

Analysis of Ireland's Innovation Performance

CSO Business Stats Seminar
Dublin Castle

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An Roinn Fiontar, Trádála agus Nuálaíochta
Department of Enterprise, Trade and Innovation

Enterprise Policy Advice to the Government



- Competitiveness, Infrastructure, Tax and Finance Advice
- Economic Analysis & Enterprise Policy
- Education and Skills Policy
- R & D and Innovation Policy
- Trade, Environment and Survey Analysis

Sister Agencies



Irish Owned Enterprise



Inward Investment



Scientific Research

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Advisory Council for Science Technology and Innovation
An Comhairle Eolaíochta

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National body with responsibility for Accreditation in Ireland



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AN ROINN OIDEACHAIS AGUS SCILEANN
DEPARTMENT OF EDUCATION AND SKILLS



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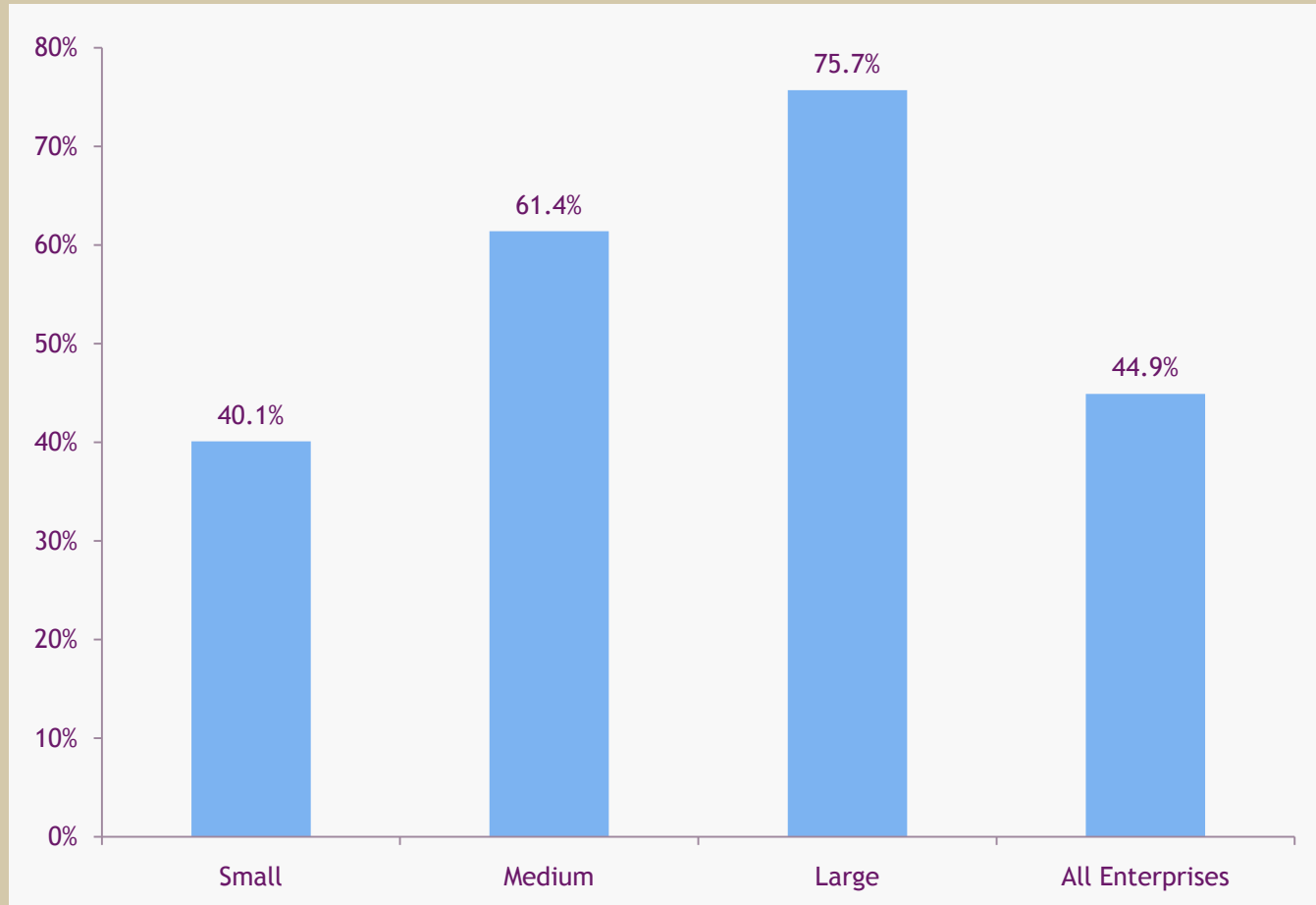
An Roinn Fiontar, Trádála agus Nuálaíochta
Department of Enterprise, Trade and Innovation

