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Contents

Chapter 1

Overview and Summary

The Community Innovation Survey (CIS) 2008 is a survey of innovation activities of enterprises in Ireland and other EU Member States. The CIS is carried out under Commission Regulation (EC) No 1450/2004 implementing Decision No 1608/2003/EC. The survey collects information about product and process innovation as well as organisational and marketing innovation along with other key variables during the three year period 2006 to 2008 inclusive. Most questions cover new or significantly improved goods or services or the implementation of new or significantly improved processes, logistics or distribution methods.

The Community Innovation Survey (CIS) 2008 is jointly conducted by the Central Statistics Office (CSO) and Forfás to increase efficiency in the collection of statistical data and to reduce the burden on the participating enterprises. Data were collected in accordance with Section 33 of the Statistics Act, 1993 and with EU law and the survey was carried out under the agreed set of international rules as laid out in the OECD Oslo manual. Detailed results from the survey are included in chapters 2 to 11, some international comparisons are included in chapter 12 and in addition some results based on linking data to the Structural Business Surveys (the Census of Industrial Production and the Annual Services Inquiry) are included in chapter 13. This publication expands on the previous first findings release issued jointly by the CSO and Forfás in December, 2009.

Note: The CIS 2006-2008 is a voluntary enterprise sample based survey. A total of 4,650 survey forms were issued and responses were returned for 2,181 enterprises (a response rate of 47%). Poor response rates and the adoption of NACE Rev.2 (see below) have led to high variance for some aggregate results. As a consequence some of the size class detail formerly available cannot be replicated.

Methodological changes have been introduced in the CIS 2006-2008. The business classification used for CIS 2006-2008 survey is now based on the Statistical Classification of Economic Activities in the European Community (NACE Rev.2). CIS 2004-2006 was based on NACE Rev 1.1. As a consequence, care should be taken when drawing any conclusions regarding the direction and scale of innovation since the 2004-2006 survey.

Almost half of all enterprises were innovation active during 2006-2008

Overall, it was found that almost 45% of all enterprises with ten or more persons engaged in the industrial and selected services sectors[1] were innovation active over the period 2006-2008 inclusive. Nearly 65% of all turnover generated by enterprises with ten or more persons engaged was generated by enterprises who were innovation active, while 66% of persons engaged worked in such innovation active enterprises. *See Figure 1.1.*

Figure 1.1 Innovation activity rates for all enterprises (10+ persons engaged), 2006 - 2008

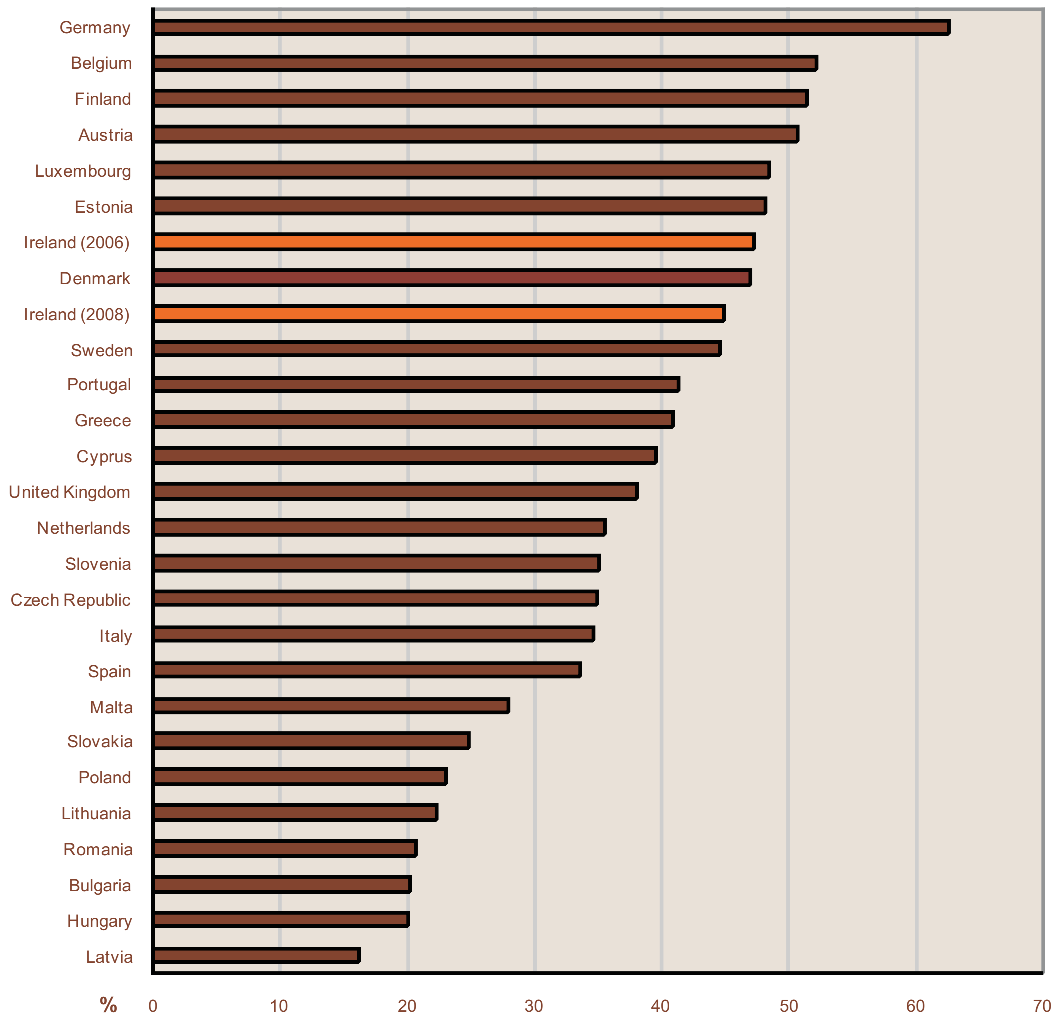
Source: CSO/Forfás - Community Innovation Survey 2006-2008.
Note: Turnover and persons engaged in 2008.
Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71).

