



**UCC**

Coláiste na hOllscoile Corcaigh, Éire  
University College Cork, Ireland



# **New Zealand Innovation**

University College Cork Executive MBA 2011/12

**EC6501: Economics of Strategy I:  
Microeconomics of Competitiveness**

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# History & Geography

- Youngest Country
- Geographically Isolated
  - 2000 km from Australia
- Population 4.3 million
- Mild Temperate Climate
- Rich in Natural Resource
- Time – Ireland + 13 hours



# Economic Milestones

**1973**  
Oil Shock  
UK Entry to EU



**1979**  
Oil Shock



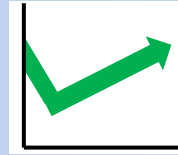
**1984**  
Wage Price Freeze  
Tight Monetary  
Policy



**1987**  
Stock Market  
Crash



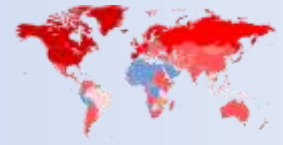
**1991**  
Start of  
Economic  
Recovery



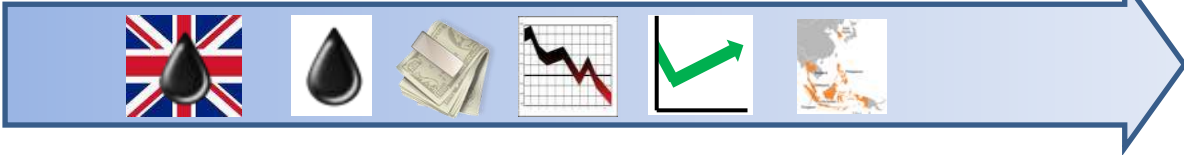
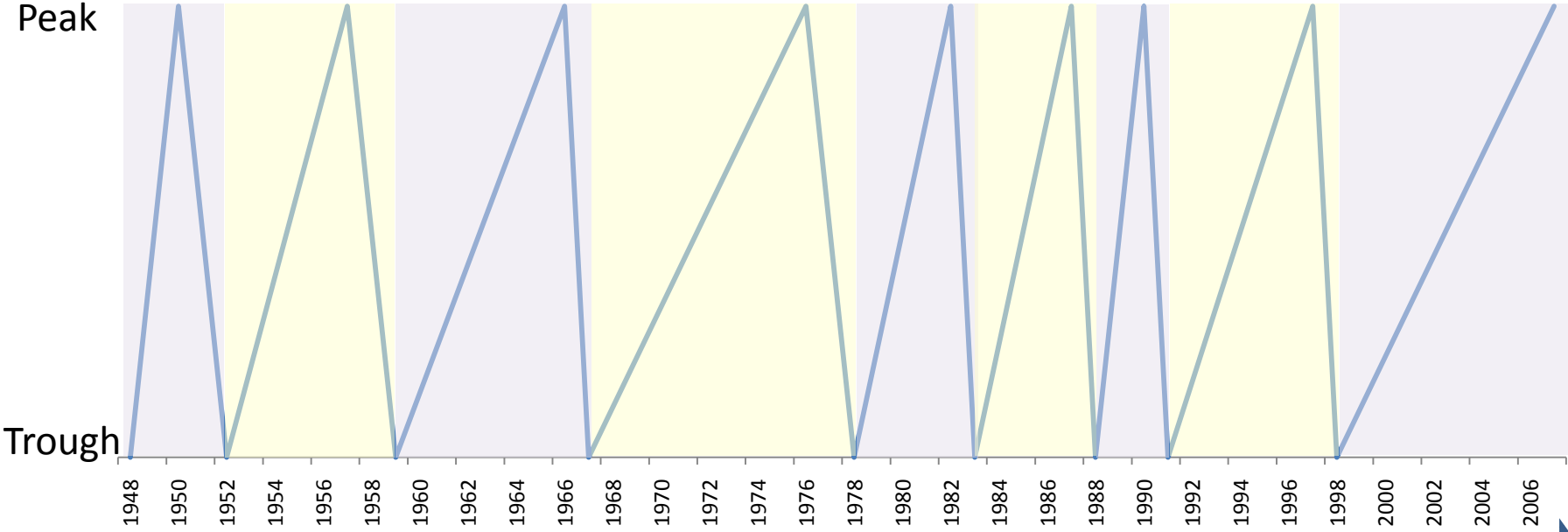
**1997**  
Asian  
Financial  
Crisis



**2008**  
Credit  
Crunch



# New Zealand Economic Cycles





# Michael E. Porter and New Zealand

- Michael E. Porter's significant work on New Zealand
  - 1991 New Zealand's Competitive Advantage
  - 1998 Wellington, Town Hall
  - 2001 Catching the Knowledge Wave Conference
    - *New Zealand Competitiveness: The Next Agenda*



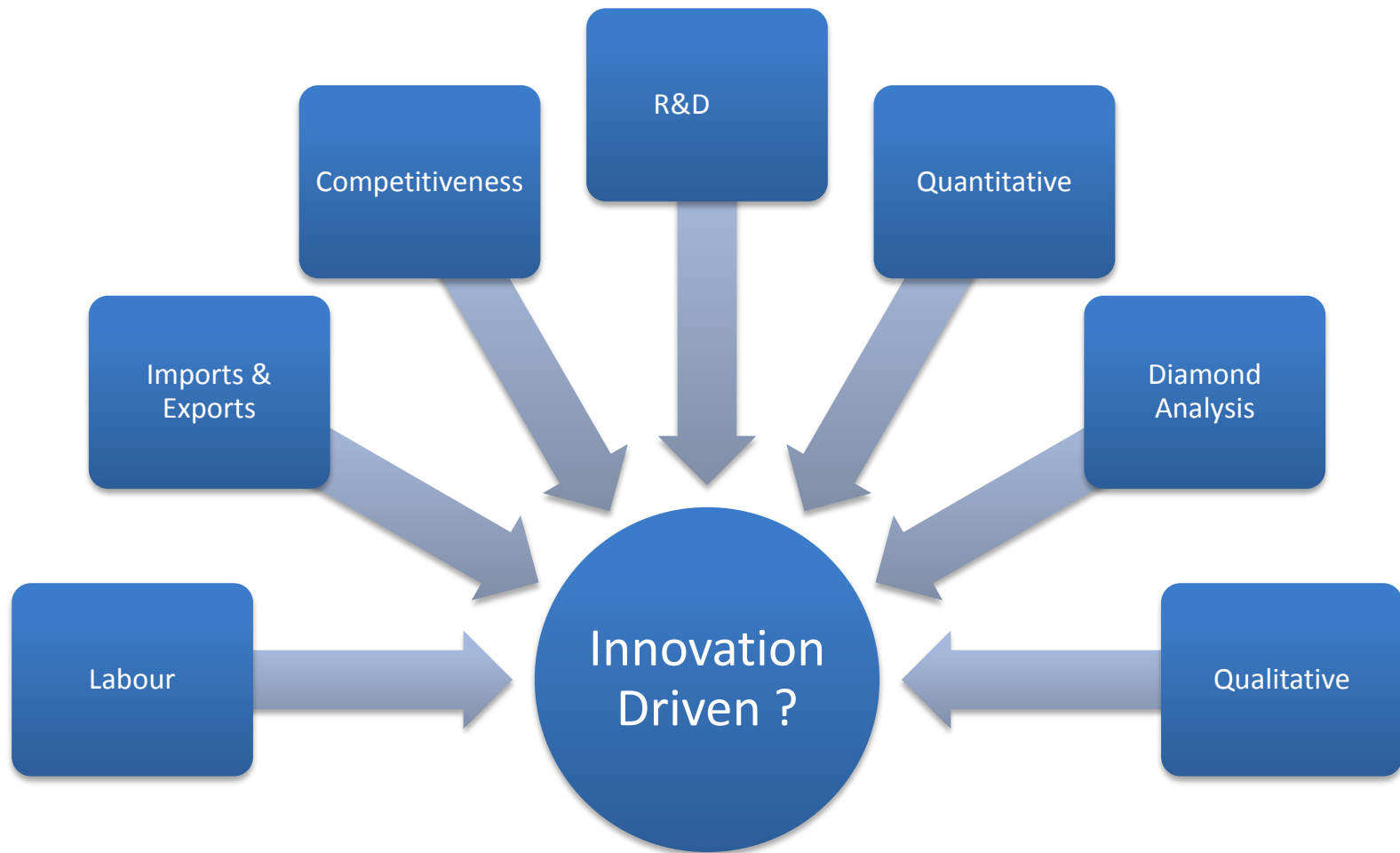
# Research Question

- In 2001 Michael E Porter said that to make the transition to an Innovation Driven economy New Zealand must by-pass the Investment Driven stage and move straight from Factor Driven to an Innovation Driven economy.



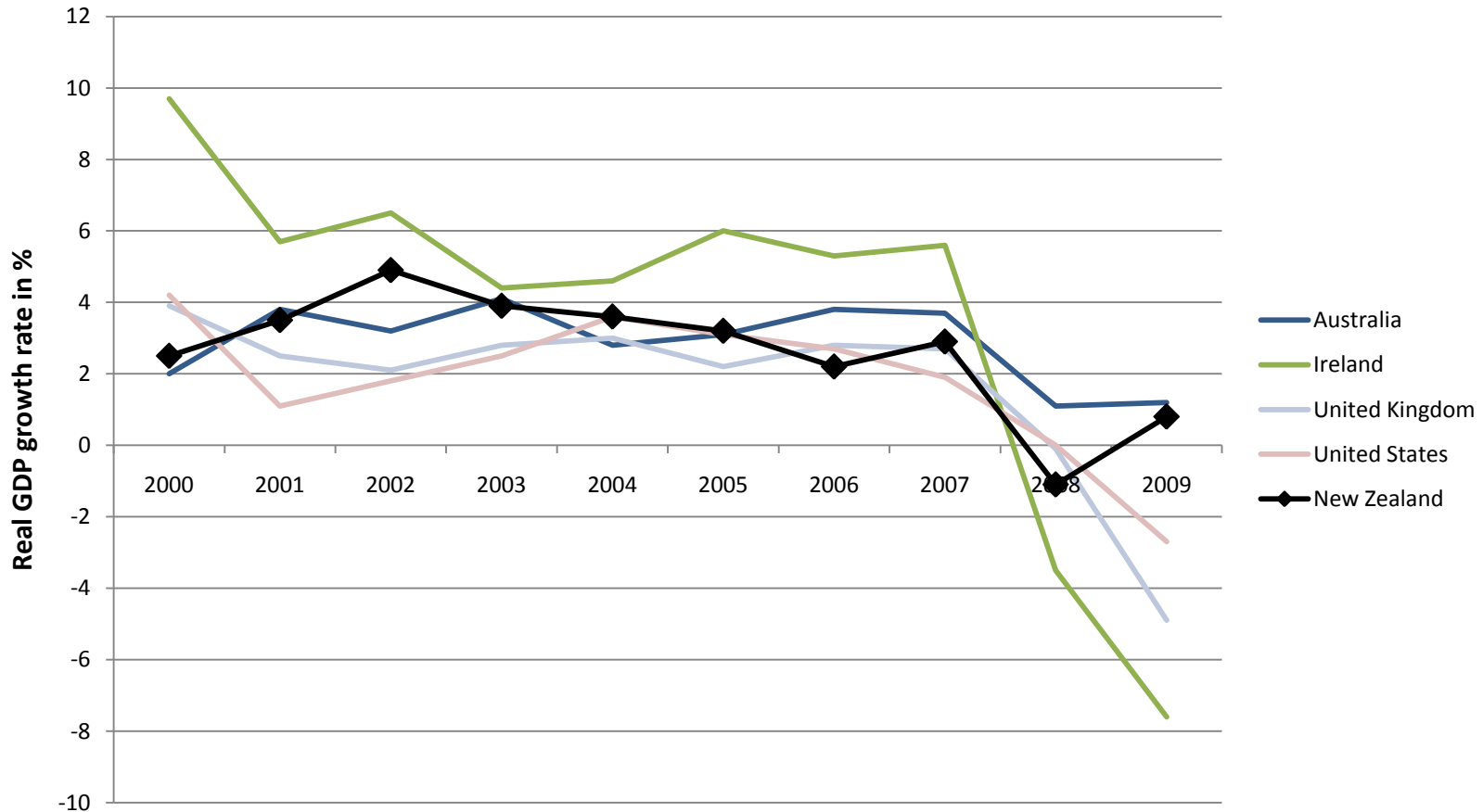
**Is it your opinion that this is still a valid assessment for New Zealand?**