Cabinet Sub-Committee on Science, Technology & Innovation

Analysis of Innovation Performance

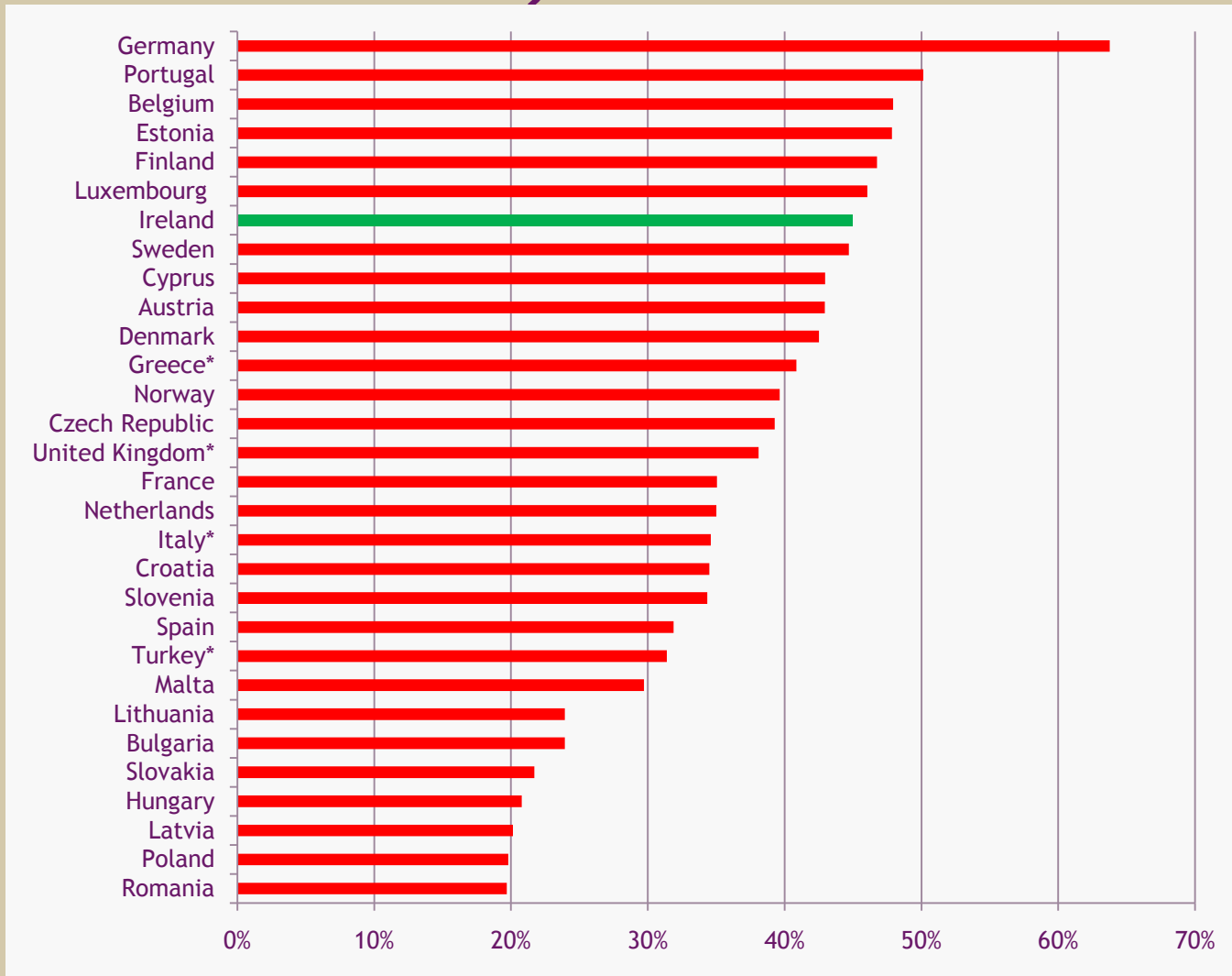
- ▶ **Aim: To benchmark Ireland's performance on innovation relative to European counterparts**
- ▶ **Use of Community Innovation Survey (CIS) data**
 - International comparisons of 2004-2006 data
 - 2004-2006, and 2006-2008 survey data: manipulation and identification of trends at national level, by sector, size of firm and firm origin
- ▶ **European Innovation Scoreboard - composite indicators**
 - Reports annually - “raw” trends indentified
- ▶ **Other Sources, notably OECD**