[1]See Appendix 2 for selected services sectors included in CIS 2006-2008

2004-2006 International innovation activity rate rankings

The Community Innovation Survey is carried out in all EU member states and comparable results can therefore be looked at across the entire community (*See Chapter 12*). The most recent available data for the rest of the European community is 2006. When comparing the 2004-2006 results for the percentage of total Irish enterprises with innovation activities with other EU member states, Ireland had the 7th highest innovation rate. While the innovation activity rate for enterprises in industry and selected services sectors with at lest ten persons engaged was 45% in Ireland in the period 2006-2008, comparable innovation activity rates will not be available for the other EU member states until the last quarter of 2010. *See Figure 1.2.*

Figure 1.2 Percentage of total enterprises with innovation activities, 2004-2006

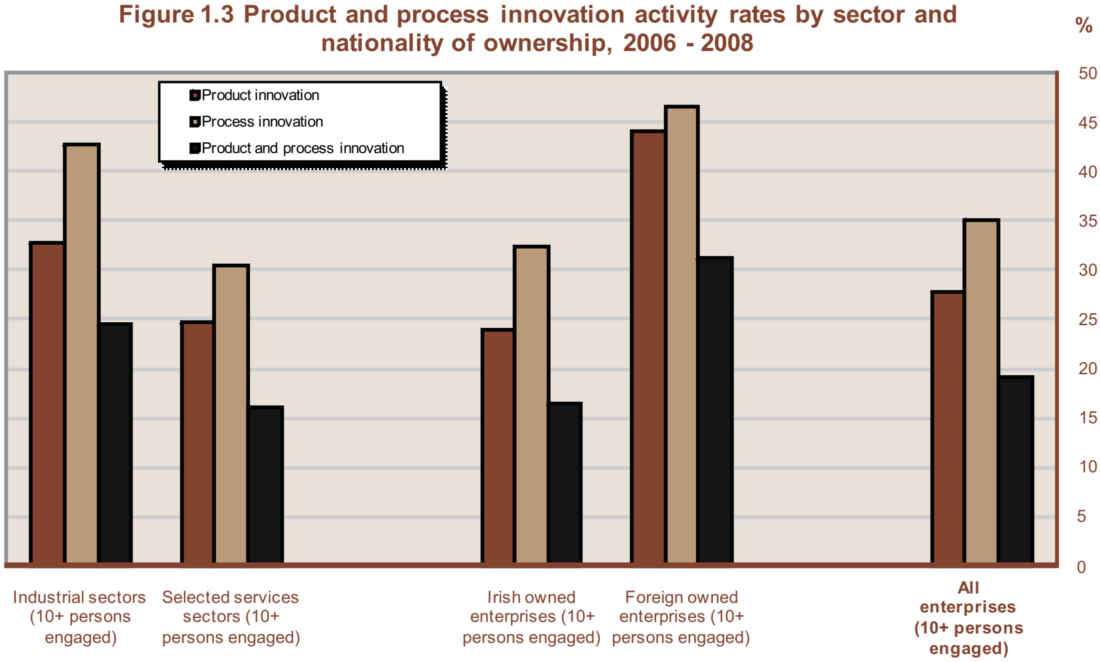


Source: Eurostat - Community Innovation Survey 2004-2006
Note: Nace Rev 1.1 includes industry (NACE 10-37, 40-41); Selected services sectors (Nace 51, 60-67, 72, 74.2, 74.3)
Note: Ireland 2008 NACE Rev 2 includes industry (NACE 05-33, 35-39) Selected services sectors (NACE 46, 49-53, 58, 61-66, 71)

Almost 28% of enterprises were engaged in product innovations; 35% were engaged in process innovations

Over one in four of enterprises in the industrial and selected services sectors with ten or more persons engaged had product innovations while over a third (35%) were engaged in process innovations. Close to one in five enterprises (19%) of these enterprises were engaged in both process and product innovations. Almost 43% of industrial enterprises were engaged in process innovation compared to 30% of enterprises in selected services sectors. Foreign owned enterprises were more likely to engage in product innovations, process innovations or both product and process innovations compared to Irish owned enterprises. *See Figure 1.3.*

Figure 1.3 Product and process innovation activity rates by sector and nationality of ownership, 2006 - 2008

