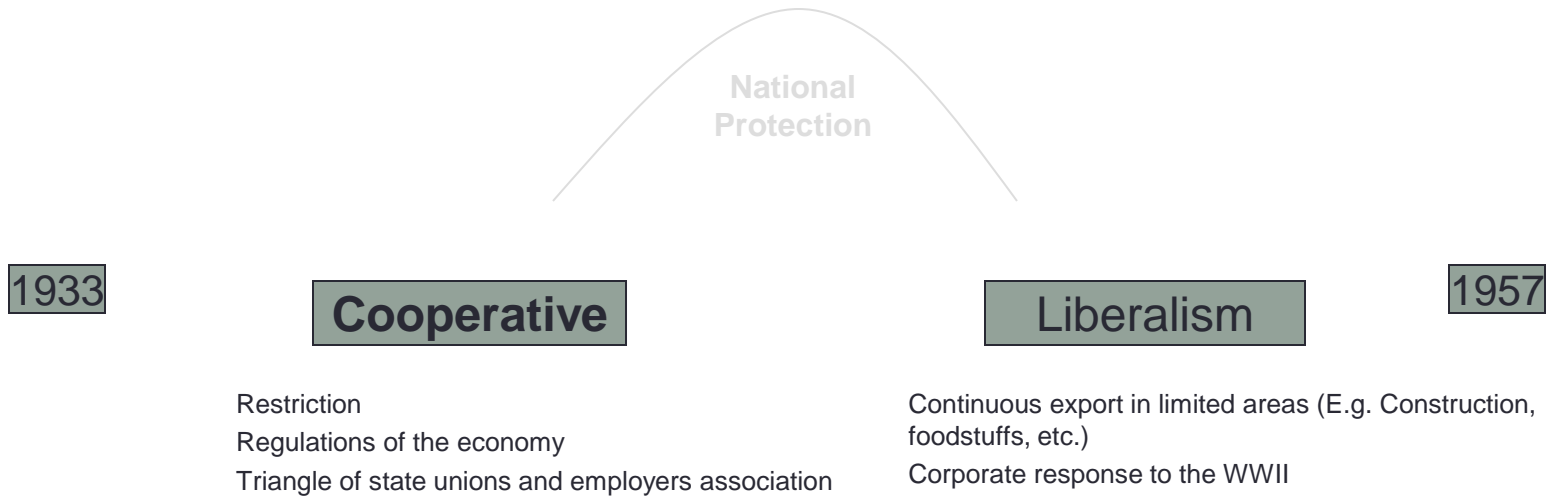
Cooperative Liberalism



The Danish Business System, 1899-1933



Cooperative Liberalism



1933-1957 creating a "holistic" homemarket industry

- Import regulation after 1932 had severe consequences
- Danish industry covered in 1930 56 % of the home market, but in 1933 it was app. 70 %.
- *The employment grew BUT productivity fell.*

- Number of employees in industry / crafts & index of productivity (1955=100):

	1935	1948	1958	1972
• Arbejdere	312.657	442.175	468.111	472.200
• Prod. Index		77	112	275

- 1933-1957: Typical industrial company = home market oriented and labour intensive example: LK

1957-1982 - the agriculture loses its leading position

	1947	1955	1965	1970
• Bruttofactor income in mio. kr. (1929-prices)				
• Agriculture	1341	1752	2078	1836
• Industry/crafts	2122	2921	5210	7667
• Commerce	1320	1714	2987	3582

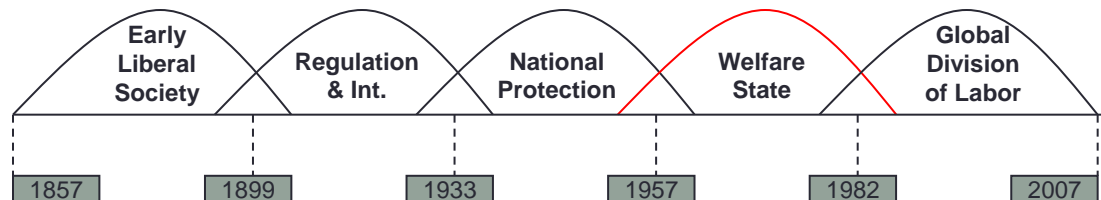


Table 3 The size of the farms (small 0.55-9.9 ha, medium 10-59.9 ha, large 60->120ha), gross income at factor cost million DKK (1929 prices)