Innovation Intensity in Ireland by Size of Enterprise, 2006-2008

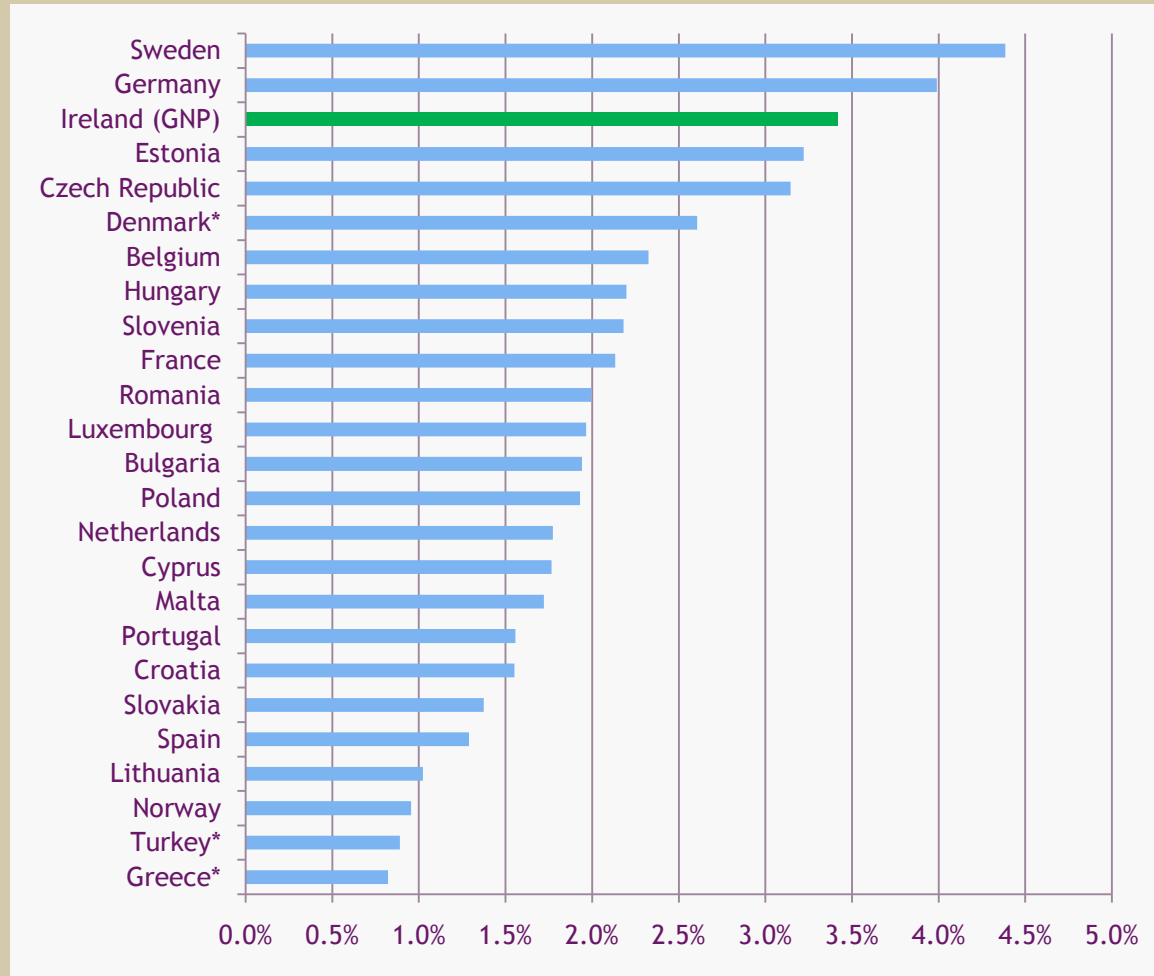


Source: CSO Community Innovation Survey 2008

Innovation Intensity in EU-27, EEA & Accession States, 2008