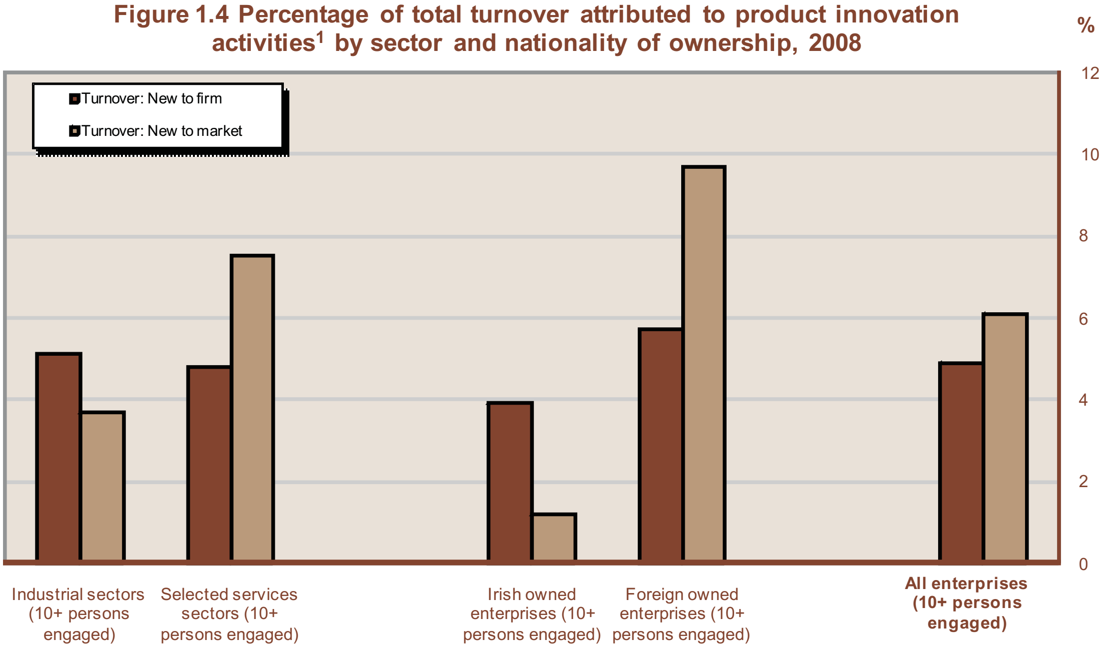


Source: CSO/Forfás - Community Innovation Survey 2006-2008
Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71,).

11% of turnover in the industrial and selected services sectors in 2008 resulted from new to firm or new to market product innovations

Just over 6% of turnover for enterprises in 2008 was estimated to be the result of new to the market product innovations between 2006 and 2008 while almost 5% of turnover was as a result of new to the firm product innovations in the same period. Just under 10% of the turnover of foreign owned enterprises was generated as a result of new to the market product innovations compared to over 1% of the turnover of Irish owned enterprises. *See Figure 1.4.*

Figure 1.4 Percentage of total turnover attributed to product innovation activities[1] by sector and nationality of ownership, 2008

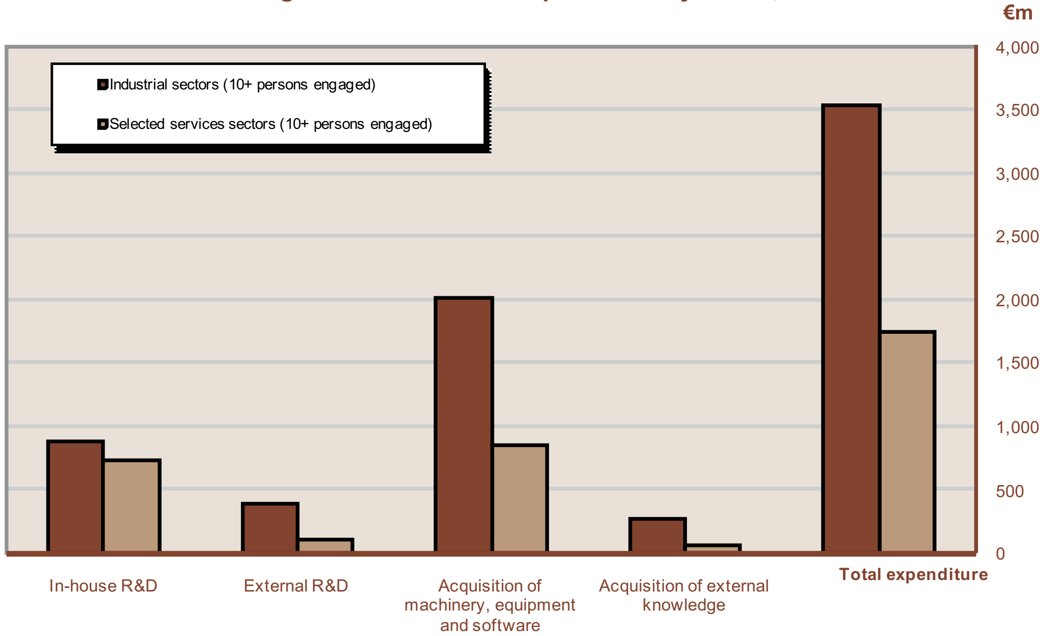


Source: CSO/Forfás - Community Innovation Survey 2006-2008.
[1] Product innovation activities during the period 2006-2008
Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71).

Almost €5.3bn spent on innovation activity in 2008

Total spending on innovation related activities across the Irish economy was almost €5.3bn in 2008. Industrial enterprises spent €2bn on the acquisition of machinery, equipment or software in 2008, while selected services enterprises spent €856m. Over 30% of expenditure or €1.6bn was spent on in-house R&D. *See Figure 1.5.*

Figure 1.5 Innovation expenditure by sector, 2008

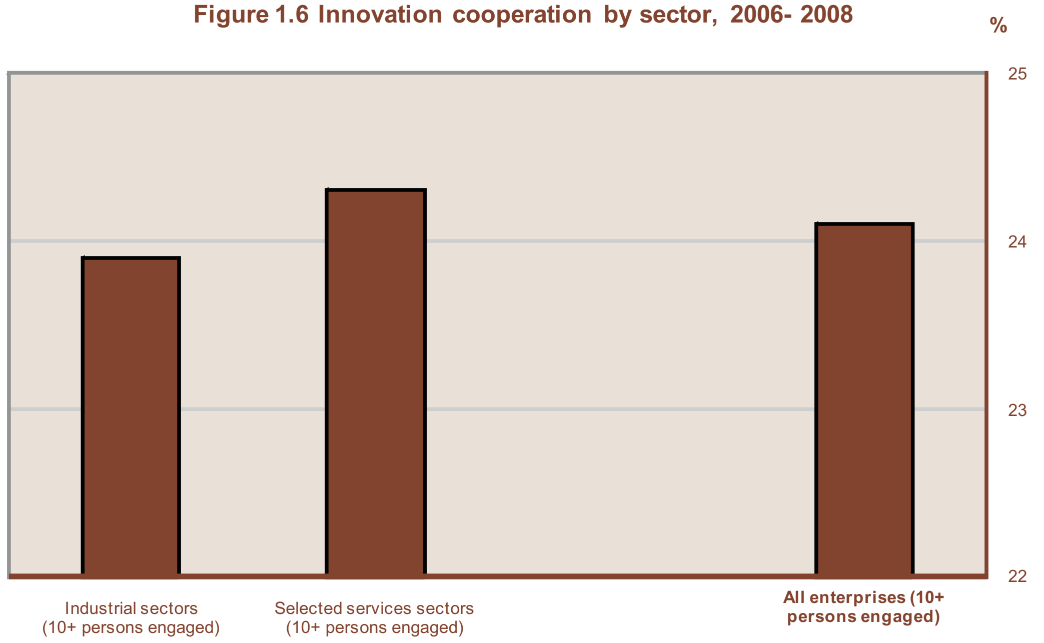


Source: CSO/Forfás - Community Innovation Survey 2006-2008
Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71).