# Approach

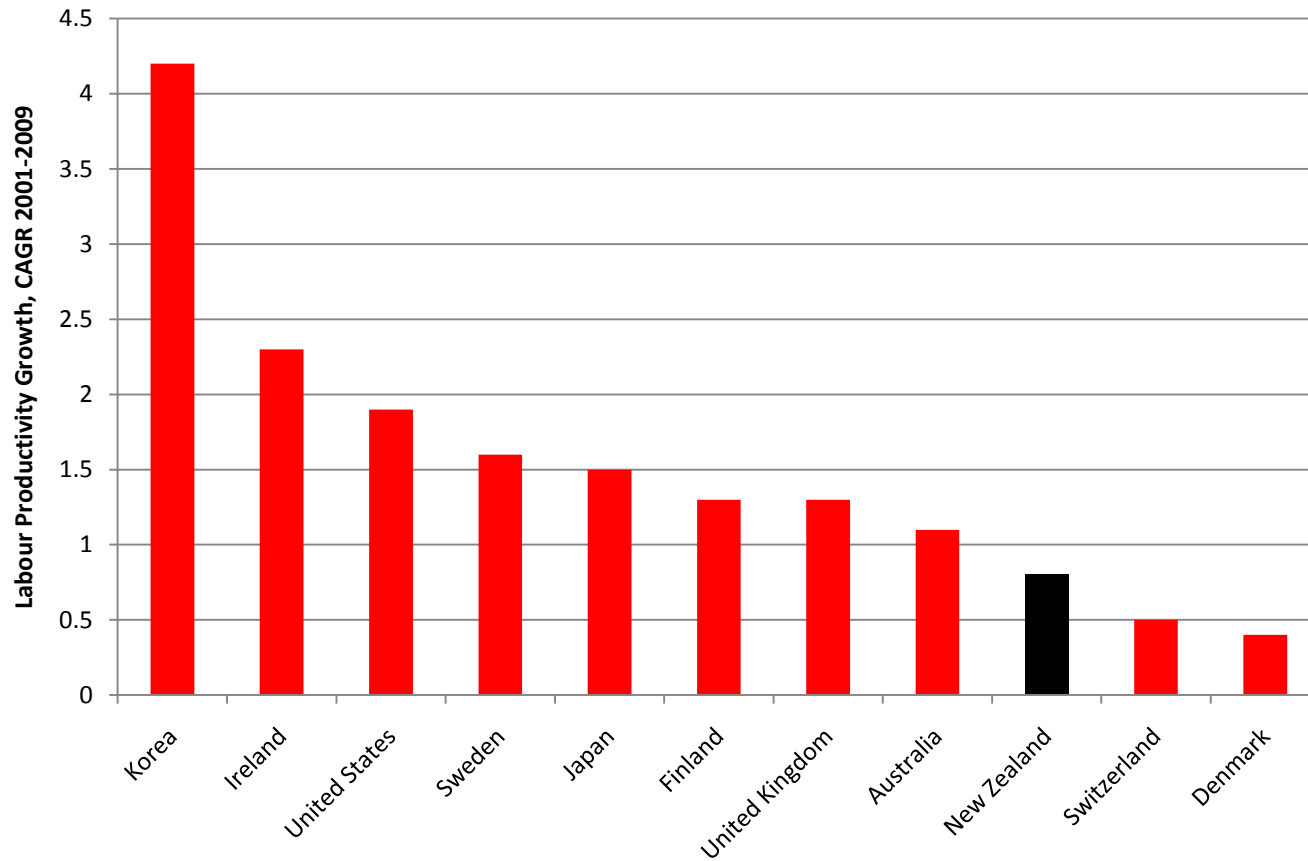


# New Zealand's Macroeconomic Performance

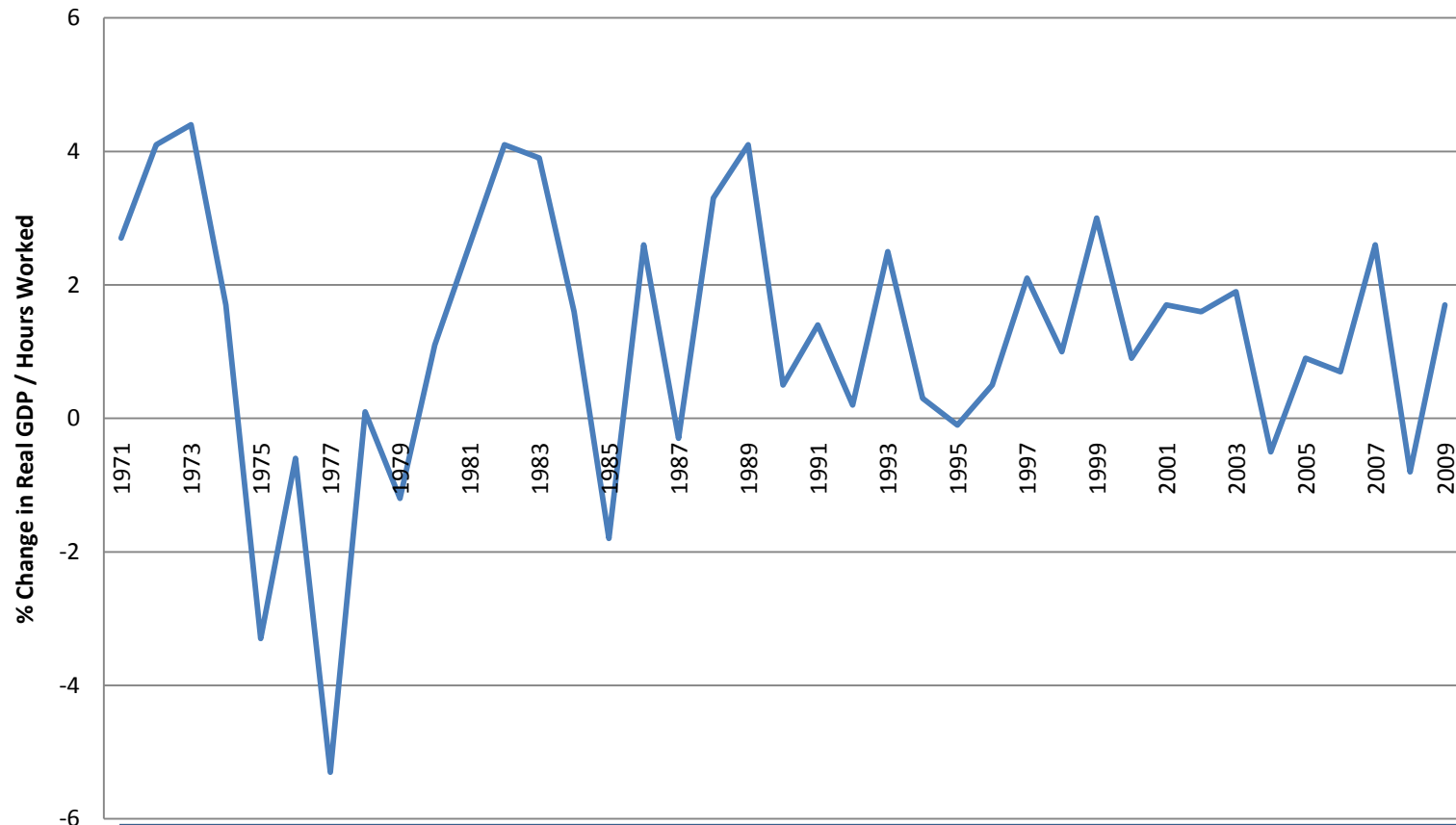
## Real GDP Growth, year-by-year



# Comparative Labour Productivity Growth 2001 to 2009

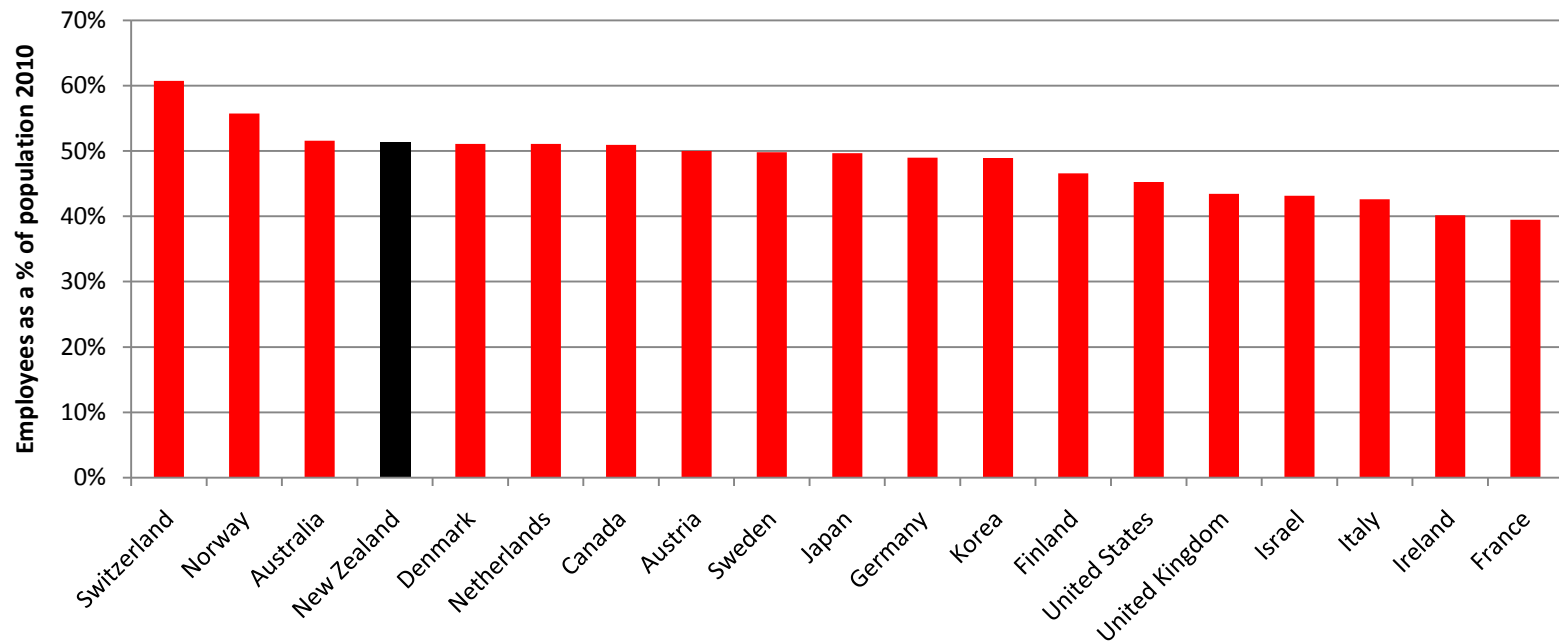


# Labour Productivity Level and Growth New Zealand



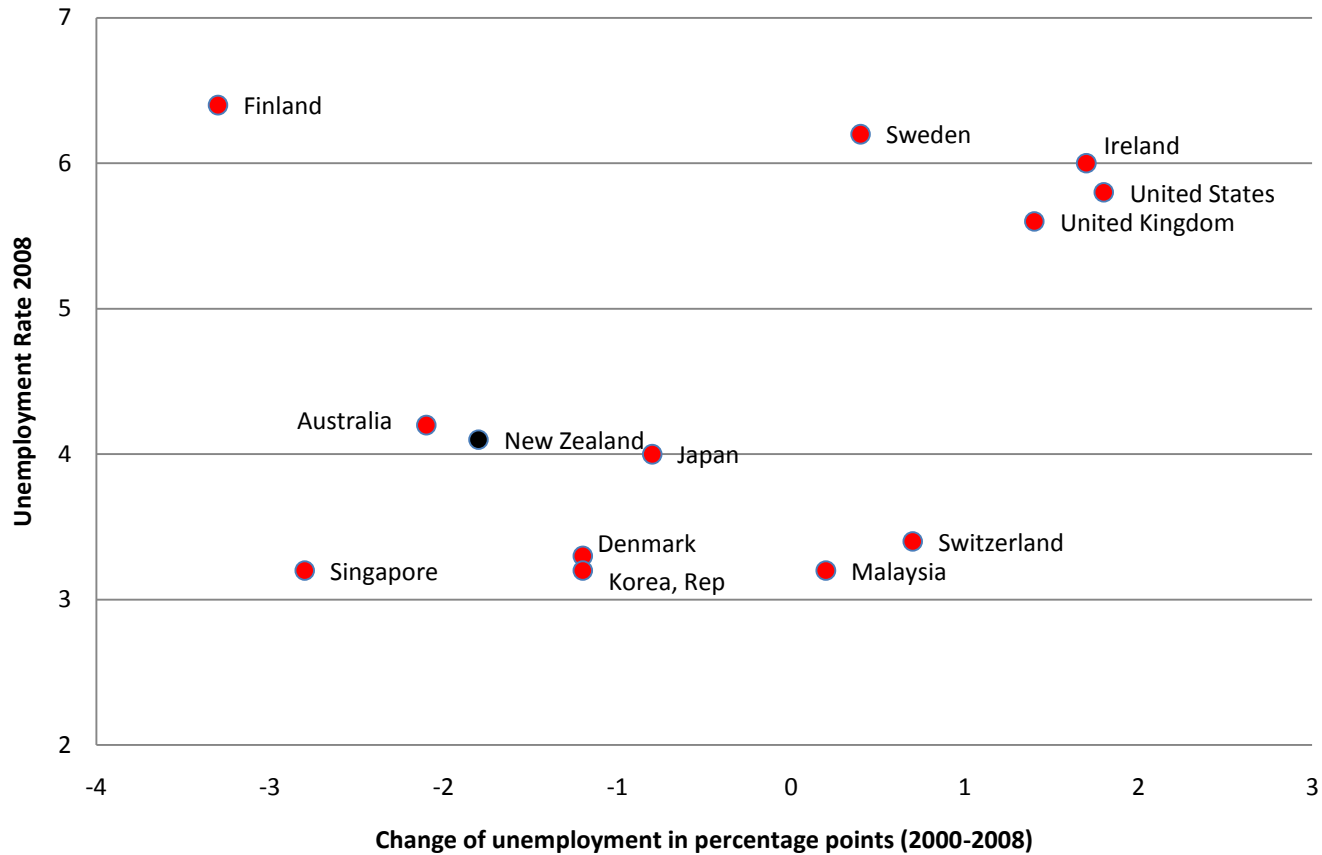