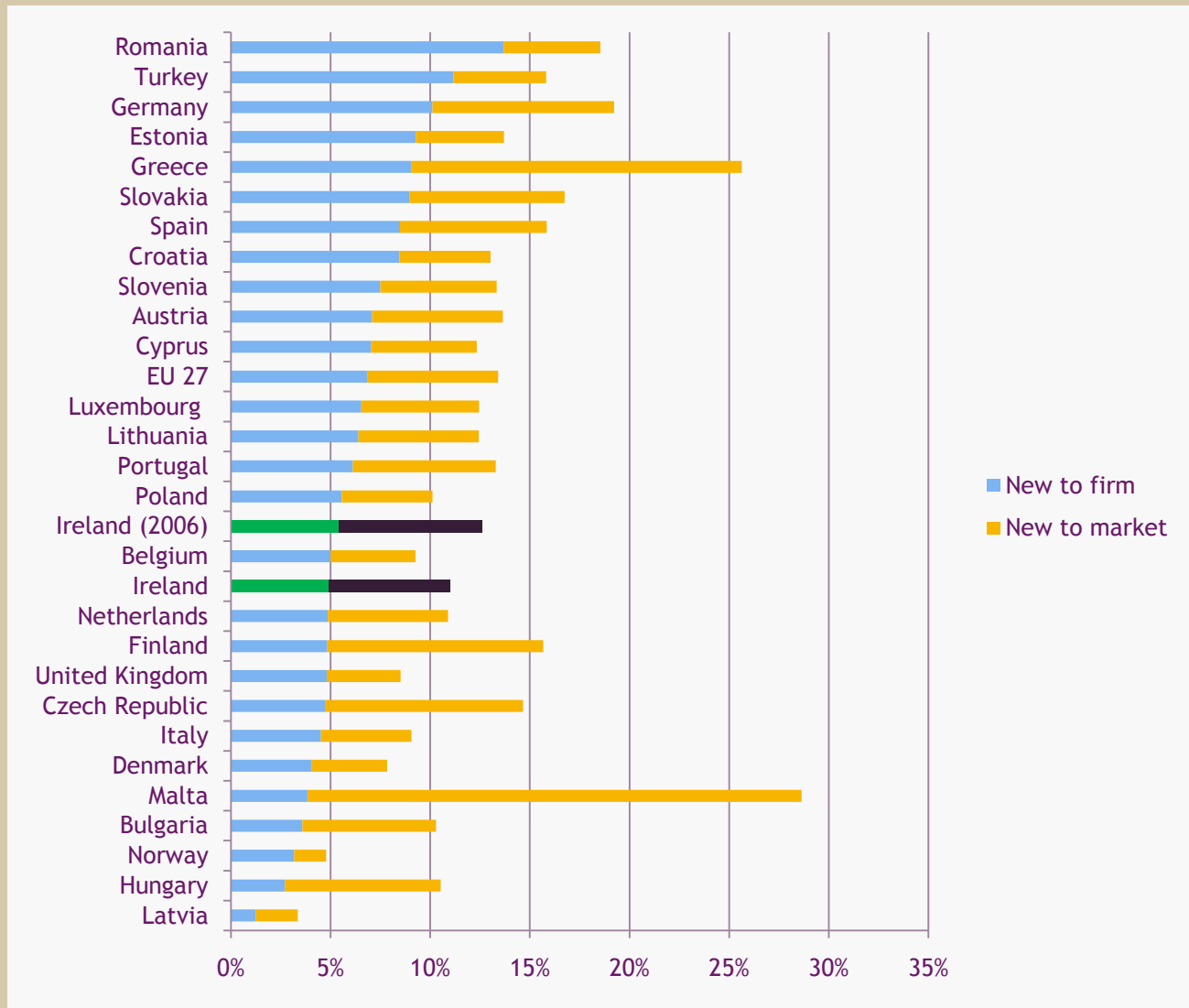


Expenditure on Innovation as % of GDP, 2008

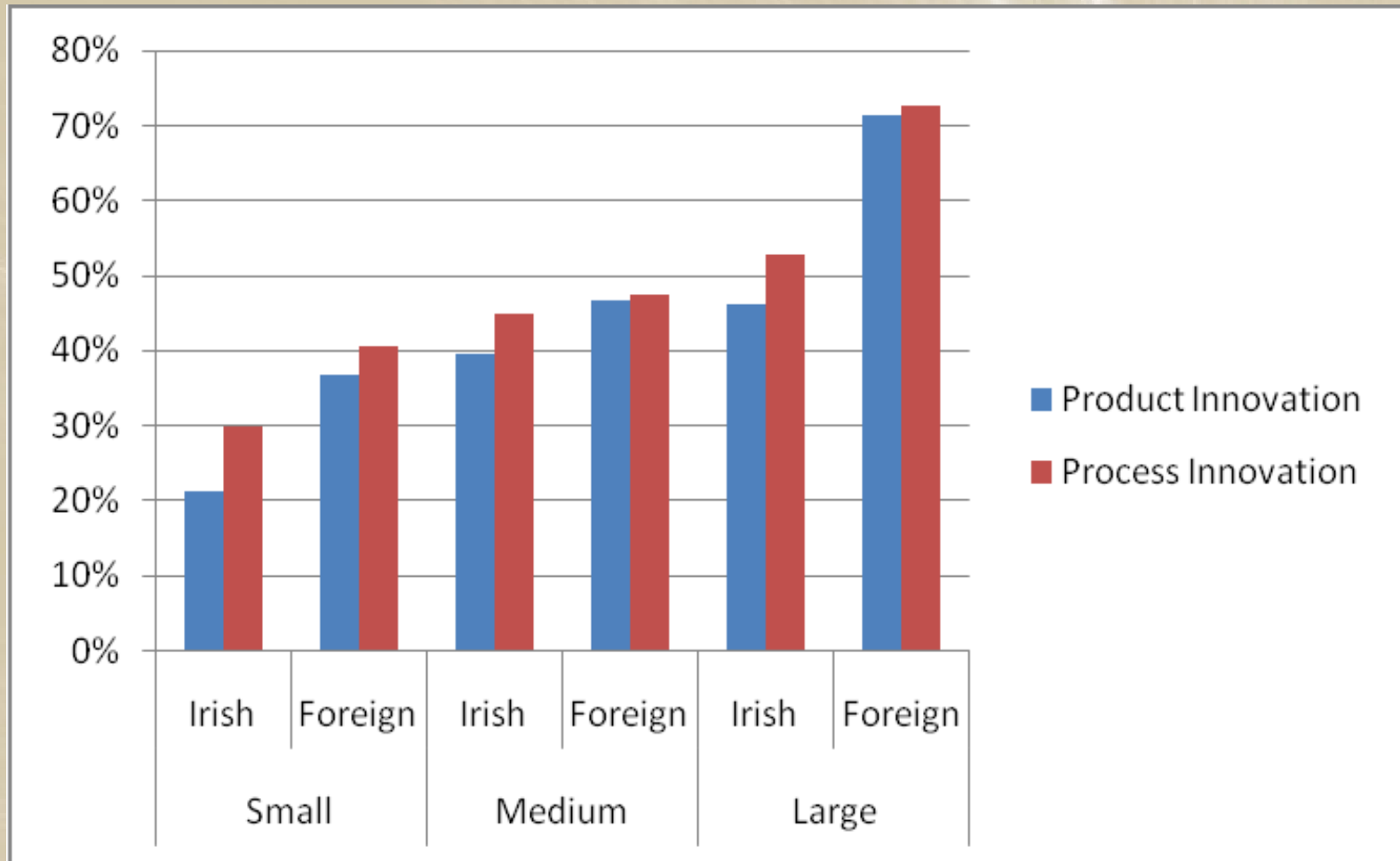


Source: Eurostat Community Innovation Survey 2006; CSO Community Innovation Survey 2008