A quarter of all innovation active enterprise engaged in innovation cooperation

Close to one in four (24%) of all innovation active enterprises engaged in innovation cooperation. The industrial and selected services sectors had similar rates of innovation cooperation, just under 24% for industrial enterprises and over 24% for selected services enterprises. *See Figure 1.6.*

Figure 1.6 Innovation cooperation by sector, 2006- 2008



Source: CSO/Forfás - Community Innovation Survey 2006-2008.
Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71,).

Chapter 2

Innovation Rates

Introduction

Enterprises which are classed as innovation active are those enterprises that have carried out a product innovation or a process innovation between 2006 and 2008, or who have abandoned or have on-going innovation activities.

Innovation Rates by Number of Persons Engaged

In the period 2006 to 2008 inclusive, 45% of enterprises in Ireland with ten or more persons engaged indicated that they were active innovators. Nearly 65% of the turnover generated by enterprises with ten or more persons engaged was generated by enterprises who were engaged in innovation activities, while 66% of persons engaged worked in such innovation active enterprises. In large enterprises (250+ persons engaged), active innovators generated over 72% of turnover. *See Table 2.1, Figure 2.1 and Table 2.6.*

Table 2.1 Innovation activity rates by number of persons engaged, 2006 - 2008

%

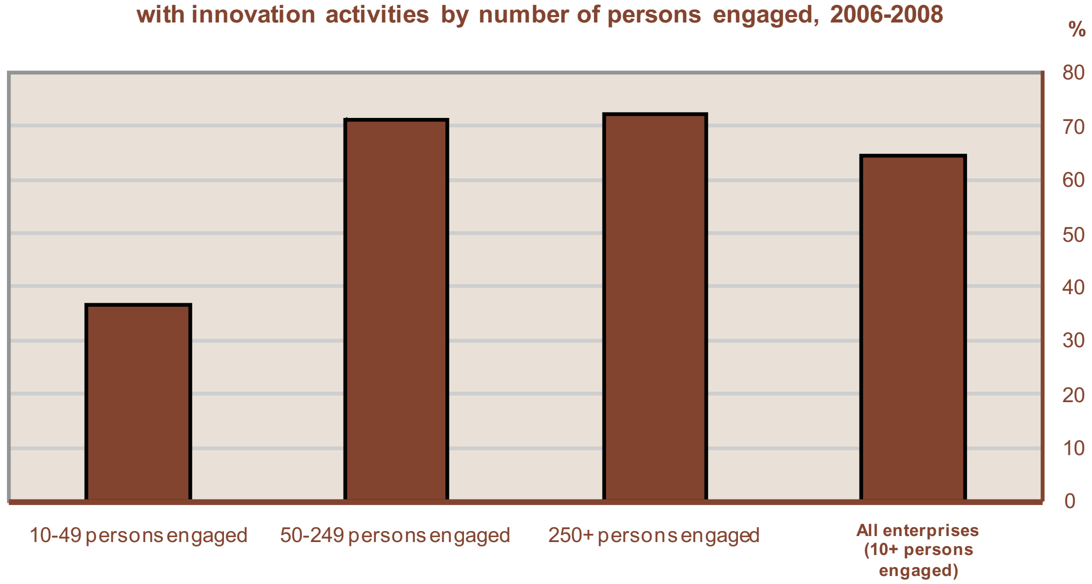
	% of total enterprises with innovation activities	% of total turnover that is generated by enterprises with innovation activities	% of total persons engaged who work in enterprises with innovation activities
10-49	40.1	36.8	42.5
50-249	61.4	71.1	63.6
250+	76.0	72.3	79.0
All enterprises (10+ persons engaged)	**44.9**	**64.6**	**65.9**

Source: CSO/Forfás - Community Innovation Survey 2006 - 2008.

Note: Turnover and persons engaged in 2008.

Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71). See Appendix 2 for NACE classifications.

Figure 2.1 Percentage of total turnover that is generated by enterprises with innovation activities by number of persons engaged, 2006-2008



Source: CSO/Forfás - Community Innovation Survey 2006-2008.
Note: Turnover in 2008.
Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71).

Innovation Rates by Sector and Number of Persons Engaged

Over 52% of industrial enterprises were classed as innovation active in the period 2006 to 2008; almost 41% of selected services enterprises were innovation active during the same period. 85% of turnover in industry was generated by enterprises engaged in innovation compared to nearly 53% of turnover for enterprises in selected services sectors. Over 95% of the turnover of all large industrial enterprises was generated by active innovators, while over 90% of persons engaged by large industrial enterprises worked in innovation active enterprises. *See Table 2.2 and Table 2.6.*

Table 2.2 Innovation activity rates by sector and number of persons engaged, 2006 - 2008

%

	% of total enterprises with innovation activities	% of total turnover that is generated by enterprises with innovation activities	% of total persons engaged who work in enterprises with innovation activities
Industrial sectors			
10-49	44.6	54.5	47.9
50-249	69.5	67.4	71.6
250+	86.4	95.4	90.3
Total	**52.3**	**85.0**	**75.6**
Selected services sectors			
10-49	37.8	32.7	39.4
50-249	53.4	73.1	54.9
250+	64.2	53.8	70.9
Total	**40.6**	**52.7**	**58.6**
All enterprises (10+ persons engaged)	**44.9**	**64.6**	**65.9**

Source: CSO/Forfás - Community Innovation Survey 2006 - 2008.