# Labour Force Mobilisation 2010

## Selected Countries



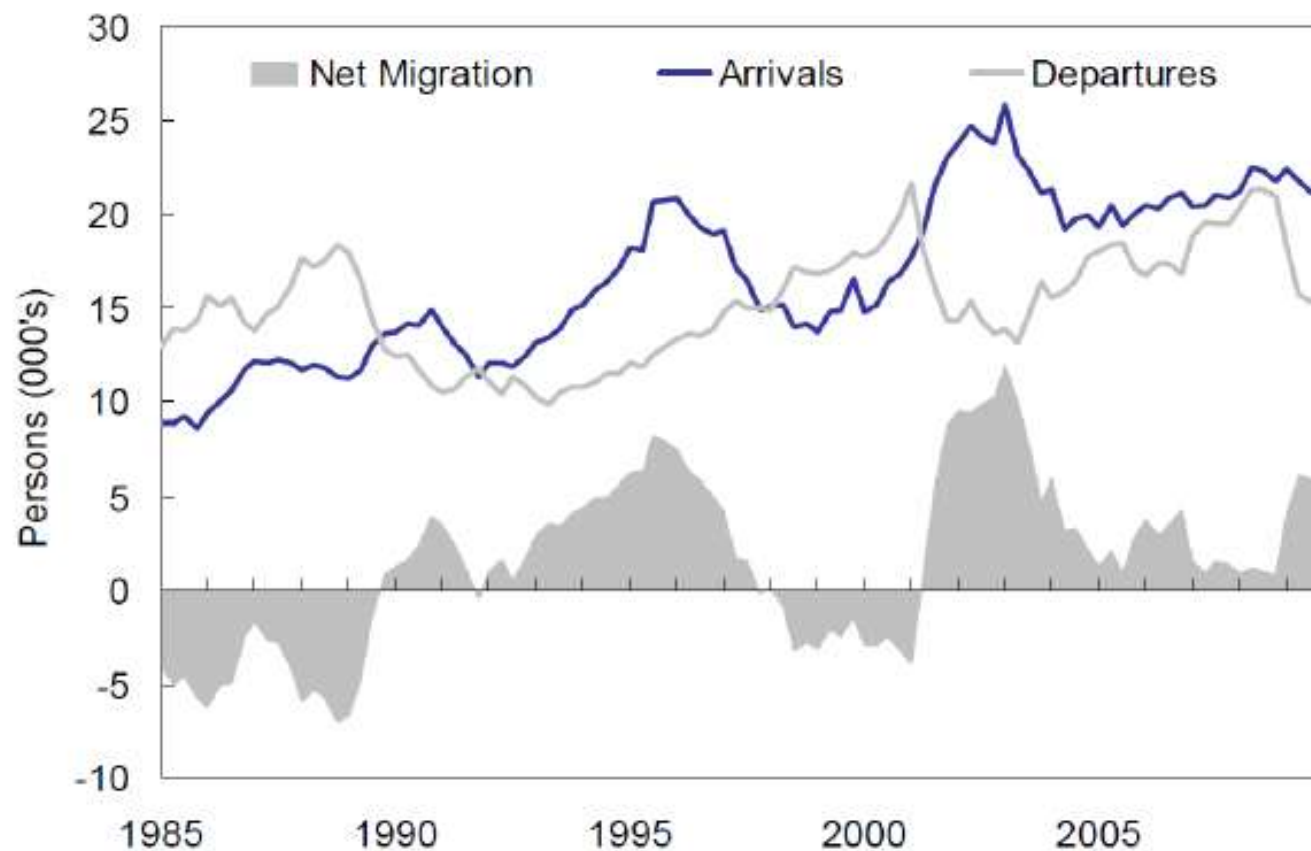
OECD Average = 0.47

# Unemployment Performance



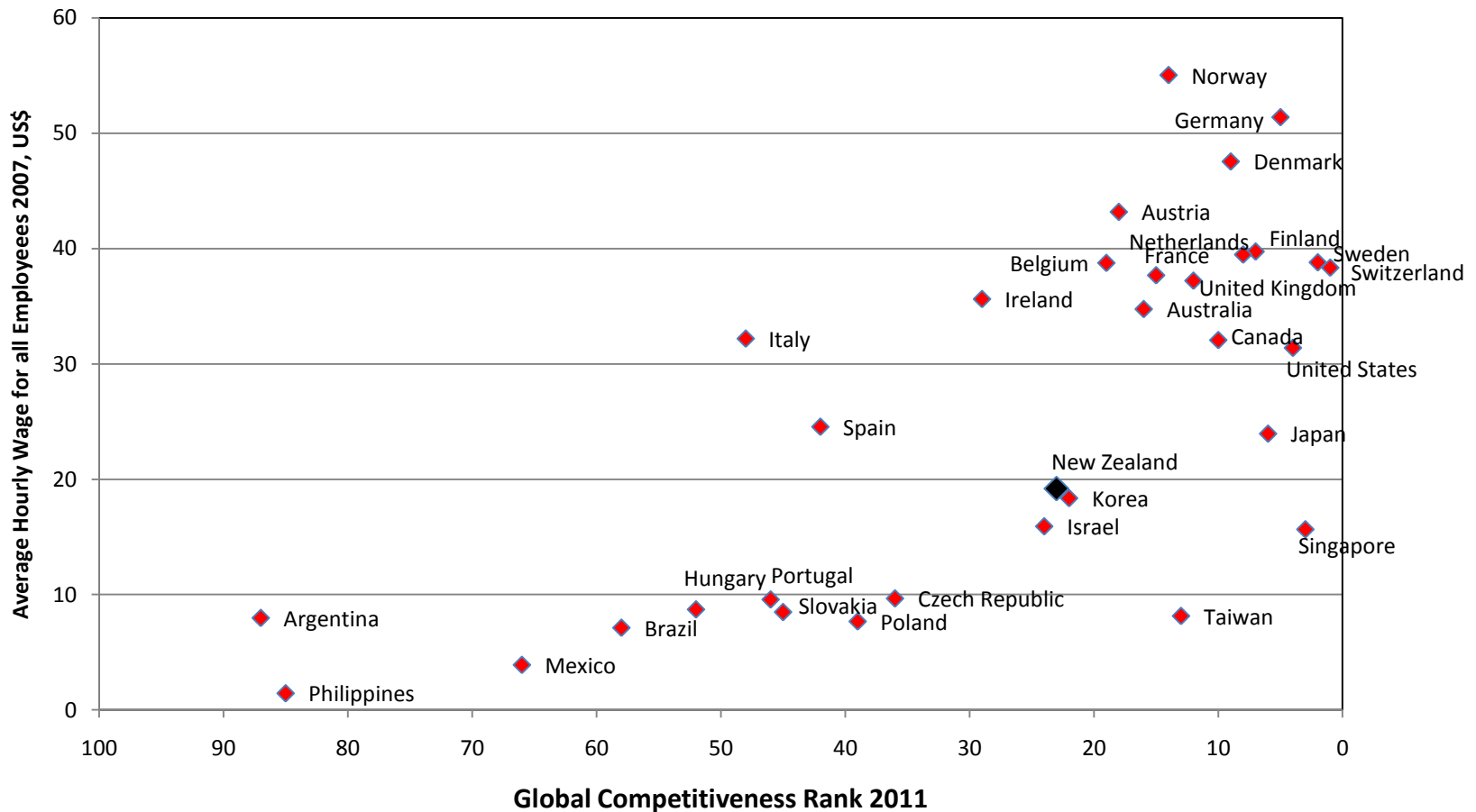
# New Zealand's Migration Balance

## Net Migration Flows to/from New Zealand, 1985 - 2009

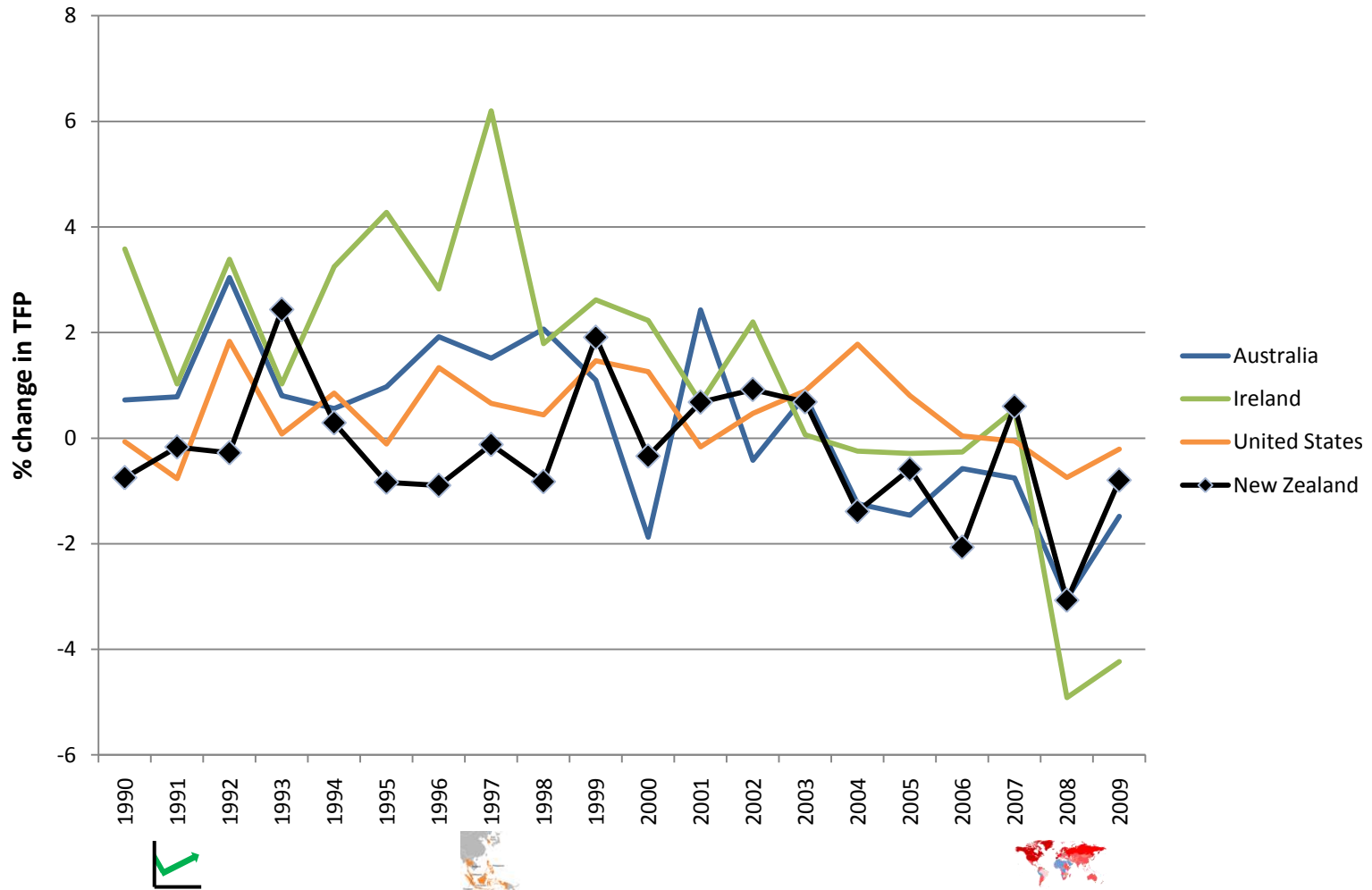


# Competiveness versus Wage Level

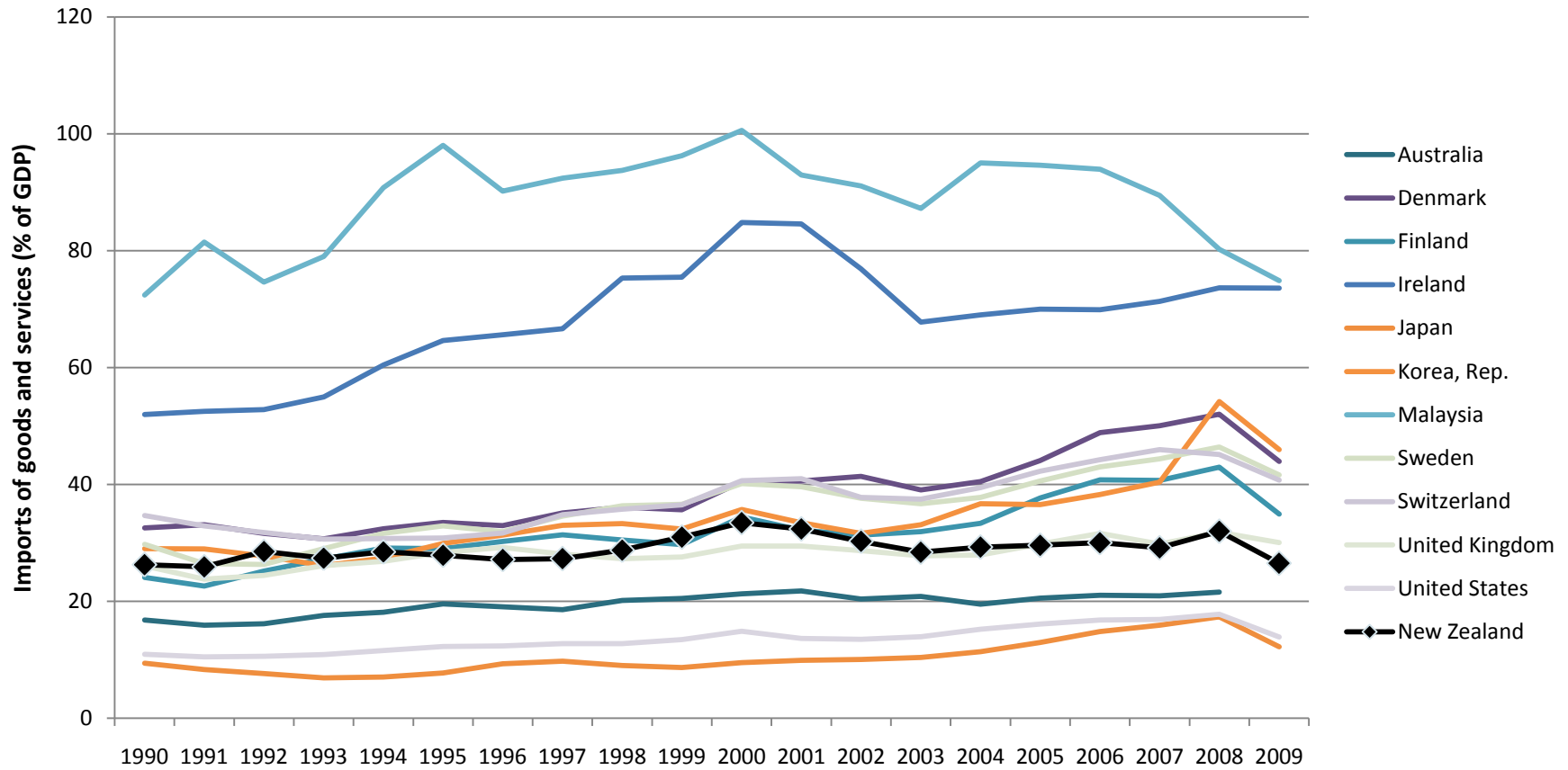