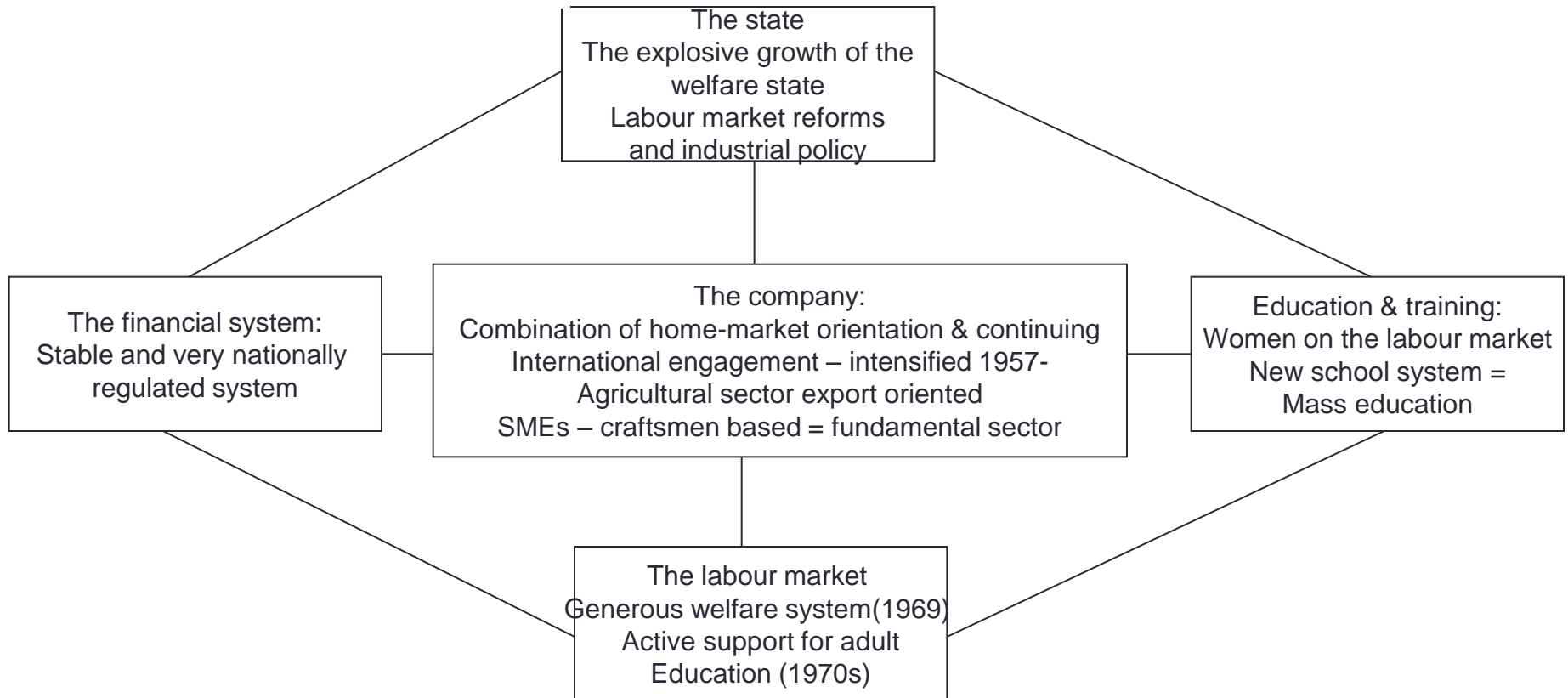
	1933	1937	1946	1955	1966	1970	2002
Small	105.677	106.225	101.573	93.128	61.881	44.038	8.100
Medium	93.758	96.827	102.044	101.597	99.871	90.686	22.900
Large	4.796	4.771	4.530	4.058	4.554	5473	17.400
Total	204.231	207.823	208.147	198.783	166.306	140.197	48.400
Gross inc.	1372	1316	1342	1645	1817	1647	