Note: Turnover and persons engaged in 2008.

Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71). See Appendix 2 for NACE classifications.

Innovation Rates by Nationality of Ownership and Number of Persons Engaged

With the exception of the percentage of total turnover that is generated by small Irish enterprises, foreign owned enterprises had higher rates of innovation activity, turnover related to innovation activity and percentage of persons engaged working in innovation active enterprises for all size classes of enterprise when compared to Irish owned enterprises. Almost 61% of all foreign enterprises with ten or more persons engaged were innovation active compared to over 41% of Irish owned enterprises. Nearly 80% of persons engaged by foreign enterprises were engaged by enterprises that were innovation active compared to 57% of persons engaged by Irish owned enterprises. *See Table 2.3, Figure 2.2 and Table 2.6.*

Table 2.3 Innovation activity rates by nationality of ownership and number of persons engaged, 2006 - 2008

%

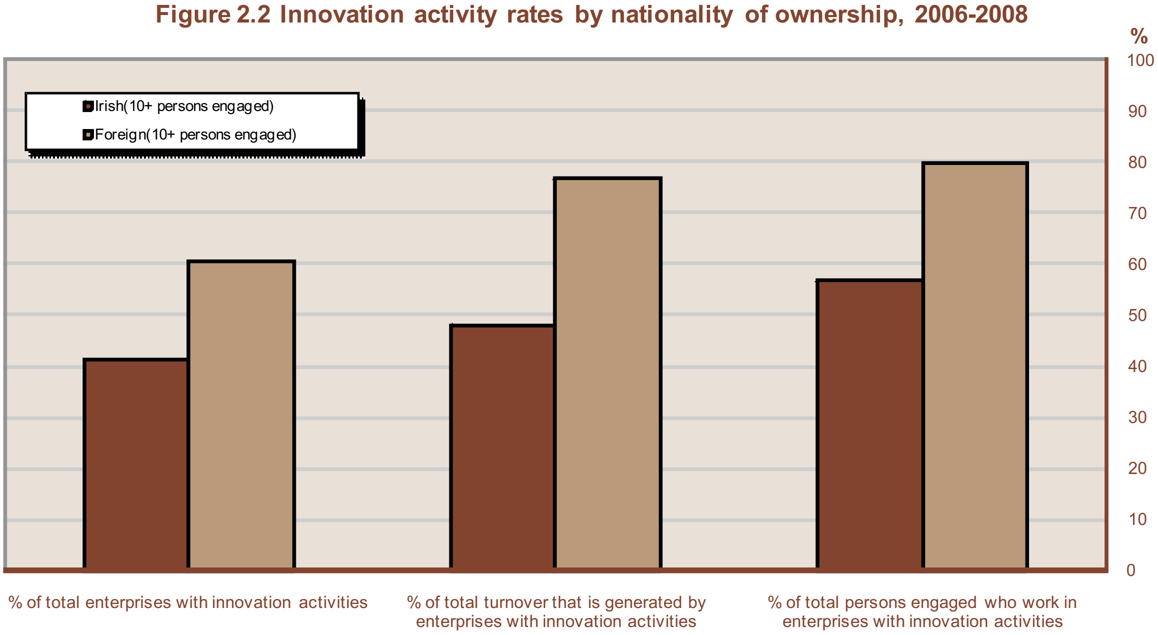
	% of total enterprises with innovation activities	% of total turnover that is generated by enterprises with innovation activities	% of total persons engaged who work in enterprises with innovation activities
Irish			
10-49	38.3	42.2	40.7
50-249	58.6	66.0	60.0
250+	61.2	43.1	68.9
Total	**41.3**	**47.9**	**56.8**
Foreign			
10-49	52.2	33.5	51.9
50-249	66.5	74.4	69.0
250+	86.1	96.2	88.6
Total	**60.7**	**76.8**	**79.8**
All enterprises (10+ persons engaged)	**44.9**	**64.6**	**65.9**

Source: CSO/Forfás - Community Innovation Survey 2006 - 2008.

Note: Turnover and persons engaged in 2008.

Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71). See Appendix 2 for NACE classifications.

Figure 2.2 Innovation activity rates by nationality of ownership, 2006-2008



Source: CSO/Forfás - Community Innovation Survey 2006 - 2008.
Note: Turnover and persons engaged 2008.
Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71).

Innovation Rates by Sector, Nationality of Ownership and Number of Persons Engaged

Two in three (66%) foreign owned industrial enterprises were innovation active compared to one in two (49%) Irish owned industrial enterprises. In the same period, 57% of foreign owned enterprises in selected services sectors were innovation active compared to 37% of such Irish owned enterprises. Over 89% of the turnover of foreign owned industrial enterprises was generated by innovation active enterprises in comparison to 76% of the turnover of Irish owned industrial enterprises. *See Table 2.4, Figure 2.3 and Figure 2.4.*

Table 2.4 Innovation activity rates by sector, nationality of ownership 2006-2008