## Selected Countries



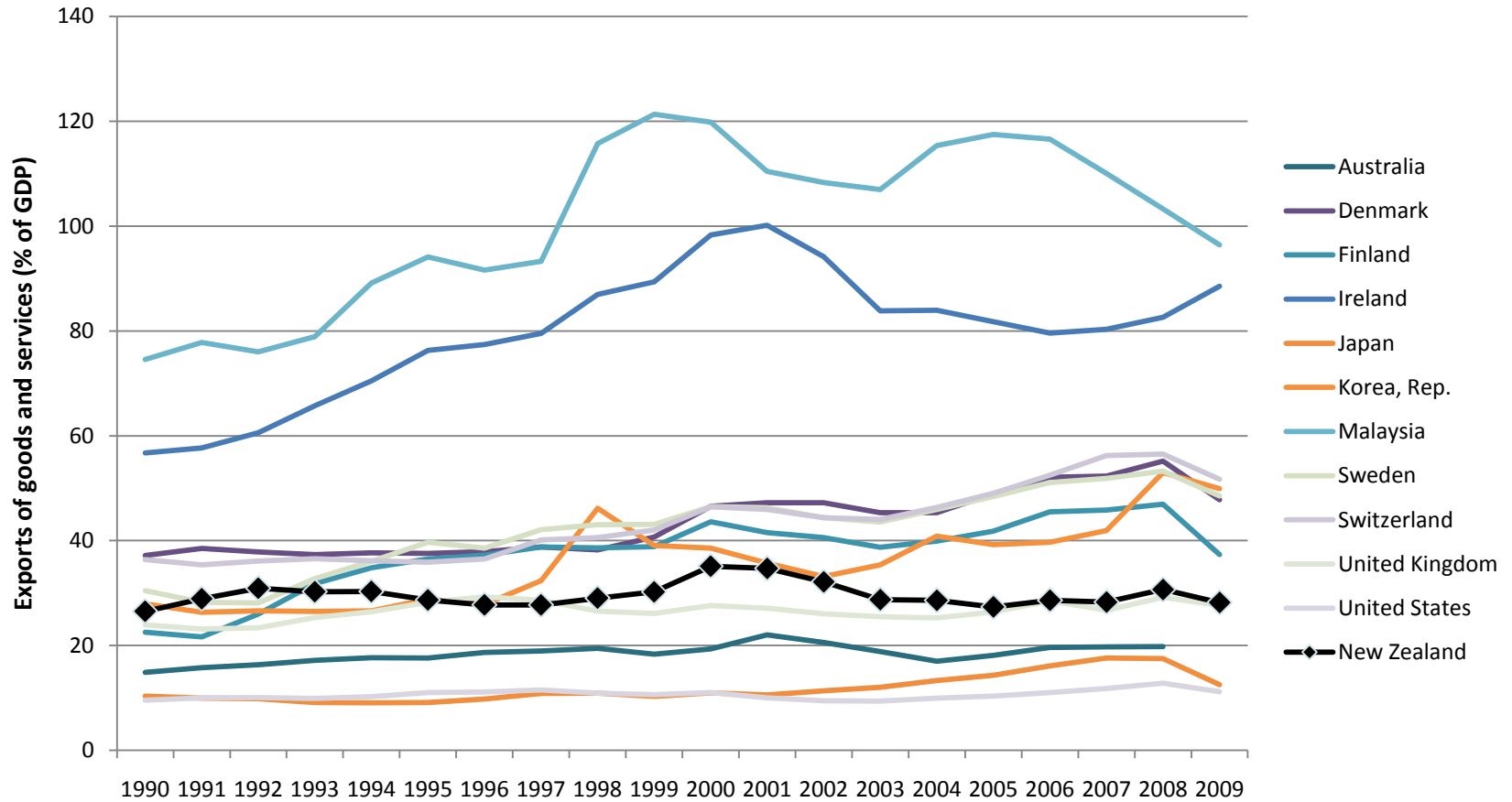
# Total Factor Productivity Growth



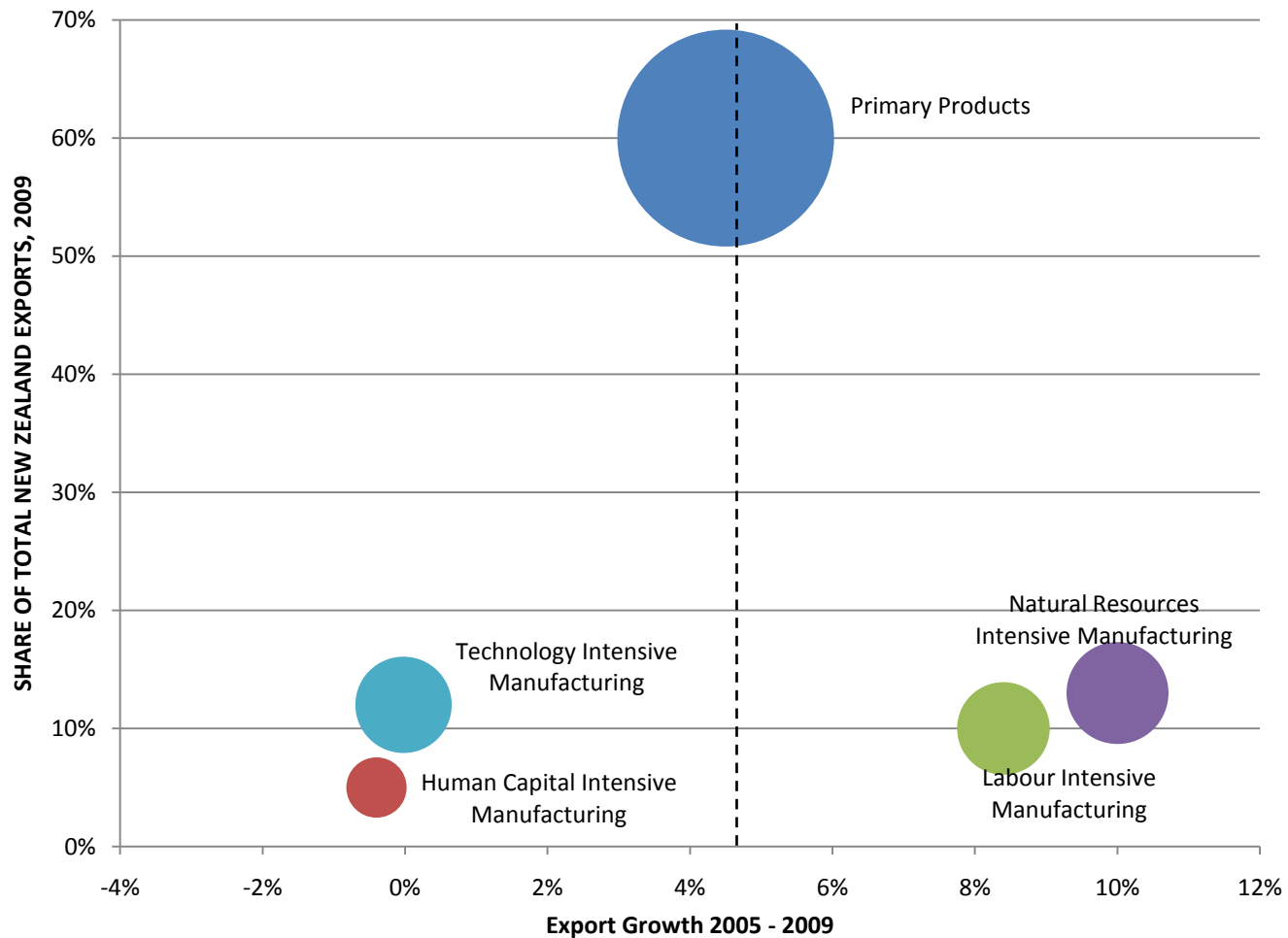
# Import Intensity



# Export Intensity

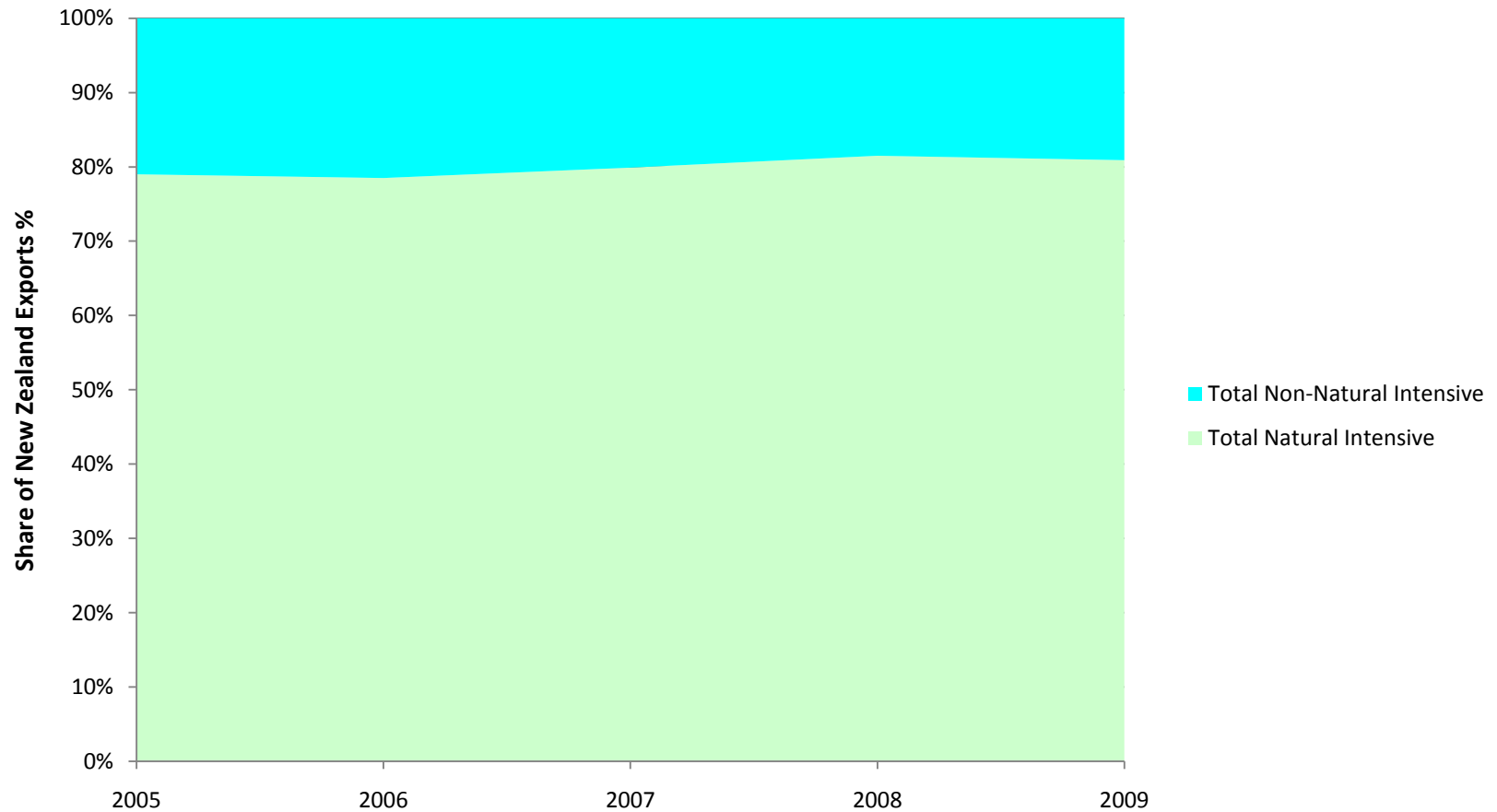


# New Zealand's Export Structure

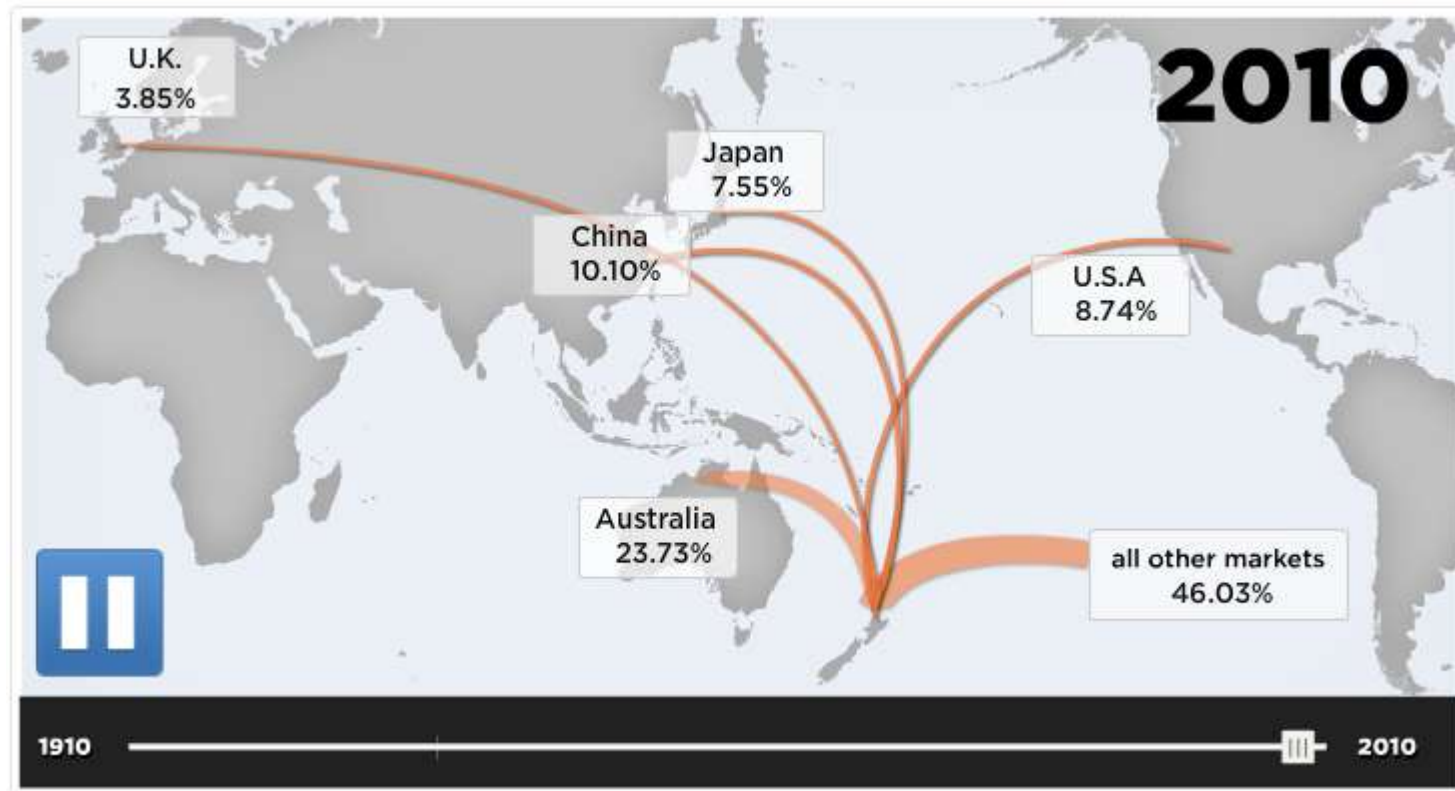


# Total Country Exports

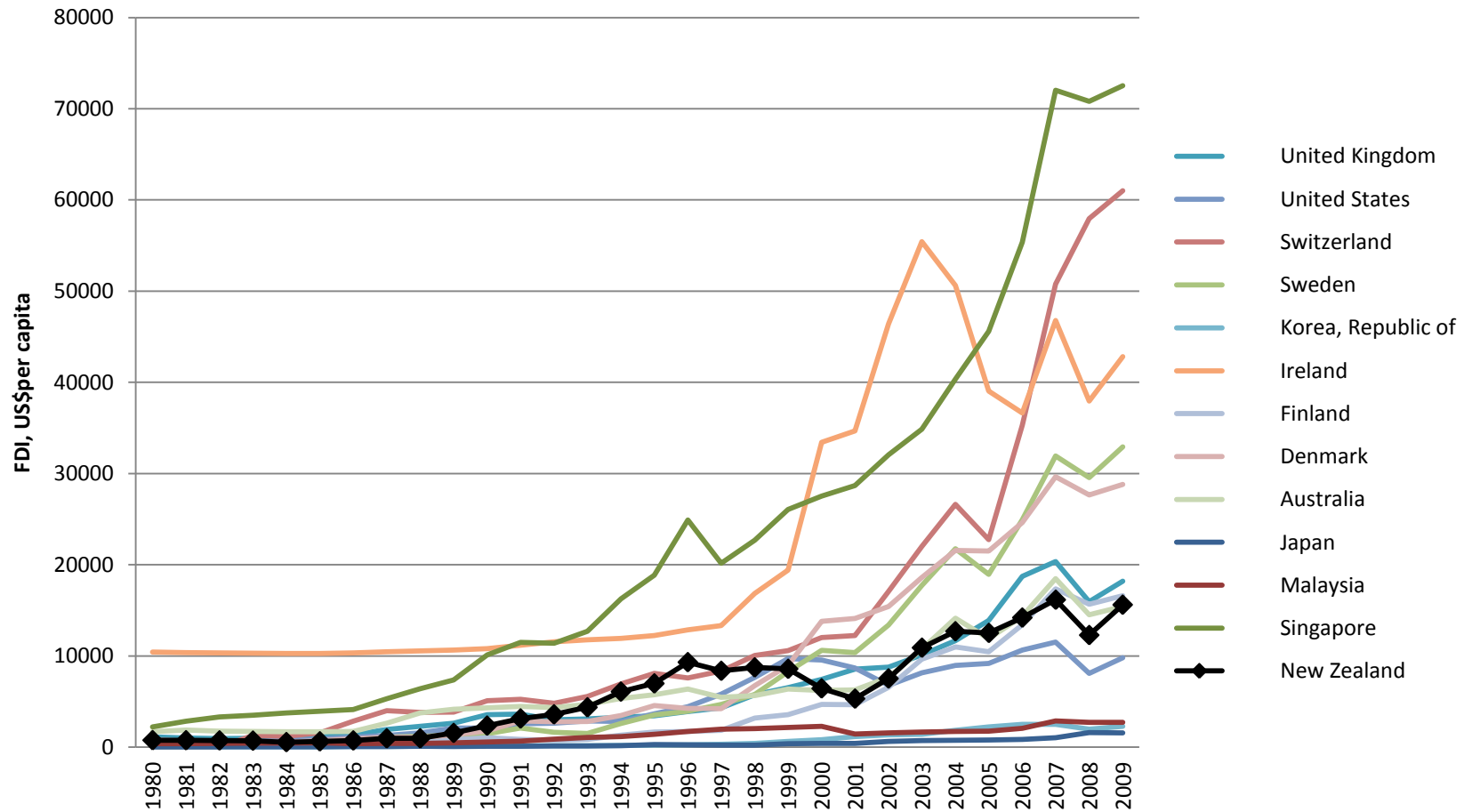
## By Natural Resource Intensity 2005 to 2009