Source: Jørgen Fink, various tables

Cooperative Liberalism



The Danish Business System, 1957-1982



Main conclusion: Historical reasons for the wealth, growth and competitiveness in Denmark

- The past leaves traces and consequences
- The era of colonization is present on the current situation of many African nations and the City of London and the Victorian empire has consequences for the present GB
- The same in Denmark. The companies, the structure and events of the past has consequences for the present situation
- "layers of consequences"

1982-
The adaptability

1933-1982
Regulation, co-operation

1857-1899
Open trade, initiatives
from below

Danish Capitalism: From an export oriented “international” economy to an integrated “transnational” economy, 1982-2007

Major Danish Economic Indicators, 1982 & 2005

	1982	2005
Inflation	10.1%	1.8%
Balance of payments (DKK bn)	-10.4	54.2
Unemployment	10%	6%
GDP per capita (2006\$)	22.738	35.234

Statistics Denmark



Helsingør skibsværft, 1982

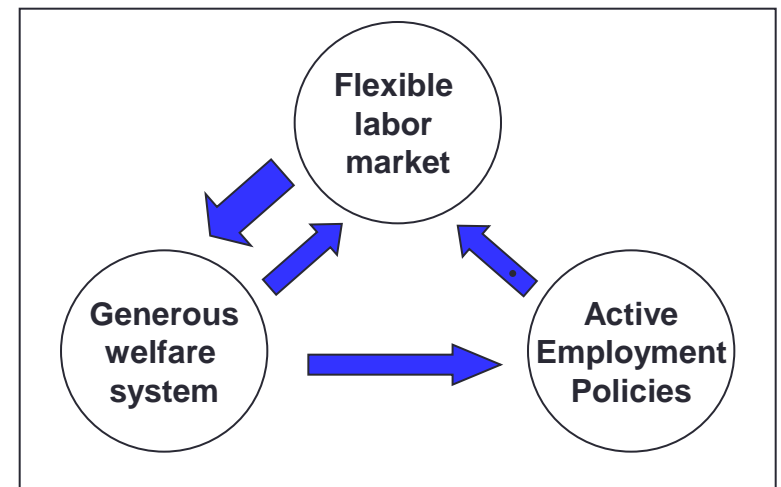
Curiosity: How can we understand
/ explain the dramatic change?



M/S Emma Mærsk, 2006

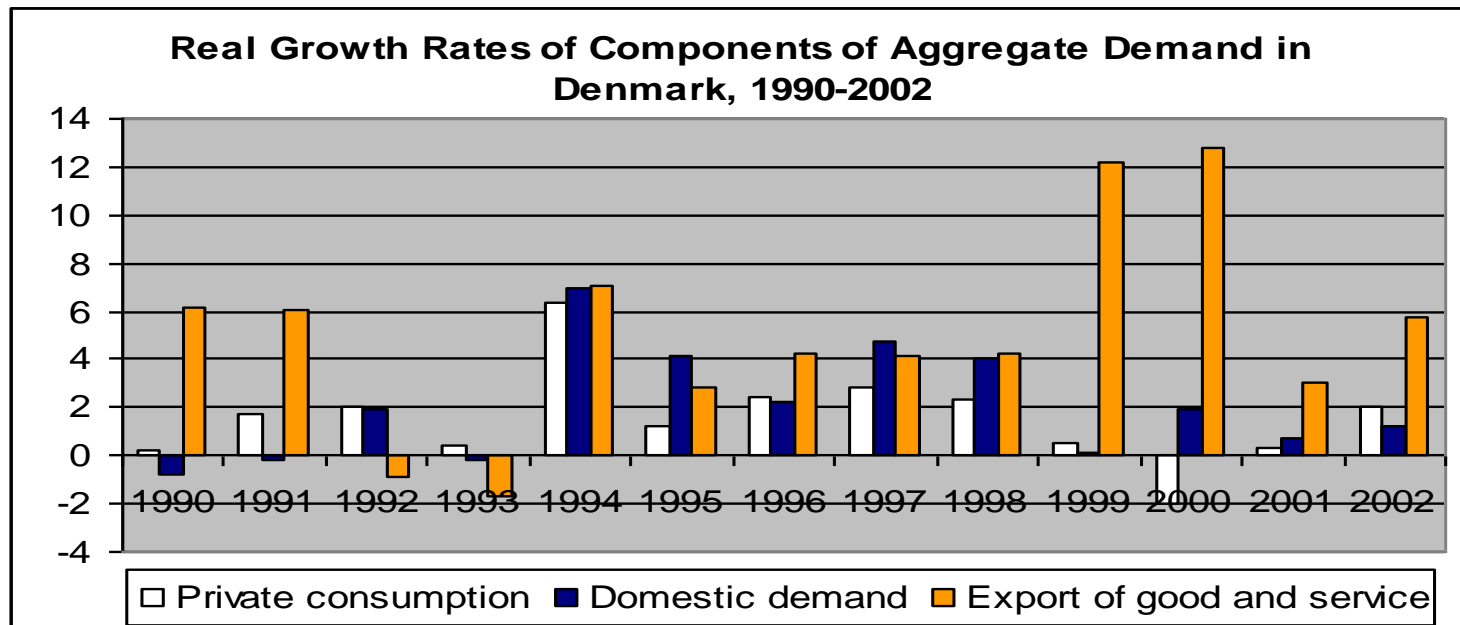
National institutions matter: “Varieties of Capitalism - The Danish Experience”