%

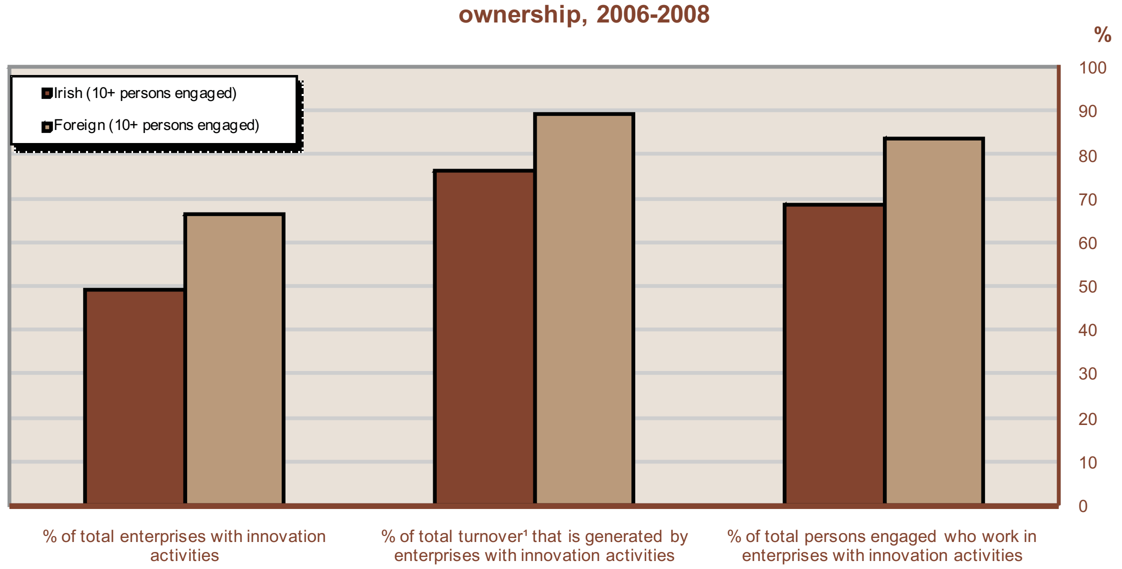
	% of total enterprises with innovation activities	% of total turnover that is generated by enterprises with innovation activities	% of total persons engaged who work in enterprises with innovation activities
Industrial sectors			
Irish	49.0	76.2	68.6
Foreign	66.5	89.4	83.8
Selected services sectors			
Irish	36.7	36.3	49.4
Foreign	57.3	67.6	75.8
All enterprises (10+ persons engaged)	44.9	64.6	65.9

Source: CSO/Forfás - Community Innovation Survey 2006 - 2008.

Note: Turnover and persons engaged in 2008.

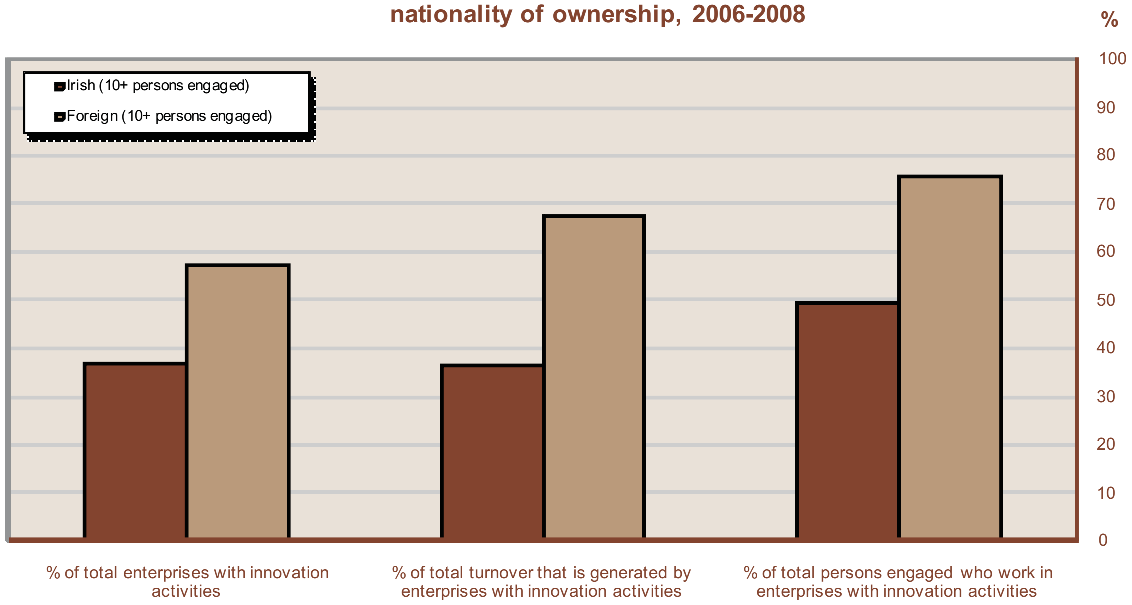
Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71). See Appendix 2 for NACE classifications.

Figure 2.3 Innovation activity rates in industrial sectors by nationality of ownership, 2006-2008



Source: CSO/Forfás - Community Innovation Survey 2006 - 2008.
Note: Turnover and persons engaged in 2008.
Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71)

Figure 2.4 Innovation activity rates in selected services sectors by nationality of ownership, 2006-2008



Source: CSO/Forfás - Community Innovation Survey 2006 - 2008.
Note: Turnover and persons engaged in 2008.
Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71).

Innovation Rates by Detailed Sector

Three-quarters of all enterprises in NACE sectors 19-22 were innovation active while two-thirds of enterprises in NACE 27 were engaged in innovation activities. In NACE sectors 10-12 and 29-30, 85% and 88% respectively, of all turnover was generated by those enterprises who were innovation active. Just under 80% of persons engaged in NACE sectors 26-28 were engaged by enterprises that were innovation active over the period. *See Table 2.5.*