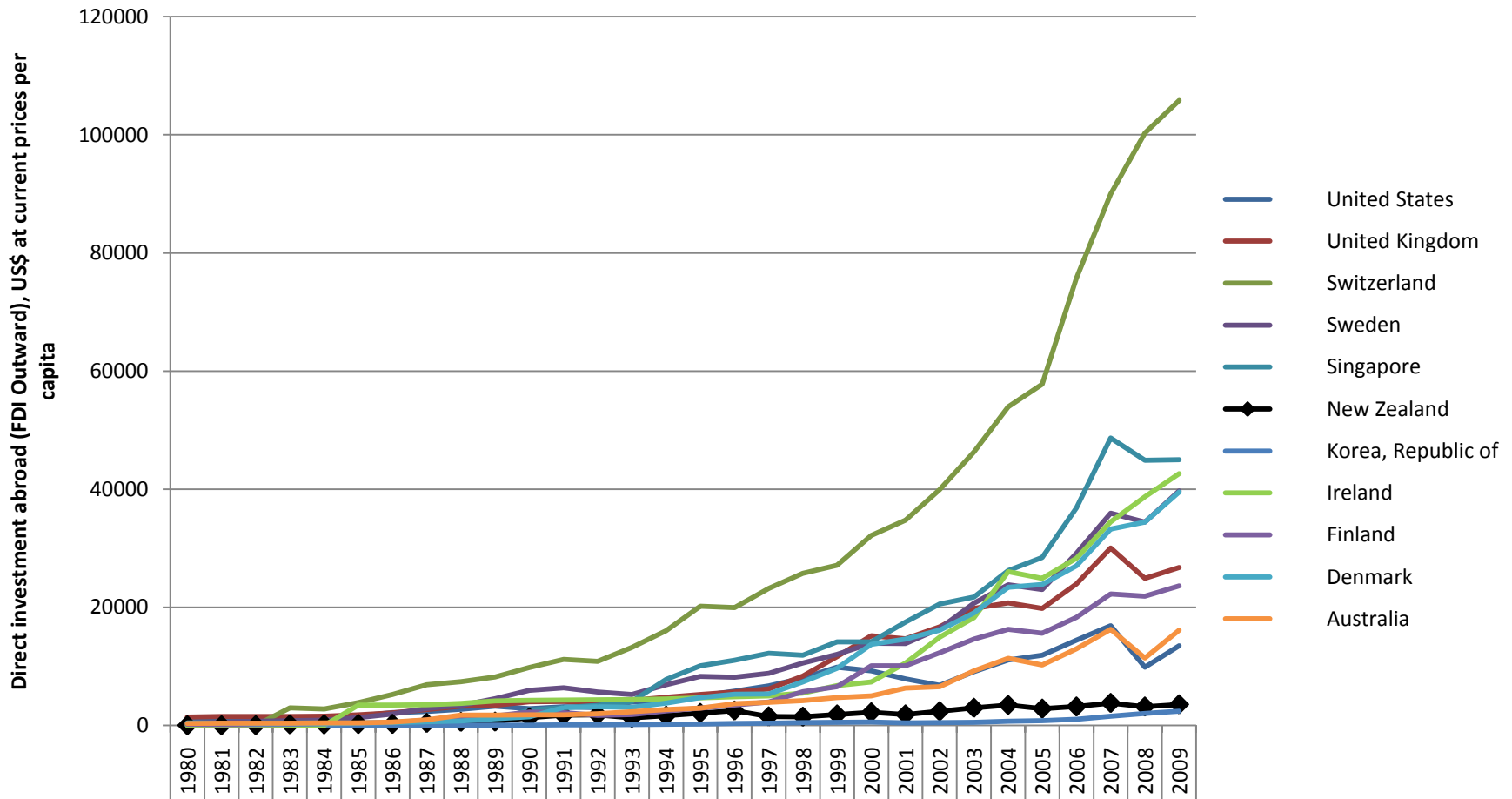
# Export Video



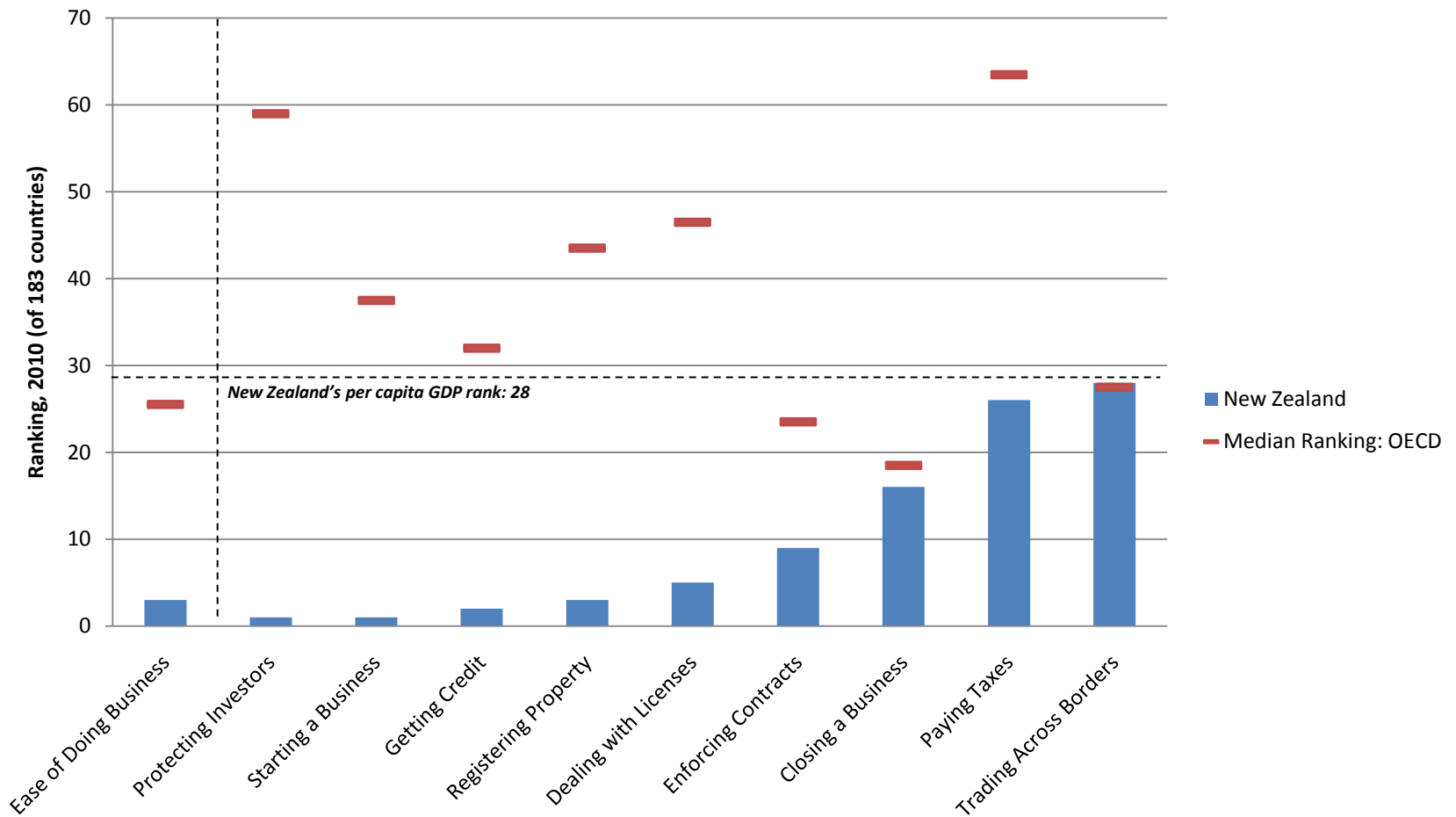
# Foreign Direct Investment New Zealand's Relative Position



# Direct Investment Abroad (FDI Outward)



# Ease of Doing Business



# Embracing Competition

## New Zealand's Relative Position

### Competitive Advantages Relative to GDP per Capita


	2010	2000
Diversion of Public Funds	1	4
Prevalence of Trade Barriers	3	5
Effectiveness of Anti-Monopoly Policy	5	10

### Competitive Disadvantages Relative to GDP per Capita

	2010	2000
Intensity of Local Competition	64	18
Extent of Market Dominance	40	31
Trade Tariffs	33	7

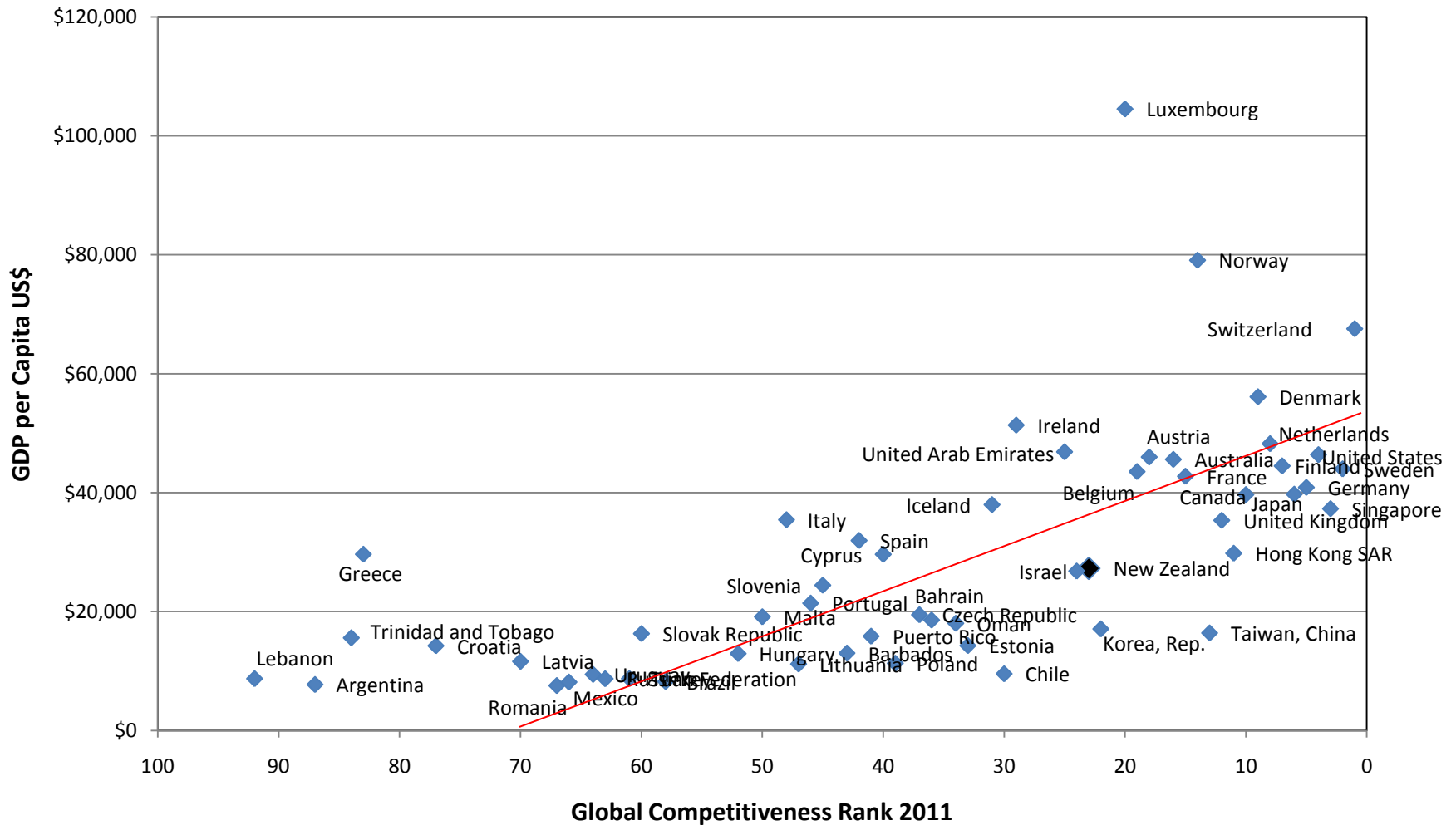
# New Zealand's Relative Position

## GCR Ranking Over Time

Rank	Overall Competitiveness Index	Efficiency Enhancers Sub-Index	Innovation and Sophistication factors Sub-Index	Rank
1	..	..	..	1
2	..	..	..	2
3	..	..	..	3
4	..	..	..	4
5	..	..	..	5
6	..	..	..	6
7	..	..	..	7
8	..	..	..	8
9	..	..	..	9
10	..	..	..	10
11	..	..	..	11
12	..	..	..	12
13	..	..	..	13
14	..	..	..	14
15	..	..	..	15
16	..	..	..	16
17	<b>New Zealand (1998)</b>	<b>New Zealand (1998)</b> 	..	17
18	.. 	<b>New Zealand (2000)</b> 	..	18
19	<b>New Zealand (2000)</b>	<b>New Zealand (2010)</b>	<b>New Zealand (1998)</b>	19
20	..	..	..	20
21	..	..	.. 	21
22	.. 	..	<b>New Zealand (2000)</b>	22
23	<b>New Zealand (2010)</b>	..	..	23
24	..	..	..	24
25	..	..	..	25
26	..	..	..	26
27	..	..	.. 	27
28	..	..	<b>New Zealand (2010)</b>	28
29	..	..	..	29
30	..	..	..	30

# Microeconomic Competitiveness


## Global Competitiveness Rank






# Financial Markets

## New Zealand's Relative Position

### Competitive Advantages Relative to GDP per Capita

	2010	2000
Strength of Investor Protection	1	9 

### Competitive Disadvantages Relative to GDP per Capita

	2010	2000
Ease of Access to Loans	27	25 
Venture Capital Availability	26	28 
Financing Through Local Equity Market	23	28 

# Science and Technology System

## New Zealand's Relative Position

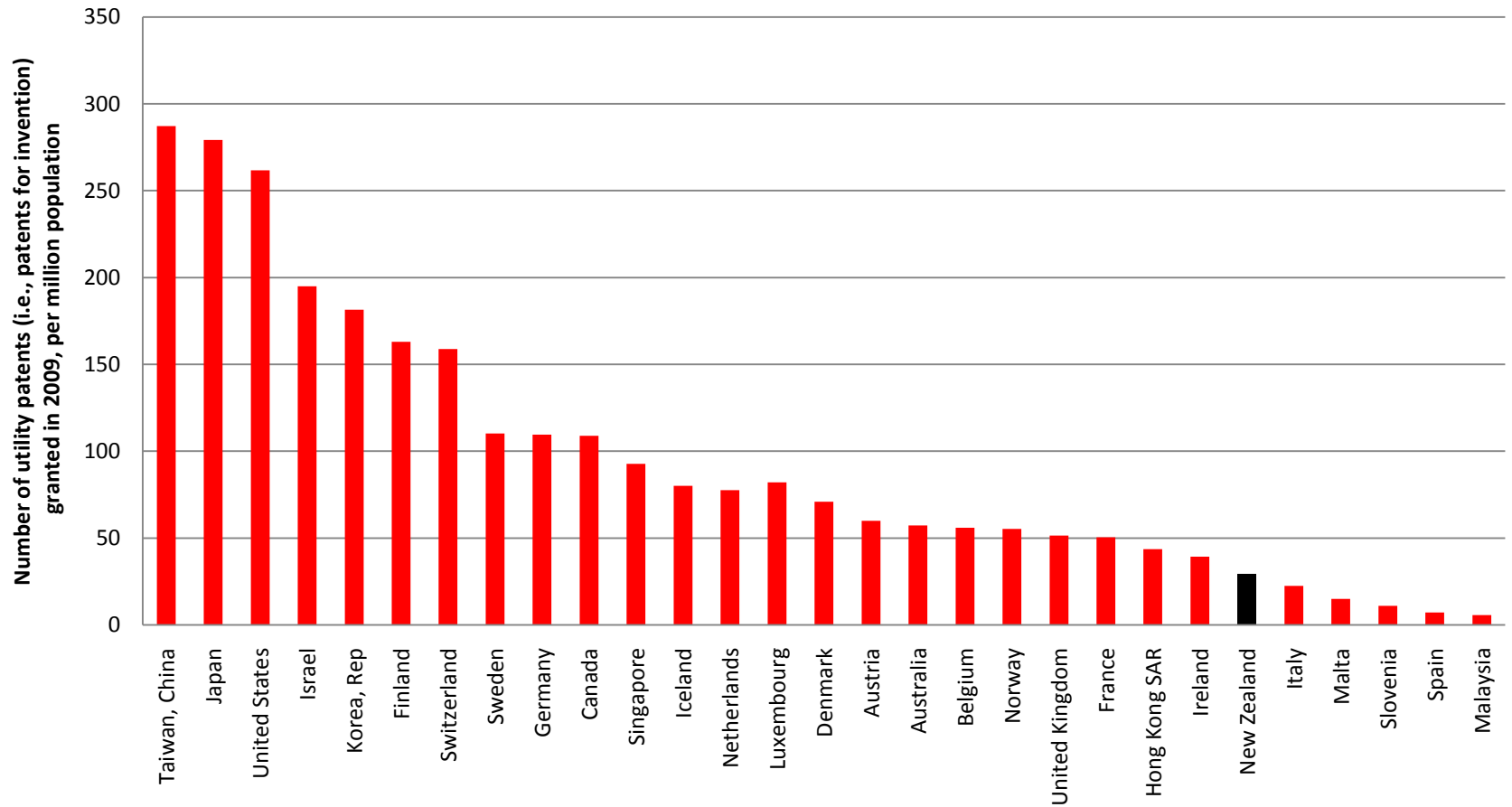
### Competitive Advantages Relative to GDP per Capita