- Primary explanations of the Danish success story in the Campbell, Hall & Pedersen book:
 - 1) The homogeneity of the Danish national culture (after 1864)
 - 2) The Danish “negotiated-economy”: consensus culture, levels of organization, tradition of cooperation (1899/1914/1933)
 - 3) The labor market system = Flexicurity
 - Flexible Labor Market (1899)
 - Generous Welfare Systems (1969)
 - Active Employment Policy (1979)
- Critical question:
 - How come that Denmark faced severe economic crisis in the early 1980s when these national institutional factors were also present?



International institutions matter

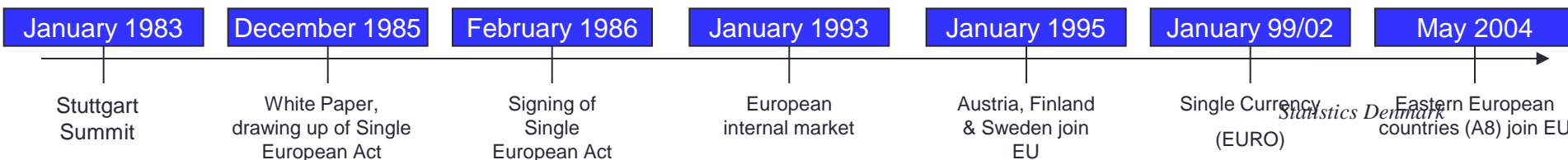
- “Varieties of Capitalism – The Danish Experience” on the post 1994 upswing:
 - “A good old fashioned upswing” ..(private) demand driven growth”
 - BUT**
 - Export of goods and services was the real growth engine
 - Indicates that
 - International institutions matter



Danish economy did experience a “Europeanization” process from the mid 1980s onwards

Foreign Direct Investments by Denmark outward; the EU, in total, EU% of total, 1982-1992 (mill. DKK, annual prices)

Denmark FDI out	1982	1986	1992	1996	1998	2002
FDI outward EU	124	2.124	11.402	11.875	24.703	24.420
FDI outward total	596	5224	13.502	14.606	26.142	37.378
EU of total FDI	20,81%	40,66%	84,45%	81,3%	95%	65,33%