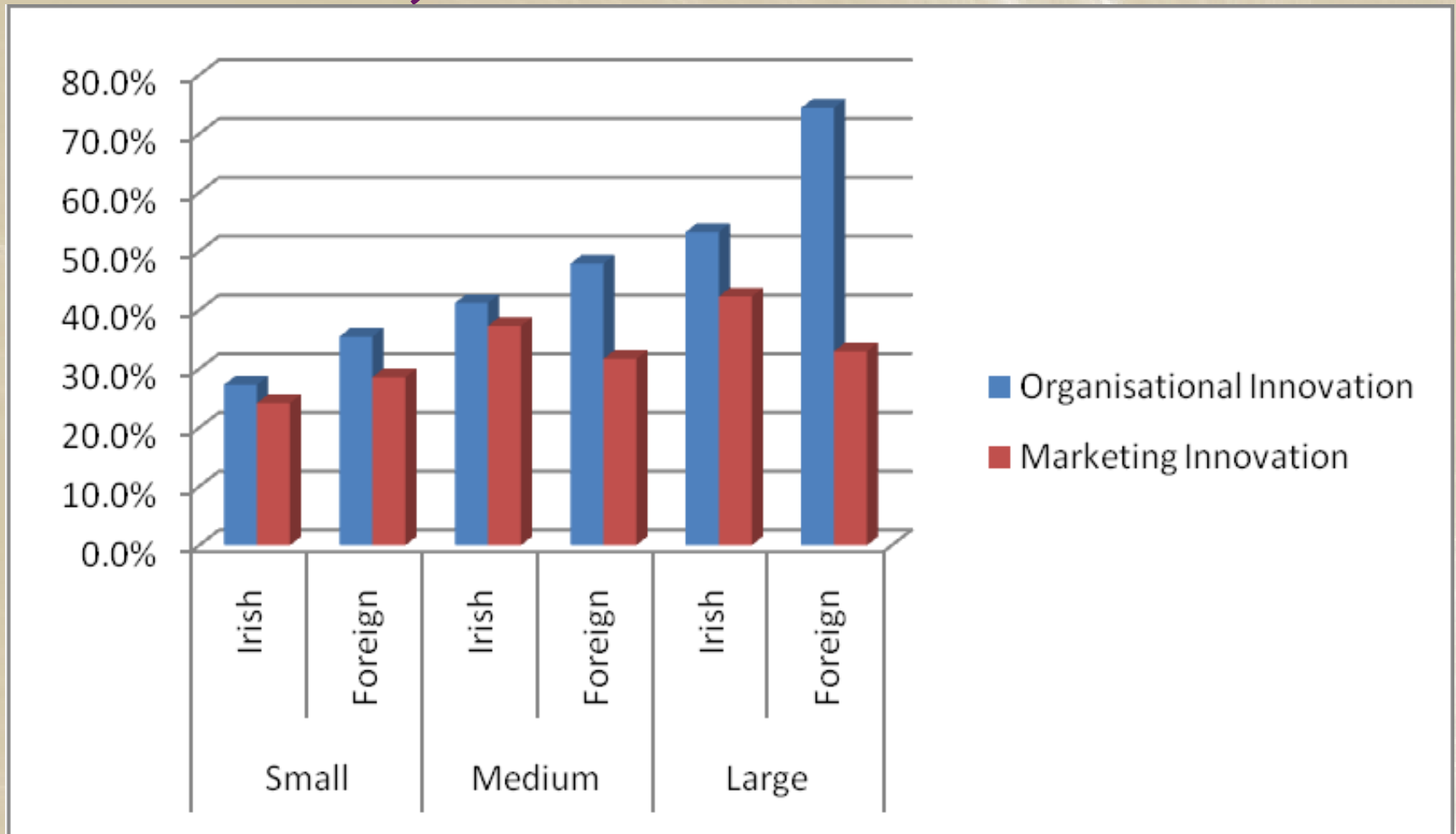
Turnover Rates from Product Innovation



Technological Innovation Rates