	2010	2000
University / Industry Collaboration in R&D	21	42

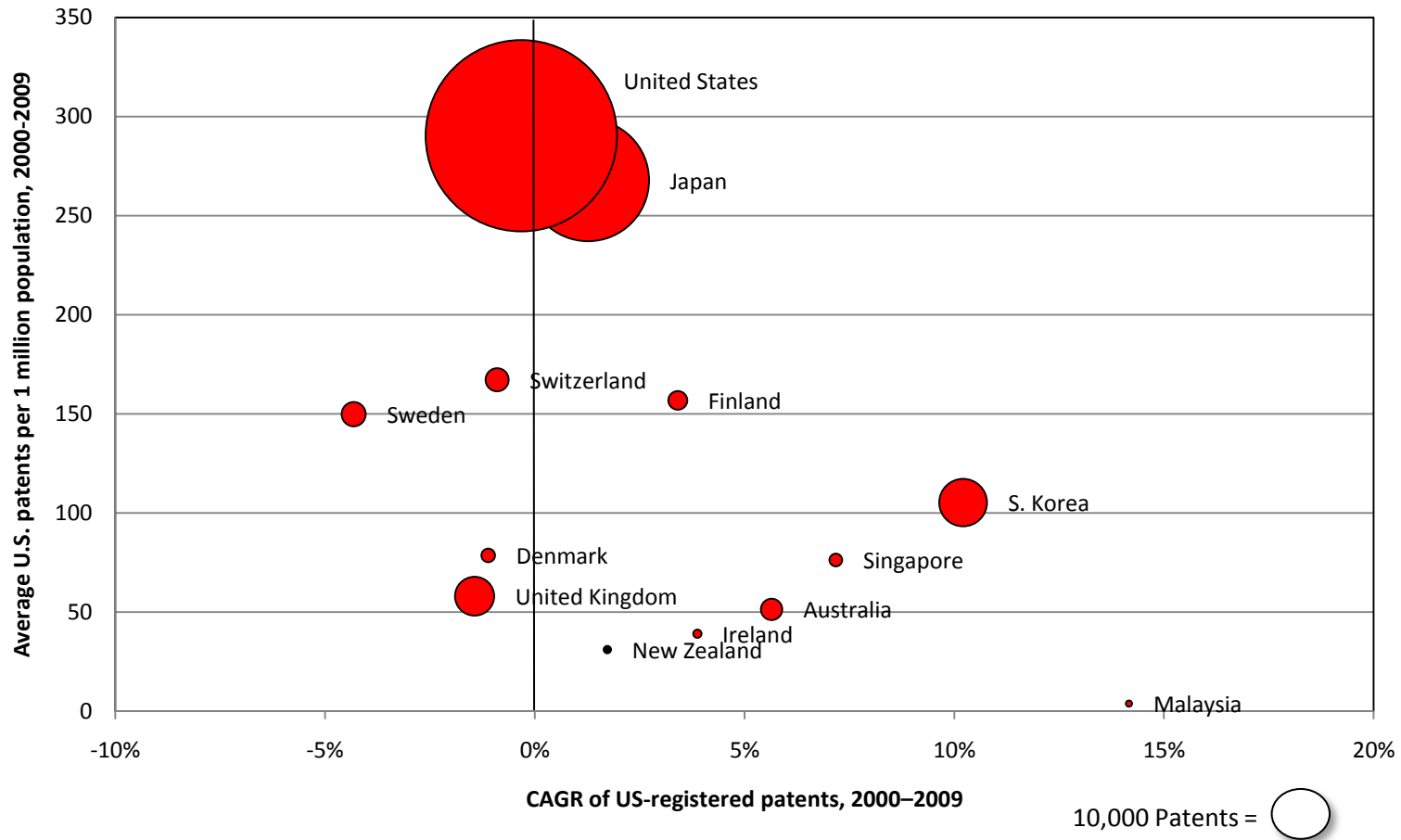
### Competitive Disadvantages Relative to GDP per Capita

	2010	2000
Company Spending on R&D	38	31
Utility Patents (per capita 2009/1998)	24	21

# Utility Patents per Million Population 2009



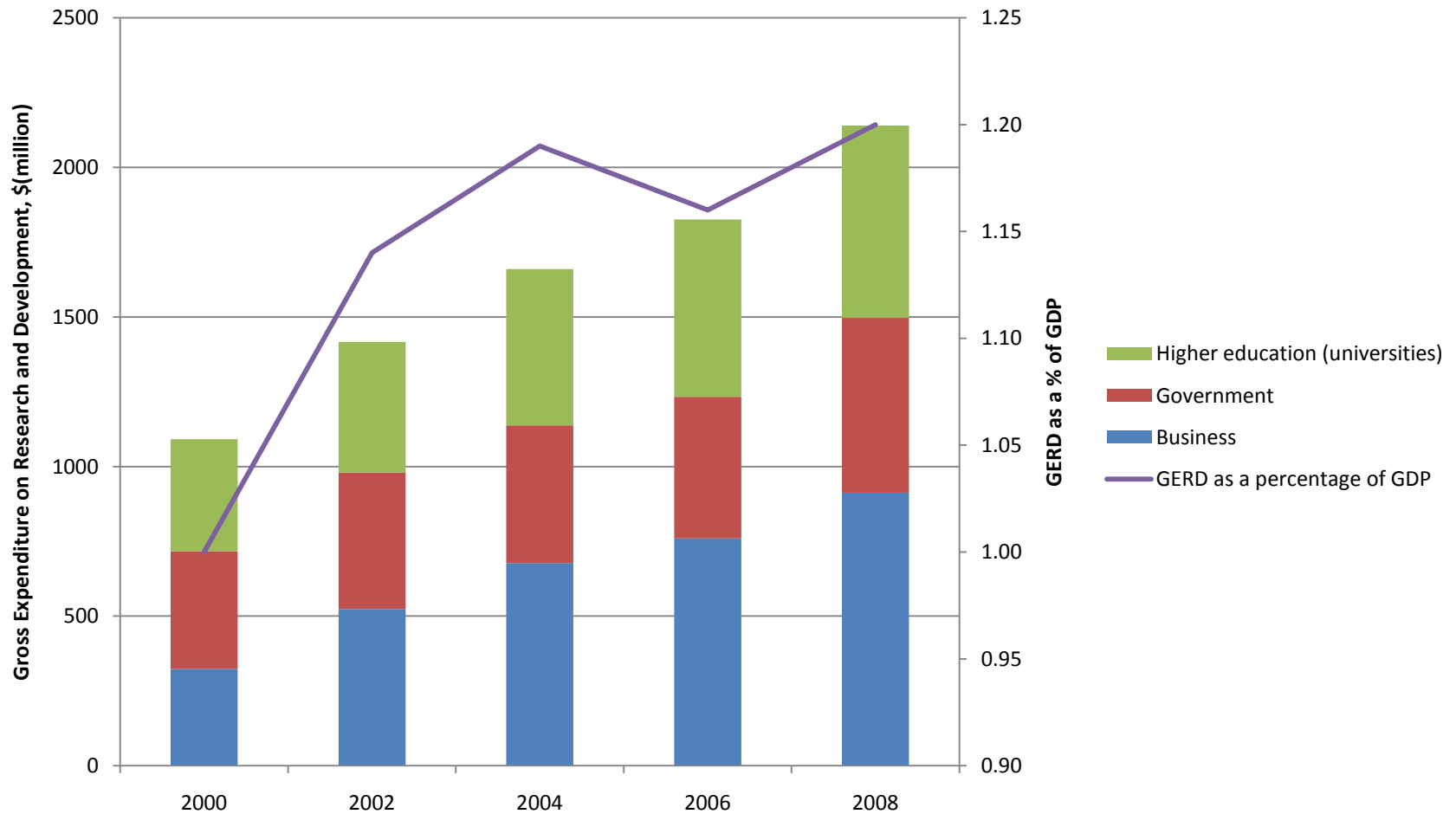
# Innovative Capacity



# Top NZ originators of US patents

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total 2000 - 2009
~INDIVIDUALLY OWNED PATENT	26	32	40	27	25	25	23	17	13	16	<b>244</b>
FISHER + PAYKEL LIMITED	3	4	16	8	11	1	0	0	0	0	<b>43</b>
AUCKLAND UNISERVICES LIMITED	3	2	5	2	6	4	5	3	4	6	<b>40</b>
TRIMBLE NAVIGATION, LTD.	11	5	3	5	0	1	1	4	1	5	<b>36</b>
FISHER & PAYKEL HEALTHCARE LIMITED	0	0	0	4	8	7	14	6	4	5	<b>48</b>
INDUSTRIAL RESEARCH LIMITED	3	0	3	2	3	1	8	3	1	3	<b>27</b>
GENESIS RESEARCH & DEVELOPMENT CORPORATION, LTD.	2	5	12	4	2	0	0	0	0	0	<b>25</b>
FISHER & PAYKEL APPLIANCES LIMITED	0	0	0	0	2	4	6	6	3	2	<b>23</b>
GENENTECH, INC.	0	2	0	5	8	1	0	0	0	0	<b>16</b>
INTERNATIONAL BUSINESS MACHINES CORPORATION	0	0	0	3	0	3	5	2	1	2	<b>16</b>
GIBBS TECHNOLOGIES LIMITED	0	0	0	1	5	3	1	1	3	2	<b>16</b>
FORMWAY FURNITURE LIMITED	1	3	0	2	3	4	1	0	1	0	<b>15</b>
<b>Total</b>	<b>107</b>	<b>124</b>	<b>140</b>	<b>135</b>	<b>142</b>	<b>122</b>	<b>136</b>	<b>113</b>	<b>105</b>	<b>127</b>	<b>1251</b>

# Gross Expenditure on R&D



# Demand Conditions

## New Zealand's Relative Position

### Competitive Advantages Relative to GDP per Capita

	2010	2000
Favoritism in Decisions of Government Officials	2	3

### Competitive Disadvantages Relative to GDP per Capita

	2010	2000
Buyer Sophistication	31	23
Availability of Latest Technologies	27	11

# Related and Supporting Industries

## New Zealand's Relative Position

### Competitive Advantages Relative to GDP per Capita

	2010	2000
Local Supplier Quality	15	20

### Competitive Disadvantages Relative to GDP per Capita

	2010	2000
Local Supplier Quantity	77	29
Intensity of Local Competition	64	18
State of Cluster Development	56	35
Extent of Market Dominance	40	31

# Context for Strategy and Rivalry

## New Zealand's Relative Position

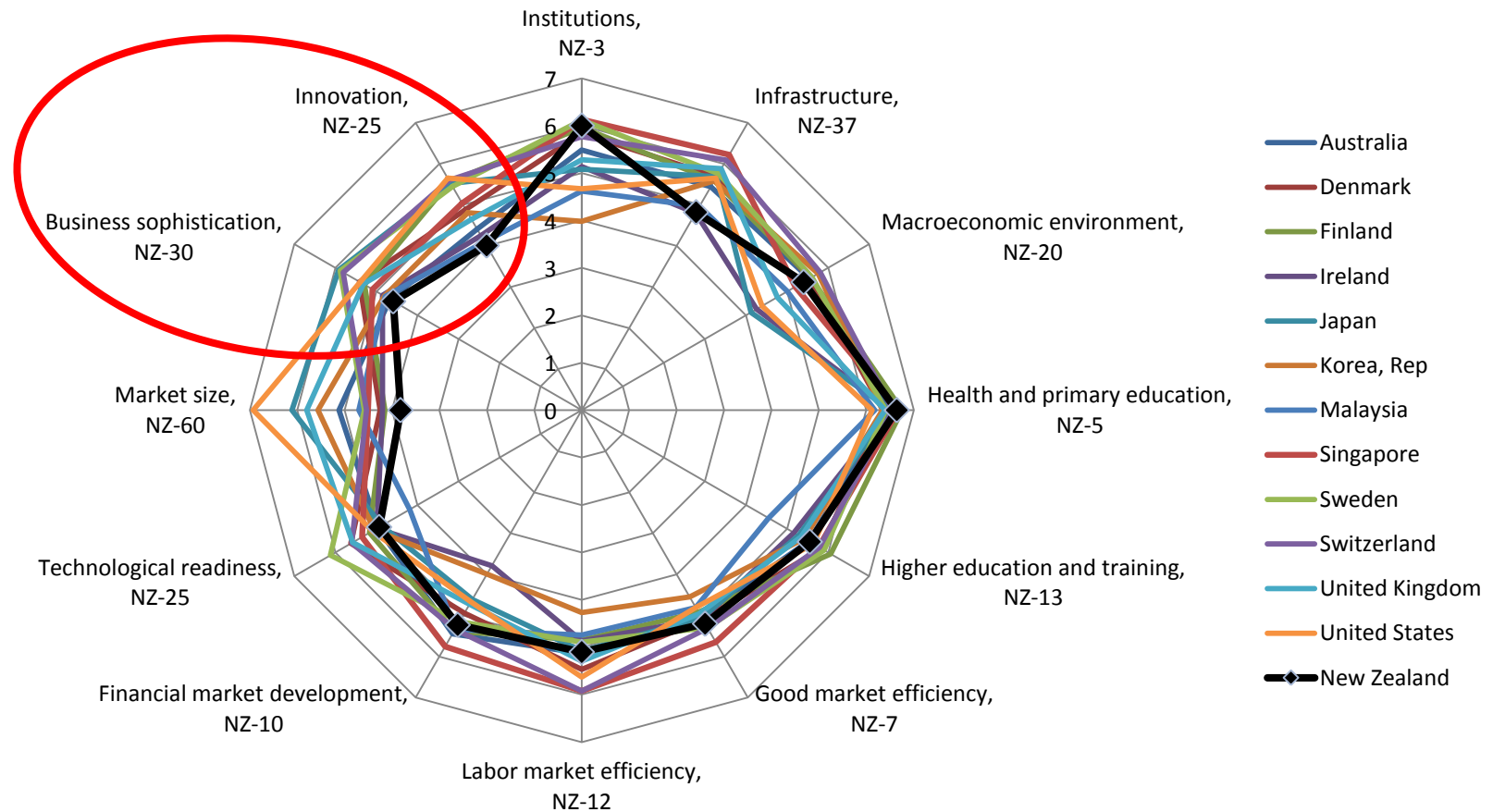
### Competitive Advantages Relative to GDP per Capita