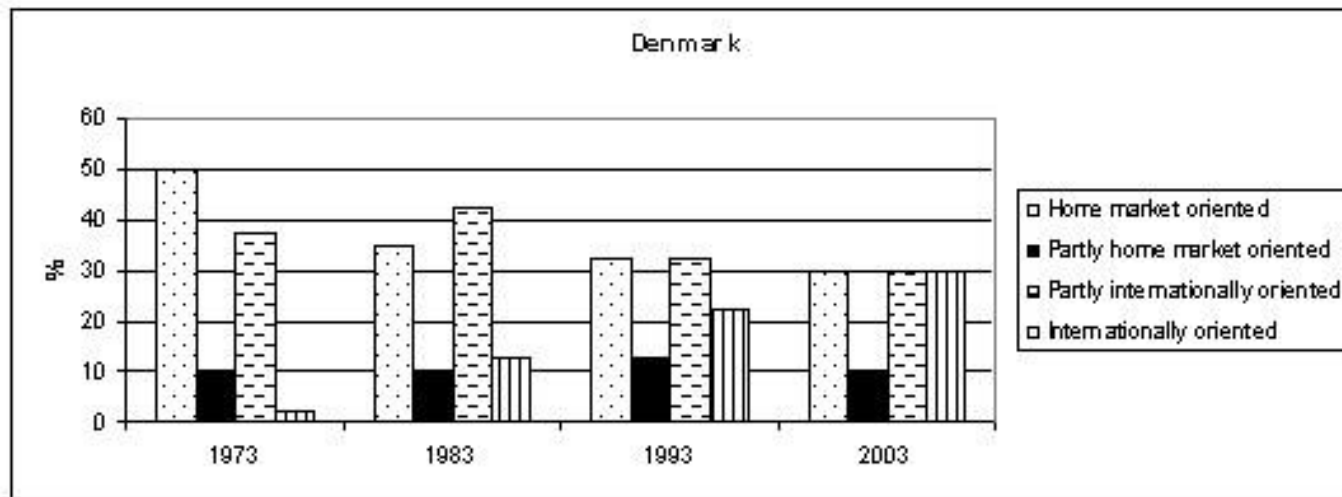


• Remaining question:

- Who facilitated the exploitation of these new market opportunities?

Plea for business history I: business matters

- ... and Danish companies became more global
- (category Internationally oriented = +90% revenue abroad)



Top 40 largest Danish non-financial companies (Binda & Iversen, 2007)