in Ireland, 2008



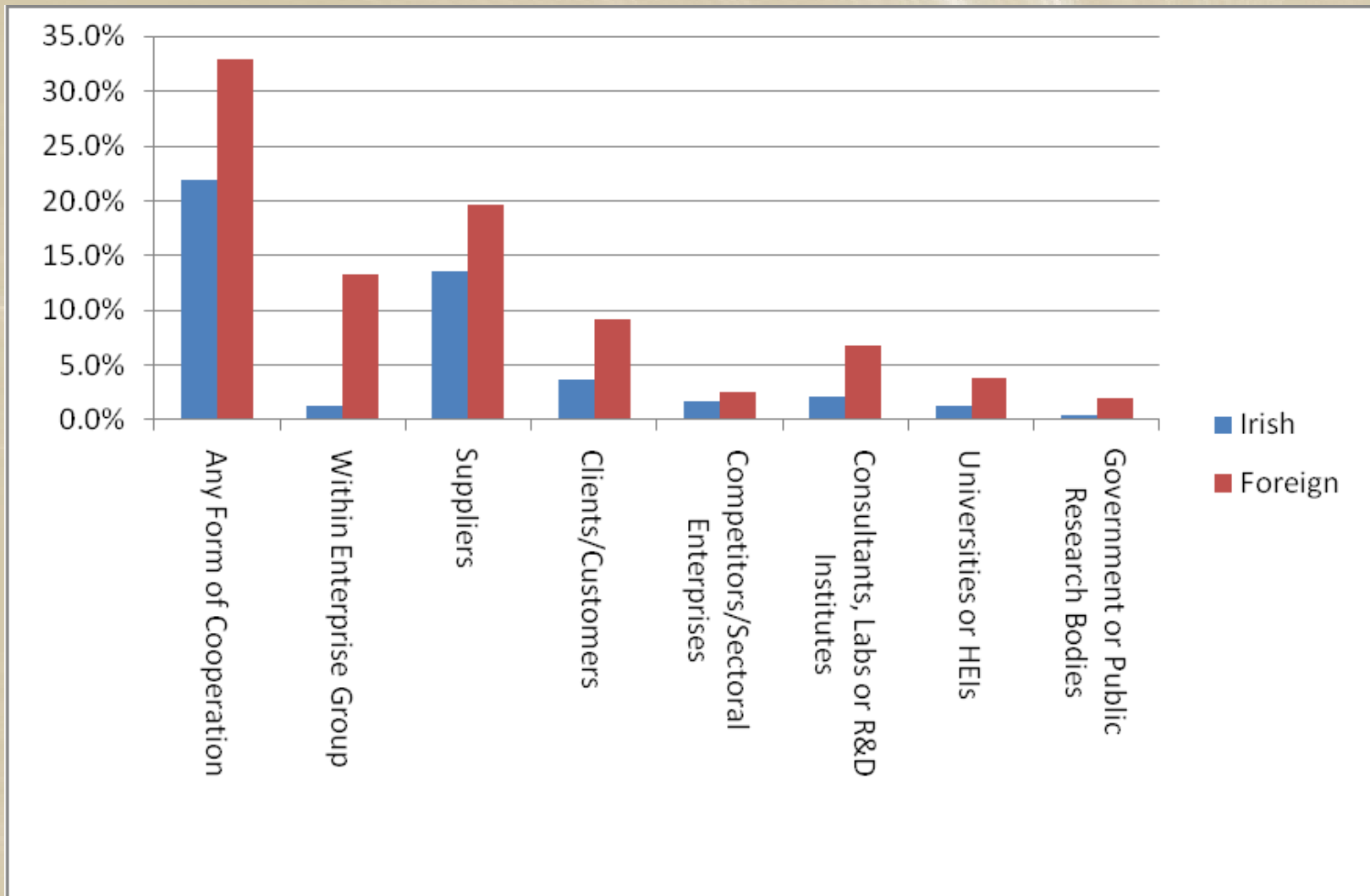
Non-Technological Innovation Rates in Ireland, 2008