	2010	2008
Strength of investor protection	1	1
Favoritism in decisions of government officials	2	7
Prevalence of trade barriers	3	3
Strength of auditing and reporting standards	3	5
Protection of minority shareholders' interests	5	4
Effectiveness of anti-monopoly policy	5	10
Intellectual property protection	7	13
Efficacy of corporate boards	8	3
Prevalence of foreign ownership	8	22
Rigidity of employment	10	8
Cooperation in labor-employer relations	13	32
Restriction on capital flows	18	15

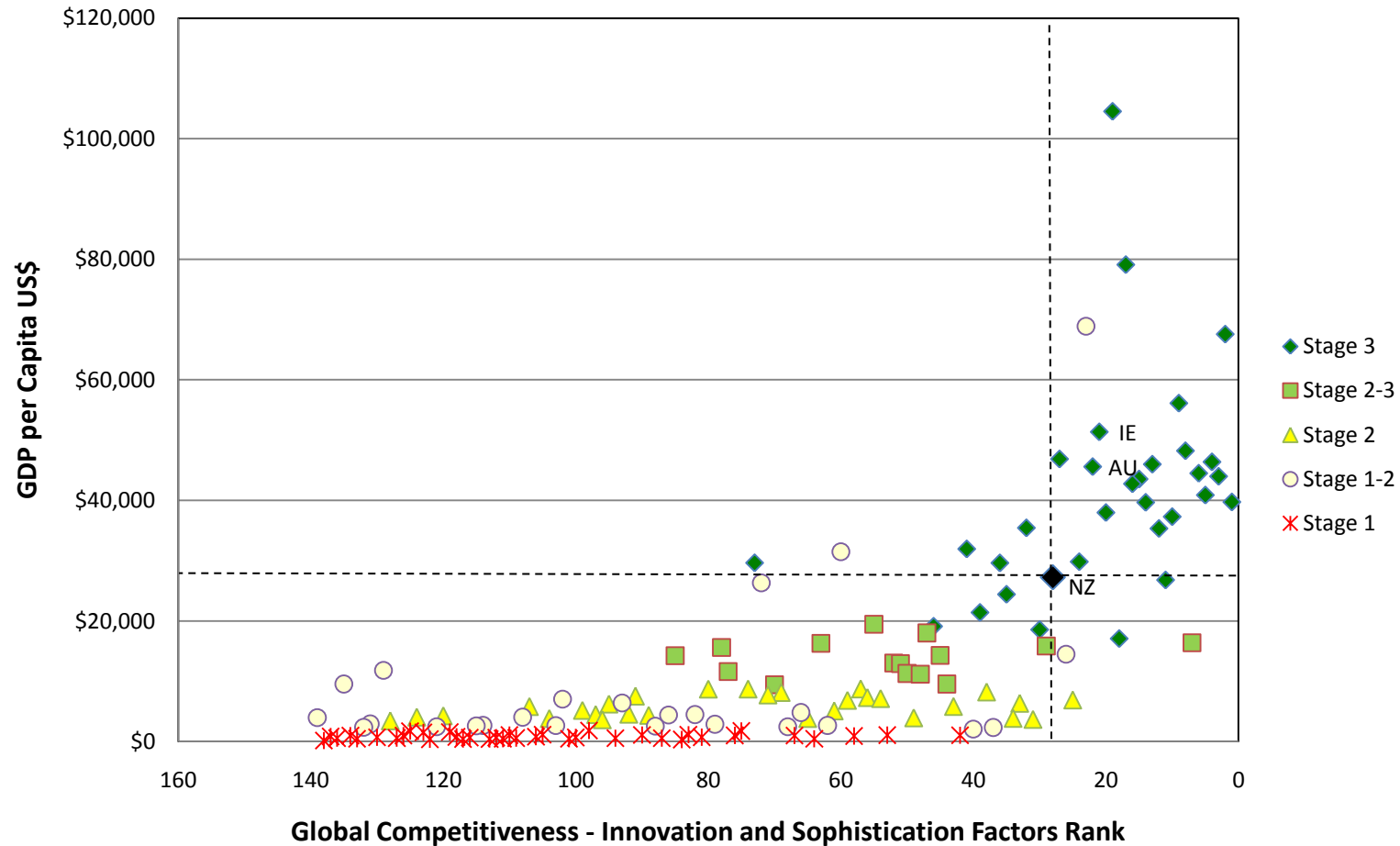
### Competitive Disadvantages Relative to GDP per Capita

	2010	2008
Intensity of local competition	64	58
FDI and technology transfer	59	52
Business impact of rules on FDI	55	63
Extent and effect of taxation	44	90
Pay and productivity	34	25
Trade tariffs	33	32

# Comparative performance of selected countries



# Microeconomic Competitiveness Innovation and Sophistication Factors Rank



# Innovation and Sophistication Factors

## New Zealand's Relative Position

### Competitive Advantages Relative to GDP per Capita

	2010	2000
Reliance on Professional Management	3	11

### Competitive Disadvantages Relative to GDP per Capita

	2010	2000
Nature of Competitive Advantage	74	25
Value Chain Breadth	51	24
Company Spending on R&D	38	31
Control of International Distribution	37	23
Capacity for innovation	28	26
Extent of Marketing	23	23

# Conclusions

- *In 2001 Michael E Porter said that to make the transition to an Innovation Driven economy New Zealand must by-pass the Investment Driven stage and move straight from Factor Driven to an Innovation Driven economy.*
- Is it your opinion that this is still a valid assessment for New Zealand?

Advantages	Disadvantages
Ease of Doing Business	Labour Productivity Growth
Context for Strategy & Rivalry	GCR Relative Position
Natural Resources	Innovative Capacity
	Related & Supporting Industries
	Innovation & Sophistication Factors

# Conclusions

- *In 2001 Michael E Porter said that to make the transition to an Innovation Driven economy New Zealand must by-pass the Investment Driven stage and move straight from Factor Driven to an Innovation Driven economy.*
- Is it your opinion that this is still a valid assessment for New Zealand?
  - Was it valid in 2001? Yes
  - Has New Zealand Progressed since 2001? No
  - Is it valid in 2011? Yes

# REFERENCES & CITATIONS

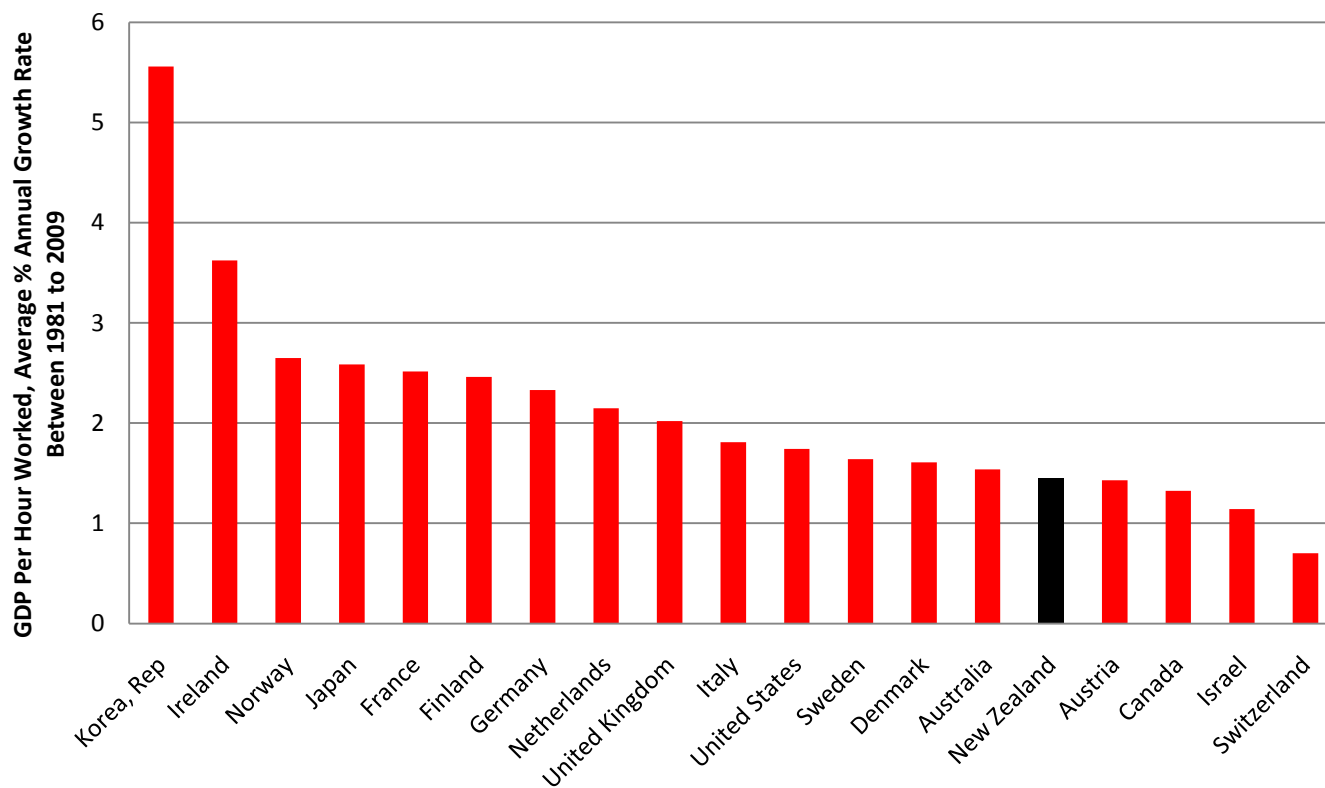
# References & Citations

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14. UNCTADstat, <http://unctadstat.unctad.org/ReportFolders/reportFolders.aspx>
15. Global Competitiveness Report 2011, World Economic Forum, <http://www.weforum.org>