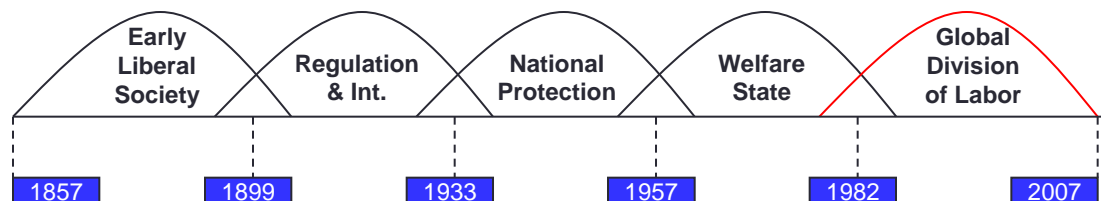
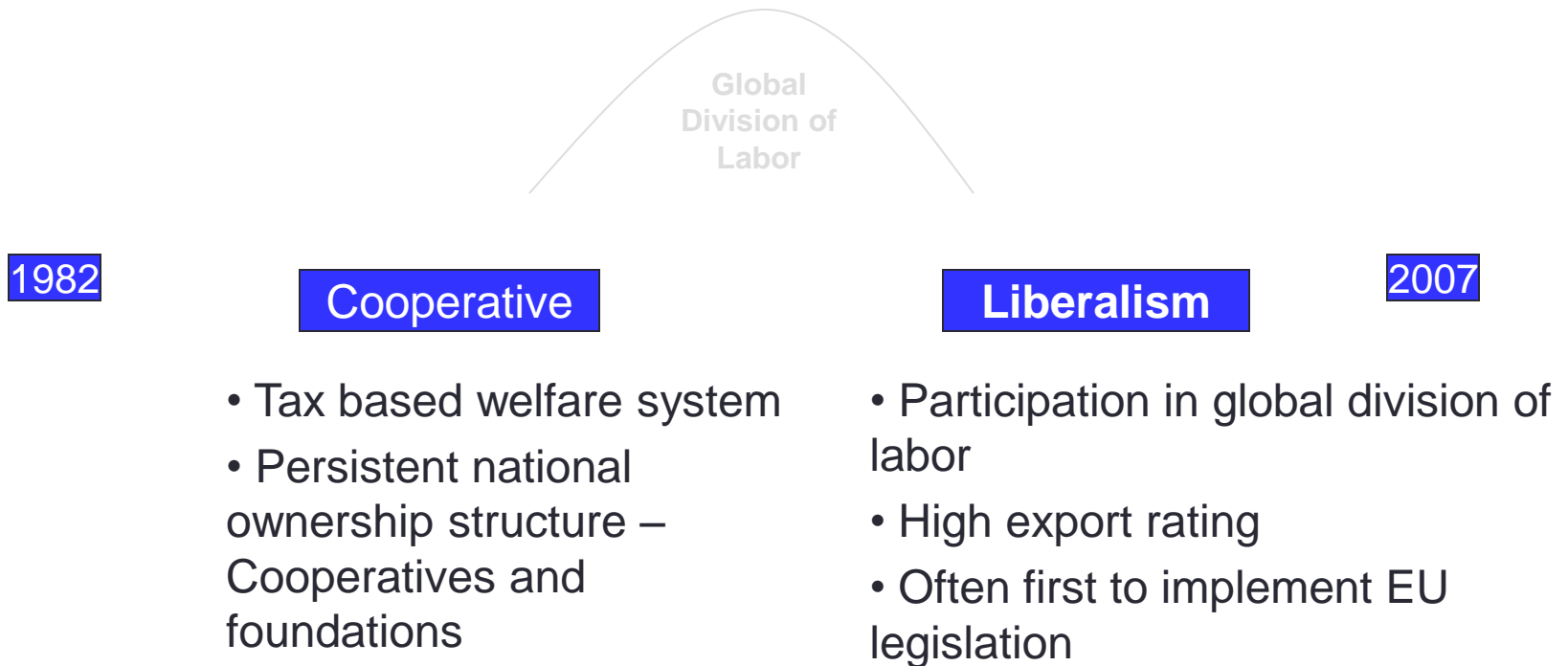
Remaining question:
How come that Danish companies were able to exploit the
new market opportunities?