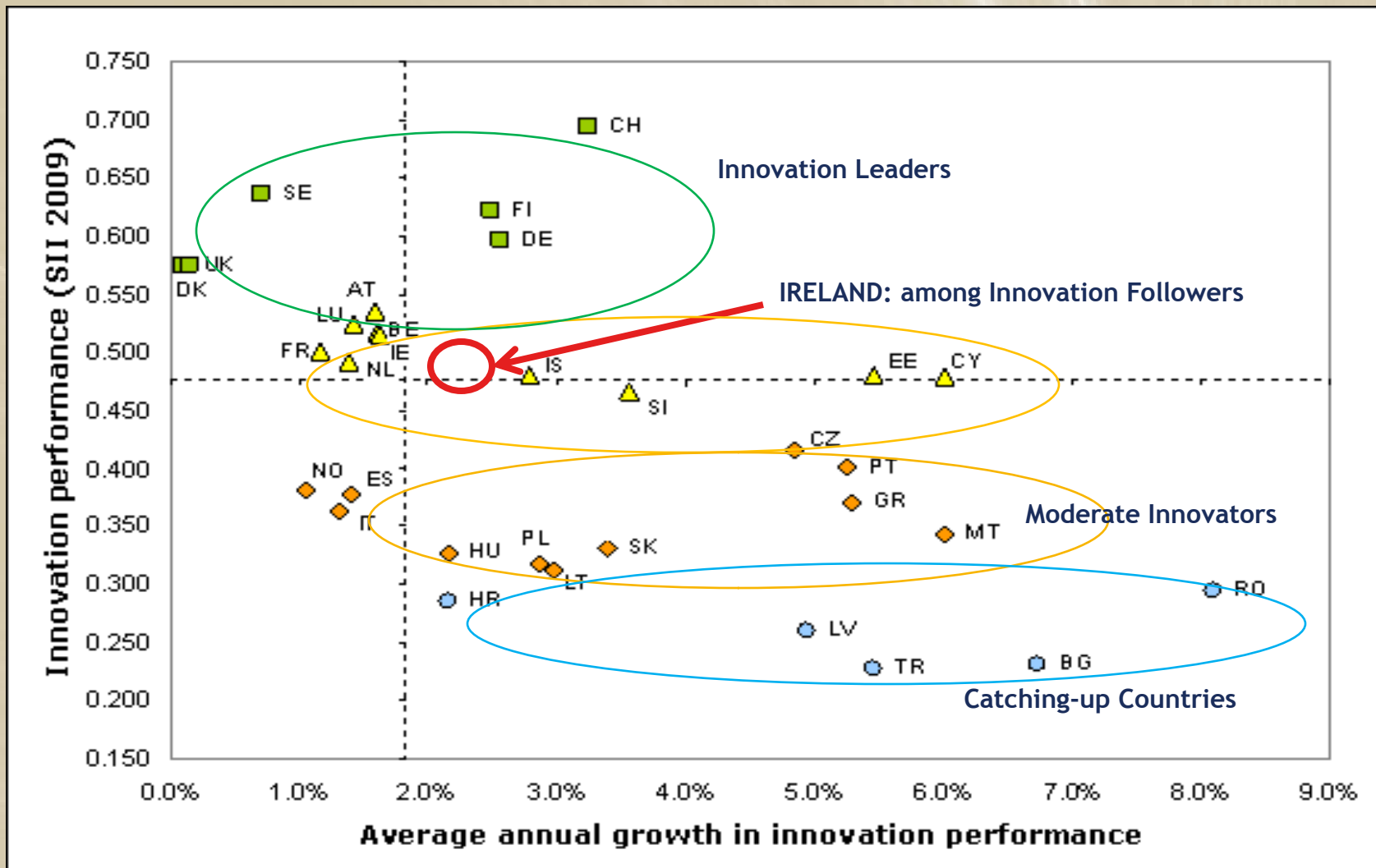
Technological Innovation by Sector, 2008

| | Product Innovation | | | Process Innovation | | | |
|-------------------------------------|--------------------|-------|----------|--------------------|---------|-----------|-----------------------|
| | All | Goods | Services | All | Methods | Logistics | Supporting Activities |
| Medical Equipment (3250) | 44.9% | 44.9% | 19.2% | 47.4% | 44.9% | 23.4% | 26.0% |
| Food Products (10) | 39.7% | 39.7% | 6.0% | 54.6% | 38.9% | 13.2% | 35.1% |
| Chemicals (20) | 56.5% | 56.5% | 21.7% | 57.6% | 45.7% | 20.7% | 45.7% |
| Pharmaceuticals (21) | 60.4% | 60.4% | 9.4% | 71.7% | 60.4% | 20.8% | 41.5% |
| Manufacturing of Computers (26) | 51.0% | 46.0% | 12.0% | 46.0% | 37.0% | 22.0% | 32.0% |
| Telecommunications (61) | 48.7% | 27.6% | 47.4% | 26.3% | 18.4% | 18.4% | 26.3% |
| Computer Programming and Cons. (62) | 56.6% | 37.7% | 46.8% | 42.5% | 18.0% | 17.5% | 39.1% |
| Information Service Activities (63) | 37.8% | 16.2% | 32.4% | 37.8% | 21.6% | 21.6% | 37.8% |
| Financial Services (64) | 26.6% | 8.3% | 25.5% | 35.9% | 14.8% | 11.7% | 30.7% |
| Insurance (65) | 32.0% | 14.7% | 29.3% | 42.7% | 17.3% | 26.7% | 40.0% |
| Architectural and Engineering (71) | 19.7% | 6.7% | 18.1% | 24.7% | 10.6% | 7.0% | 20.6% |
| Economy-Wide | 27.8% | 19.8% | 16.1% | 32.4% | 18.7% | 14.0% | 26.0% |

Co-operation in Innovation Activities, 2008



European Innovation Scoreboard - Overall Innovation Performance & Growth Rate, 2009



Recent Empirical International Evidence

- ▶ In the context of the economic downturn, firms in the EU with a strong background in product and service innovation are less likely to cut innovation expenditures.
- ▶ Germany and Canada consistently rank among the world's foremost innovative economies, particularly in manufacturing.
- ▶ Firms in receipt of public funding are more likely to be innovative.
- ▶ Almost all countries register a positive and significant relationship between engaging in product innovation and sales per employee.
- ▶ However, process innovation was generally not closely linked with sales per employee. In the one instance where there is a significant relationship, it is negative.