Table 2.5 Innovation activity rates by NACE sub-sector and sector, 2006 - 2008

%

NACE code		NACE sector	% of total enterprises with innovation activities	% of total turnover that is generated by enterprises with innovation activities	% of total persons engaged who work in enterprises with innovation activities
Industrial sectors					
05-09		**Mining and Quarrying**	**19.0**	**42.1**	**44.6**
10-33		**Manufacturing**	**54.2**	**86.8**	**76.4**
10-12		**Manufacture of food products, beverages and tobacco**	**64.2**	**84.6**	**79.5**
	10	Manufacture of food products	64.6	82.3	79.5
	11-12	Manufacture of beverages and tobacco products	59.4	94.1	79.5
13-15		**Manufacture of textiles, wearing apparel, leather and related products**	**48.3**	**54.4**	**50.6**
16-18		**Manufacture of wood, paper, printing and reproduction**	**41.5**	**59.6**	**60.4**
	16	Manufacture of wood and products of wood and cork	45.3	78.2	65.8
	17	Manufacture of paper and paper products	50.0	69.8	70.4
	18	Printing of reproduction of recorded media	33.9	41.0	48.2
19 - 22		**Manufacture of petroleum, chemical, pharmaceutical, rubber and plastic products**	**75.0**	**89.3**	**86.1**
23 - 25		**Manufacture of other non-metallic mineral products, basic metals and fabricated metal products, except machinery and equipment**	**53.4**	**72.6**	**65.6**
	23	Manufacture of other non-metallic mineral products	60.5	87.8	81.6
	24	Manufacture of basic metals	50.6	54.4	58.6
	25	Manufacture of fabricated metal products, except machinery and equipment	49.8	57.2	53.8
26-28		**Manufacture of computer, electronic and optical products; electrical equipment, machinery and equipment n.e.c**	**57.5**	**94.8**	**79.5**
	26	Manufacture of computer, electronic and optical products	62.3	96.6	79.2
	27	Manufacture of electrical equipment	66.6	91.9	89.0
	28	Manufacture of machinery and equipment n.e.c.	51.3	79.2	75.4
29 - 30		**Manufacture of motor vehicles, trailers, semi-trailers and other transport equipment**	**70.6**	**88.4**	**88.6**
31-33		**Manufacture of furniture; jewellery, musical instruments, toys; repair and installation of machinery and equipment**	**36.2**	**80.2**	**75.1**
	31	Manufacture of furniture	30.7	30.9	32.4
	32	Other manufacturing	45.8	88.4	87.4
	33	Repair and installation of machinery and equipment	36.5	40.5	54.9
	35	Electricity, gas, steam and air conditioning supply	37.5	76.4	95.7

Source: CSO/Forfás - Community Innovation Survey 2006 - 2008.

Note: Turnover and persons engaged in 2008.

Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71). See Appendix 2 for NACE classifications.

Table 2.5 Innovation activity rates by NACE sub-sector and sector, 2006 - 2008 - continued

%

NACE code		NACE sector	% of total enterprises with innovation activities	% of total turnover that is generated by enterprises with innovation activities	% of total persons engaged who work in enterprises with innovation activities
36-39		**Water Supply; Sewerage, Waste Management and Remediation Activities**	**39.5**	**43.0**	**42.4**
Total industrial sectors (10+ persons engaged)			**52.3**	**85.0**	**75.6**
Selected services sectors					
	46	Wholesale trade, except of motor vehicles and motorcycles	37.5	34.1	41.7
49-51		**Land transport and transport via pipelines, water transport and air transport**	**26.7**	**65.6**	**60.9**
52 - 53		**Warehousing and support activities for transportation and postal and courier activities**	**41.9**	**66.3**	**53.8**
58, 62,63		**Publishing, computer programming and consultancy, information and service activities**	**63.9**	**96.8**	**77.0**
	61	Telecommunicatiions	59.7	85.7	89.3
64-66		**Financial intermediation.**	**45.4**	**44.5**	**65.9**
	64	Financial service activities, except insurance and pension funding	43.3	35.5	59.1
	65	Insurance, reinsurance and pension funding, except compulsory social security	54.7	83.3	92.7
	66	Activities auxiliary to financial services and insurance activities	42.8	46.6	62.1
	71	Architectural and engineering activities; technical testing and analysis	32.8	45.4	35.4
Total selected services sectors (10+ persons engaged)			**40.6**	**52.7**	**58.6**
All enterprises (10+ persons engaged)			**44.9**	**64.6**	**65.9**

Source: CSO/Forfás - Community Innovation Survey 2006 - 2008.

Note: Turnover and persons engaged in 2008.

Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71). See Appendix 2 for NACE classifications.

Table 2.6 Summary of innovation activity rates by sector, nationality of ownership and number of persons engaged, 2006 - 2008

%

	% of total enterprises with innovation activities	% of total turnover that is generated by enterprises with innovation activities	% of total persons engaged who work in enterprises with innovation activities
Industrial sectors			
Irish	**49.0**	**76.2**	**68.6**
Foreign	**66.5**	**89.4**	**83.8**
Irish and foreign			
10-49	44.6	54.5	47.9
50-249	69.5	67.4	71.6
250+	86.4	95.4	90.3
Total	**52.3**	**85.0**	**75.6**
Selected services sectors			
Irish	**36.7**	**36.3**	**49.4**
Foreign	**57.3**	**67.6**	**75.8**
Irish and foreign			
10-49	37.8	32.7	39.4
50-249	53.4	73.1	54.9
250+	64.2	53.8	70.9
Total	**40.6**	**52.7**	**58.6**
All sectors			
Irish			
10-49	38.3	42.2	40.7
50-249	58.6	66.0	60.0
250+	61.2	43.1	68.9
Total	**41.3**	**47.9**	**56.8**
Foreign			
10-49	52.2	33.5	51.9
50-249	66.5	74.4	69.0
250+	86.1	96.2	88.6
Total	**60.7**	**76.8**	**79.8**
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All enterprises (10+ persons engaged)	**44.9**	**64.6**	**65.9**

Source: CSO/Forfás - Community Innovation Survey 2006 - 2008

Note: Turnover and persons engaged in 2008.

Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71). See Appendix 2 for NACE classifications.