In other words: which aspects of Danish capitalism made the
upswing possible?

History matters ...

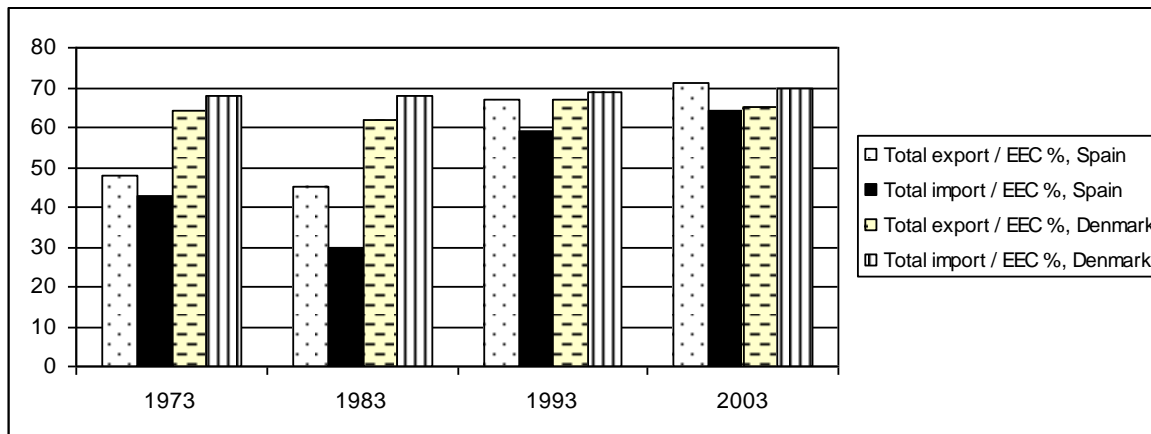
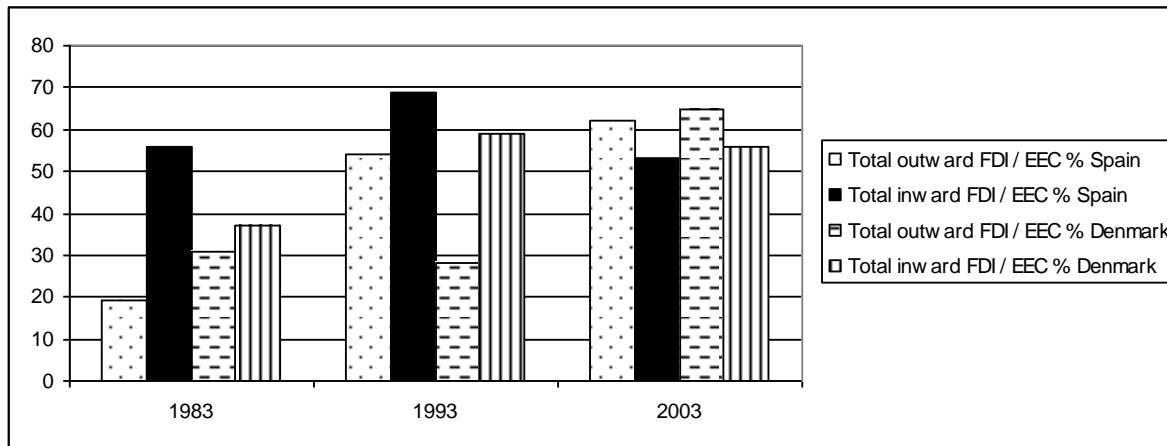
Danish capitalism as an odd combination of