SWOT of Ireland's Innovation Position

Strengths

High proportion of firms engaged in technological innovation, particularly among SMEs

Relatively high levels of expenditure on innovation by EU standards - maintained in 2008

Weaknesses

Contribution to turnover of new-to-firm and new-to-market innovations is below EU average

Innovation intensity has fallen between CIS 2006 and CIS 2008

High perceived cost of innovation

Opportunities

International evidence suggests that Ireland's high innovation intensity will ensure a greater number of firms remain innovative during recession

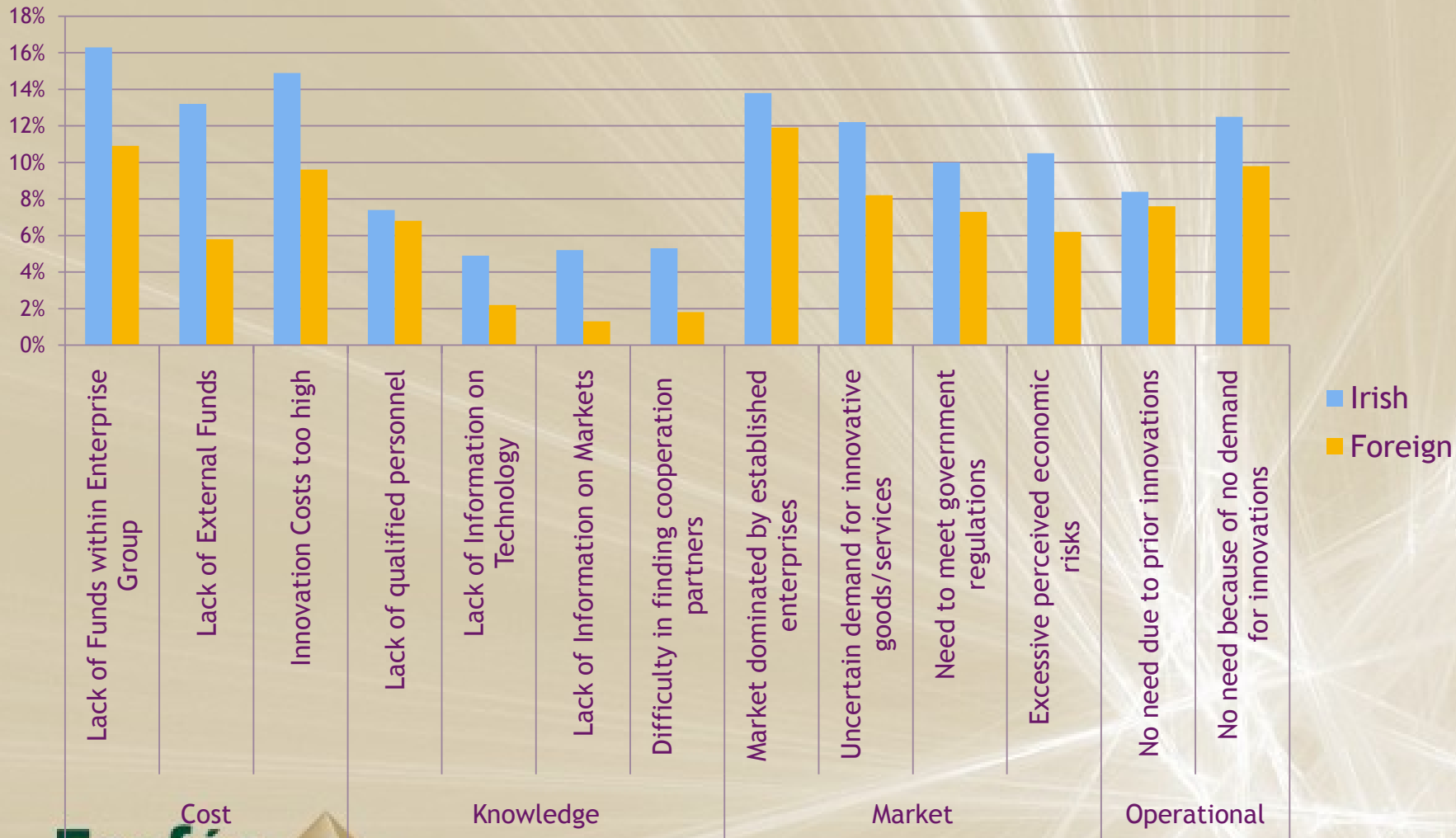
Potential value in non-technological innovation, particularly marketing innovation in service industries

Threats

Innovation expenditure may be poorly targeted and inflexible, with an over-emphasis on technological innovation and R&D and acquisition of machinery

Poor external physical infrastructure, particularly telecoms, may hold back technological product innovation, particularly in knowledge-intensive service industries

Highly Important Barriers to Innovation



Source: Community Innovation Survey 2008

Key Messages

- ▶ Ireland's innovation performance is generally promising, with high proportions of firms engaged in innovation activity, as well as relatively high levels of expenditure and reasonably high levels of turnover attributable to product innovations.
- ▶ The smallest firms in Ireland are also the least innovative.
- ▶ Indigenous firms are less innovative.
- ▶ Financial returns to product innovations are below the EU average.
- ▶ Particular modes of innovation are more suited to certain industries and sectors than others.
- ▶ Opportunities to increase non-technological innovation.
- ▶ Competitive framework Conditions for innovation are essential and need improvement