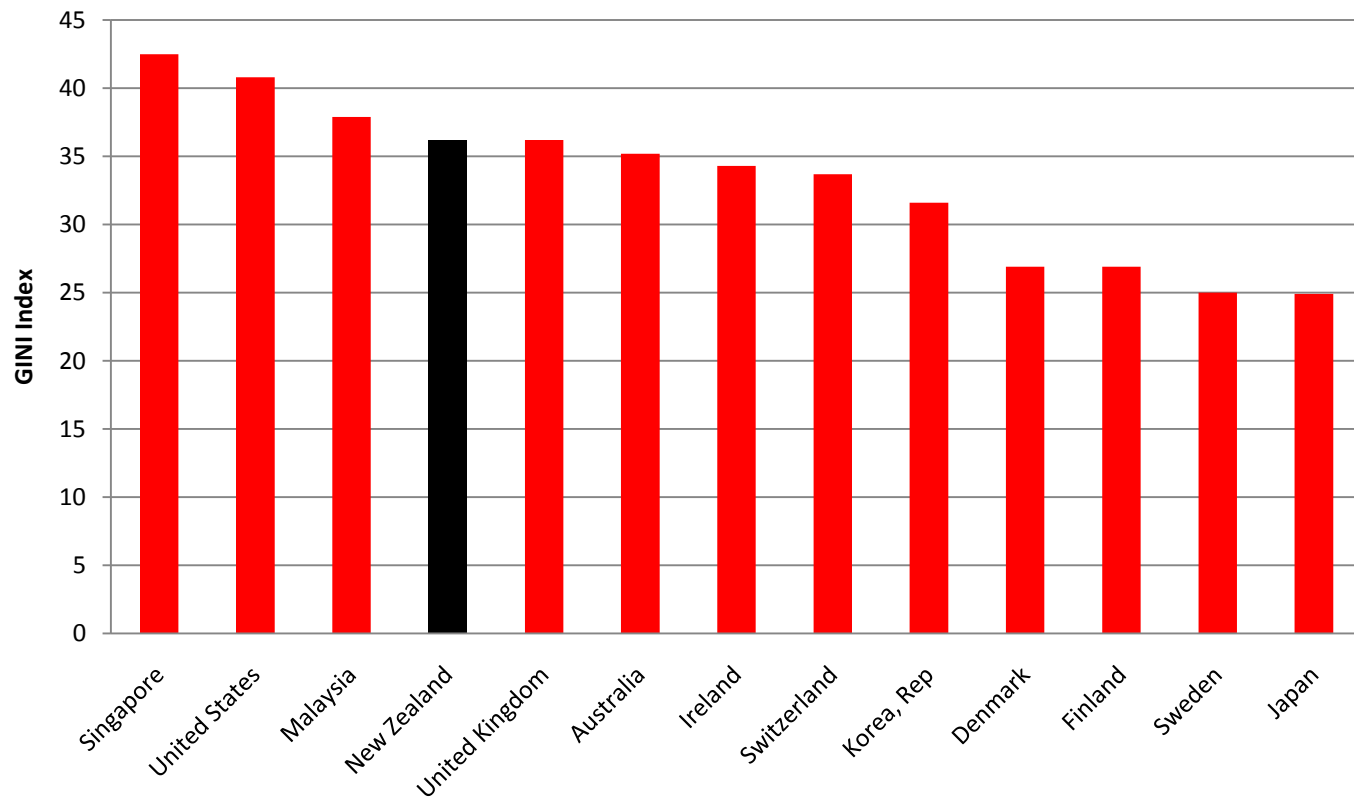
# BACKUP SLIDES

# Labour Productivity Level and Growth

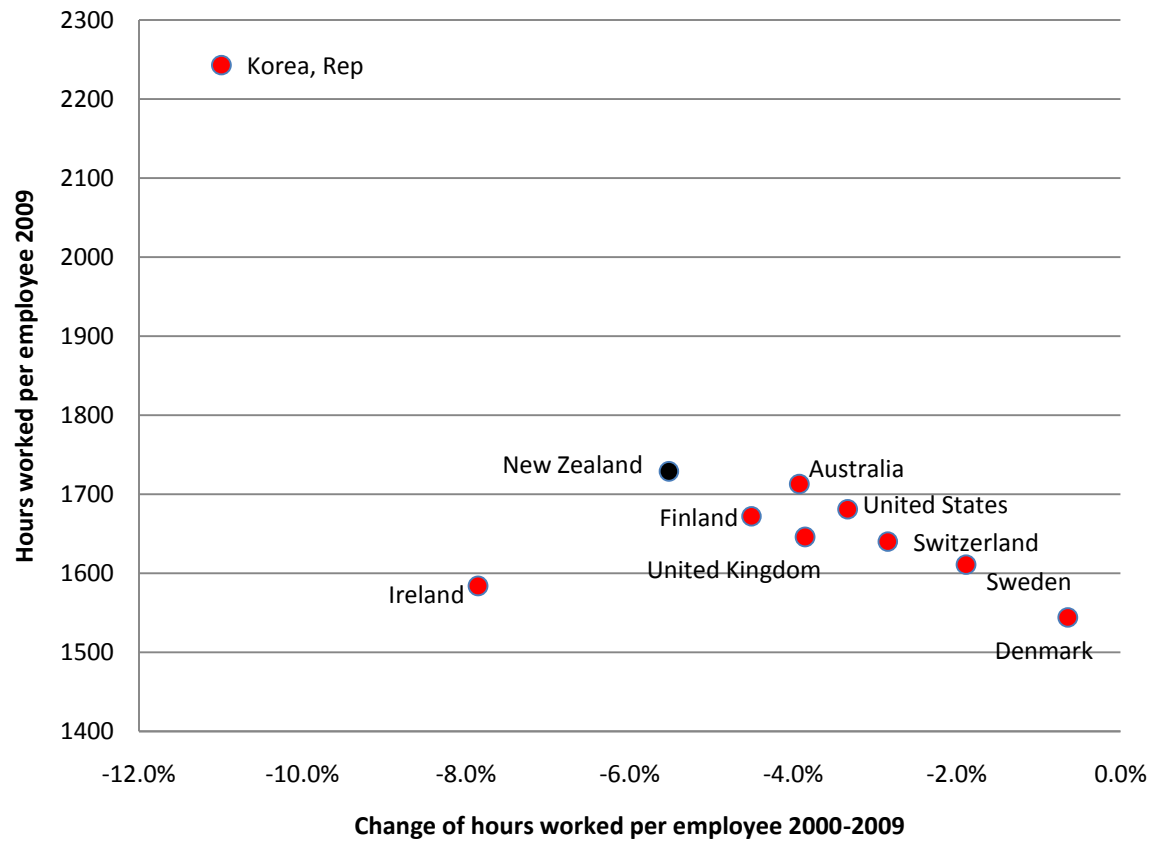
## Selected Countries



# Income Inequality

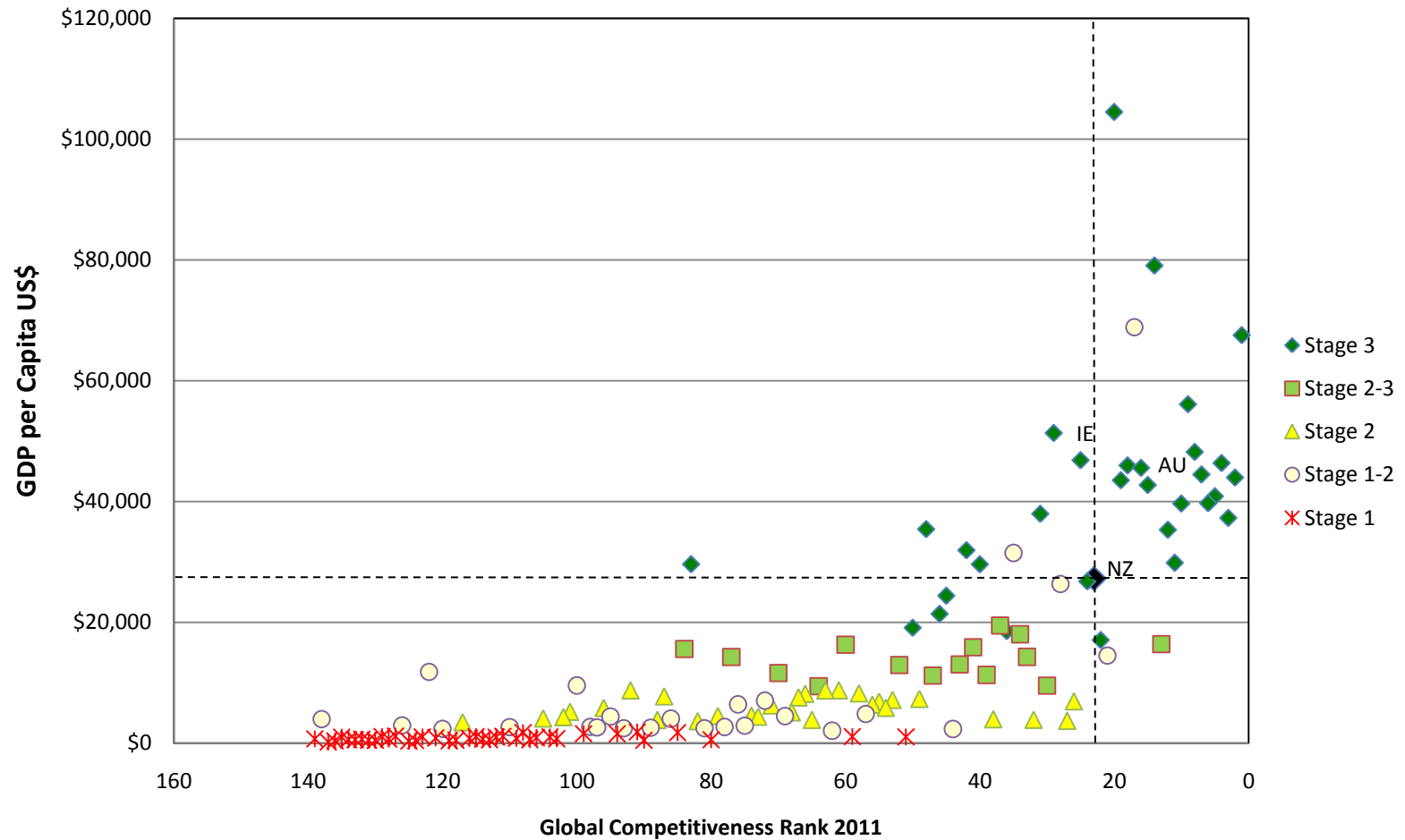


# Labour Input Level and Growth



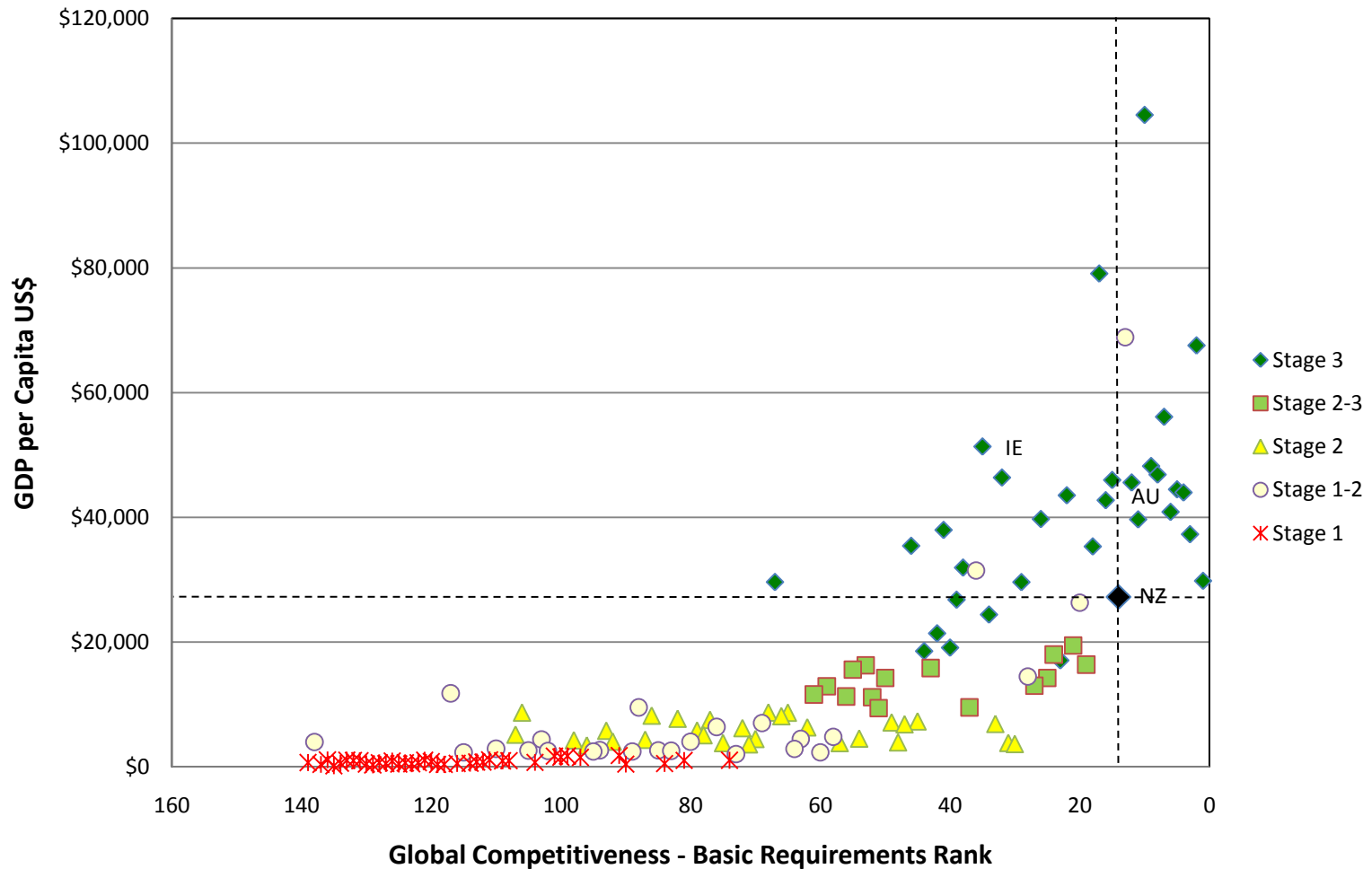
# Microeconomic Competitiveness

## Global Competitiveness Rank

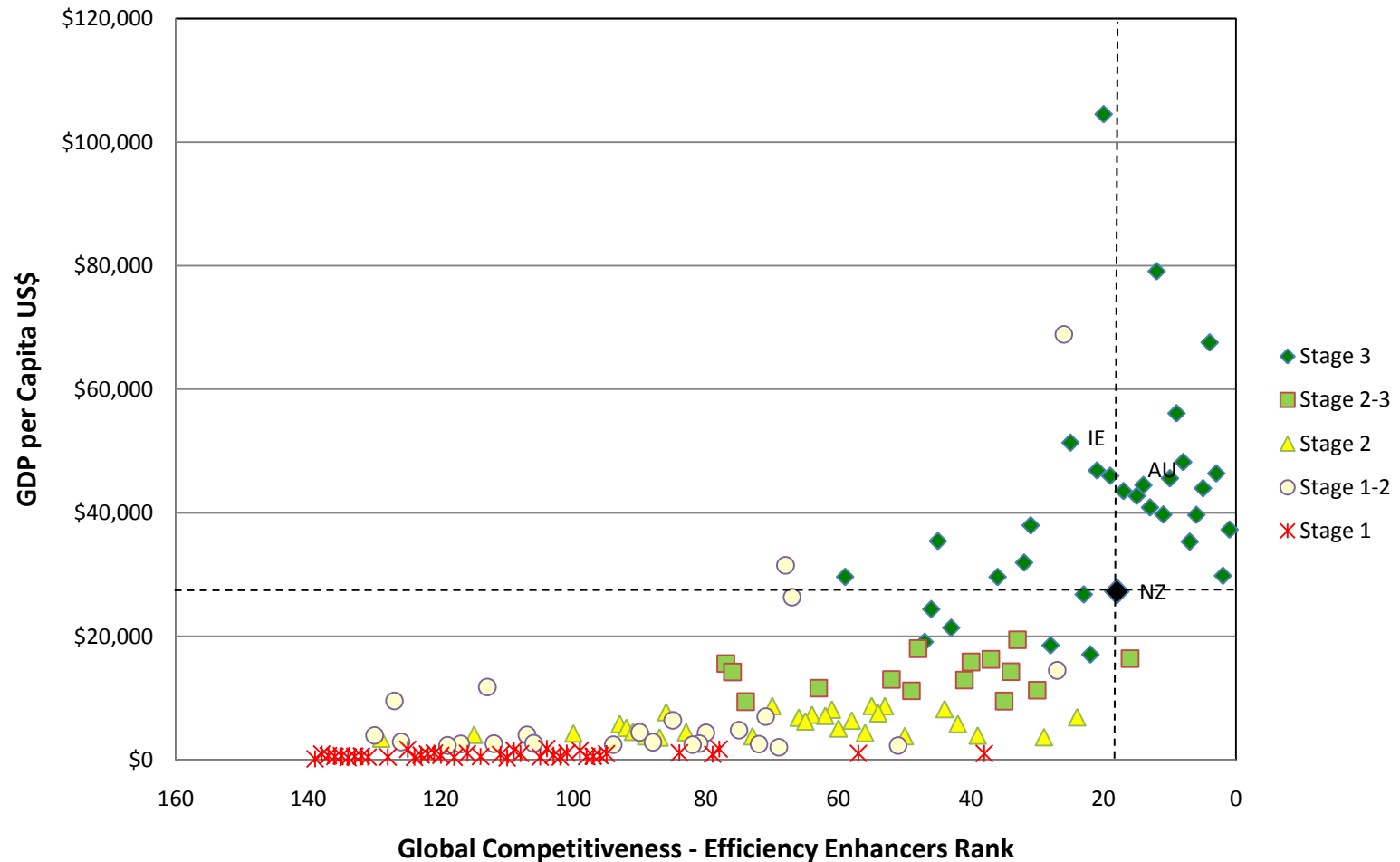


# Microeconomic Competitiveness

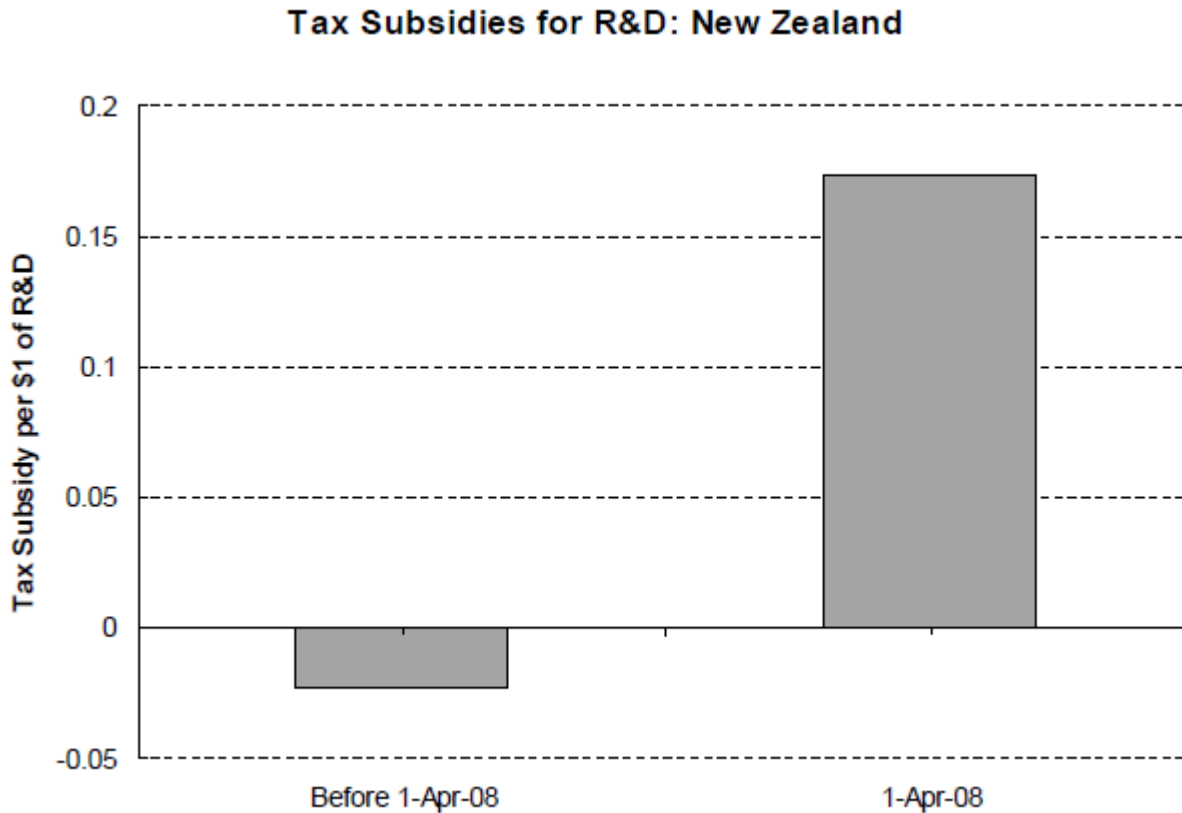
## Basic Requirements Rank



# Microeconomic Competitiveness Efficiency Enhancers Rank



# Tax subsidies for R&D



... However R&D Tax subsidies were removed again in 2009

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