- 1) Cooperative characteristics (co-operation, help-to-self-help, solidarity)
- 2) Liberalistic characteristics (open economy, liberal constitution, individual rights)

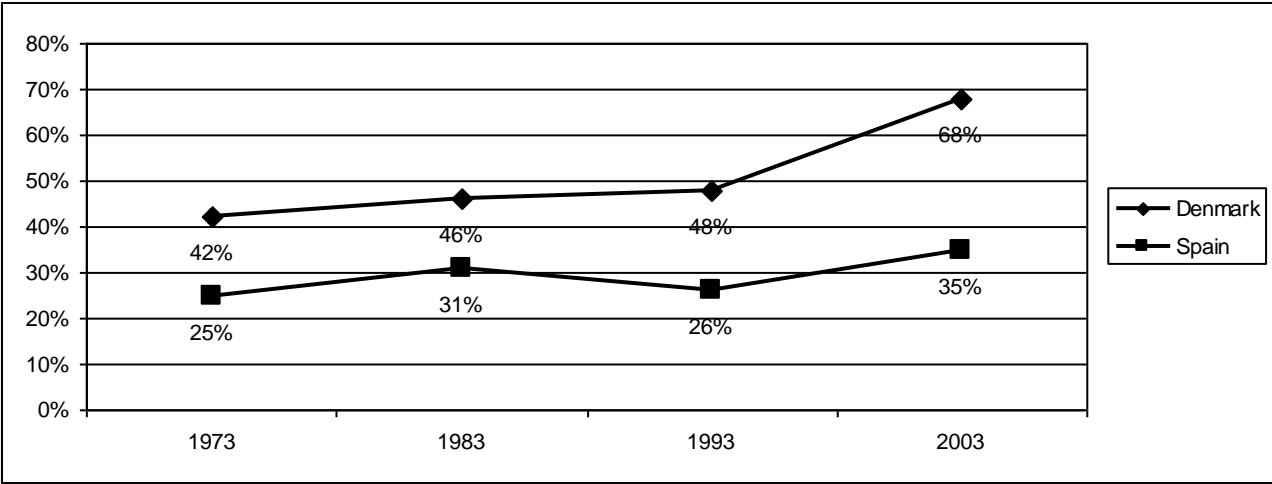
Cooperative Liberalism



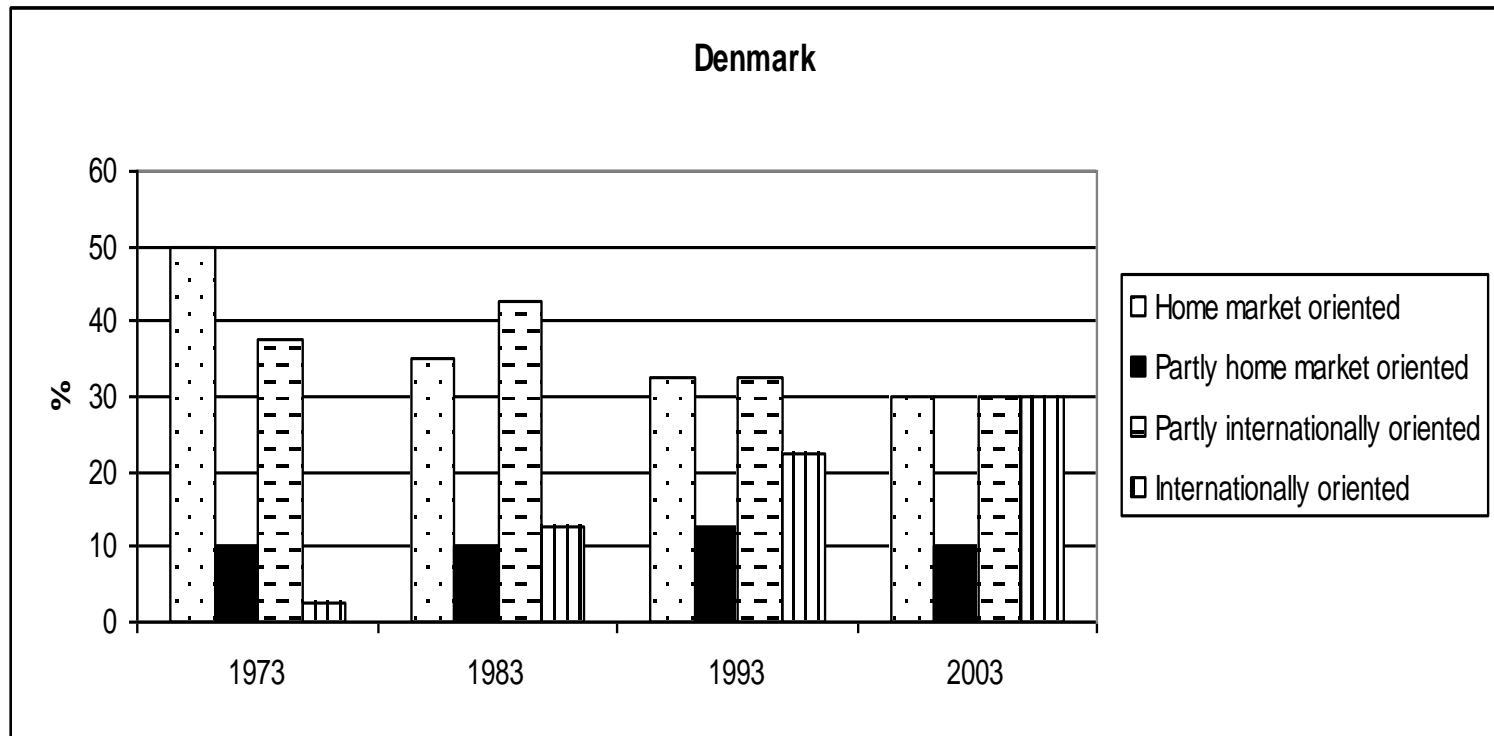
FDI / Export/Import the importance of the EU



The importance of big business: total top 40 revenue in relation to national GDP



Strategy: Level of internationalization



Conclusions

- In the process of Europeanization in Denmark 1973-2003 we did identify some convergence tendencies among the largest corporations in terms of
 - Internationalization
 - Ownership structures (dispersed ownership)
- “We have found evidence of a tendency for firms to refocus on their leading business. Industrial diversification is decreasing on average and firms who are either very diversified appear to reduce their initial levels of diversification more than smaller or less diversified firms do. ...
- “At the same time firms have increasingly expanded and/or rebalanced their geographical operations across member states, thereby strongly increasing their geographic diversification of production over time”