Chapter 3

Innovation Types

Introduction

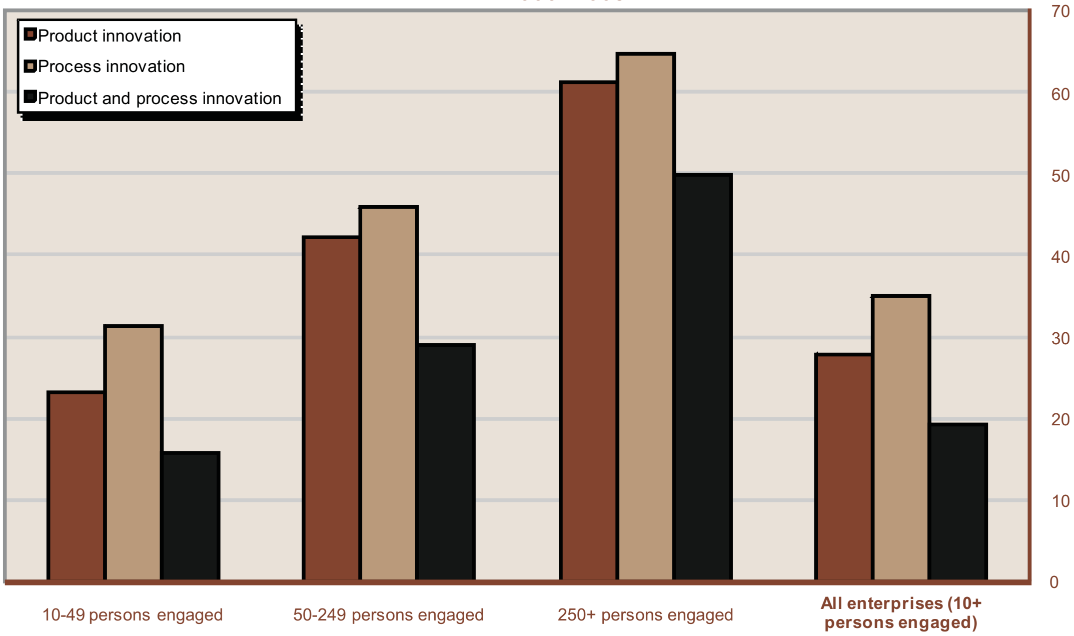
Enterprises active in innovation can be engaged in product innovations, process innovations or both product and process innovations. In addition, some enterprises had ongoing or abandoned innovation activities.

Innovation Types

In the period 2006 to 2008 inclusive, 28% of all enterprises with ten or more persons engaged were engaged in product innovations, 35% of enterprises were engaged in process innovations and 1.4% had ongoing or abandoned innovation activities. One-fifth of all enterprises were engaged in both product and process innovations.

Product and process innovation rates tended to be higher as the size of the enterprise increased with large enterprises more than twice as likely to be engaged in product or process innovation activities than small enterprises. For example, while 23% of small enterprises were product innovators, over 61% of large enterprises were engaged in product innovations. Similarly, while 31% of small enterprises engaged in process innovations, almost 65% of large enterprises were process innovators. *See Figure 3.1 and Table 3.1.*

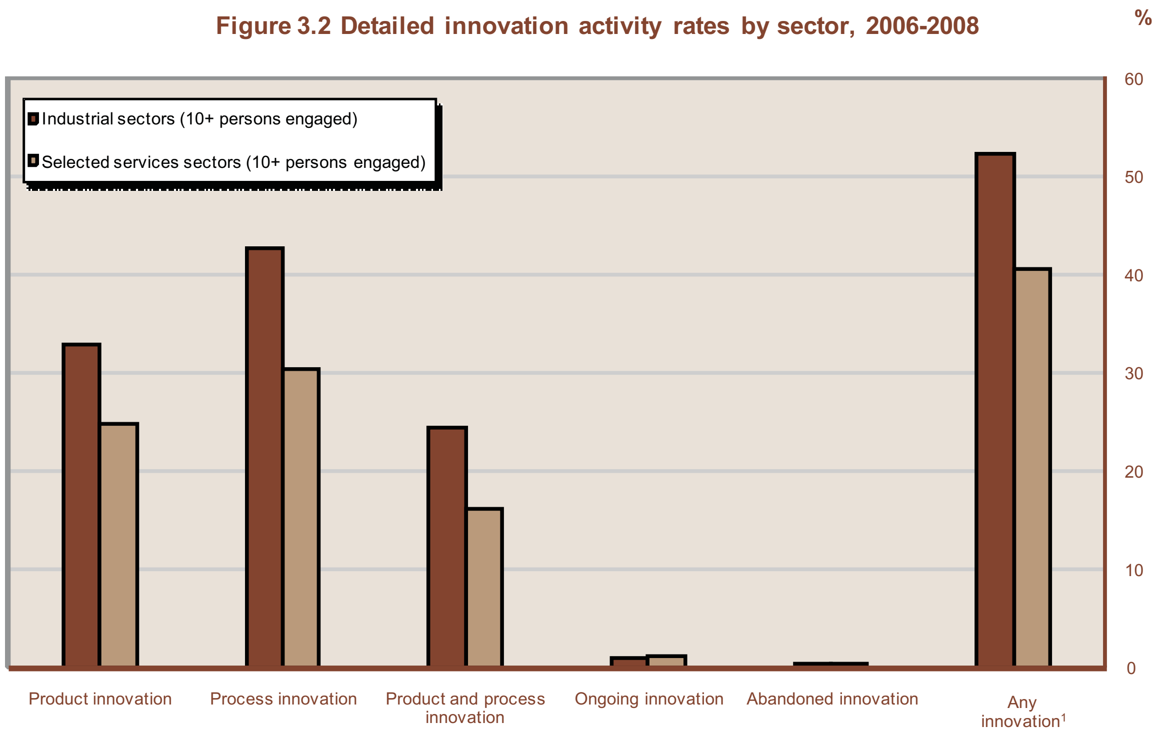
Figure 3.1 Detailed innovation activity rates by number of persons engaged, 2006 -2008



Source: CSO/Forfás - Community Innovation Survey 2006-2008.
Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71).

Industrial enterprises had higher rates of product innovation, process innovation and combined product and process innovation compared to selected services sector enterprises. One-third of all industrial enterprises were engaged in product innovation compared to a quarter of selected services sector enterprises. Almost 43% of industrial enterprises were actively engaged in process innovations compared to over 30% of selected services enterprises. *See Figure 3.2 and Table 3.1.*

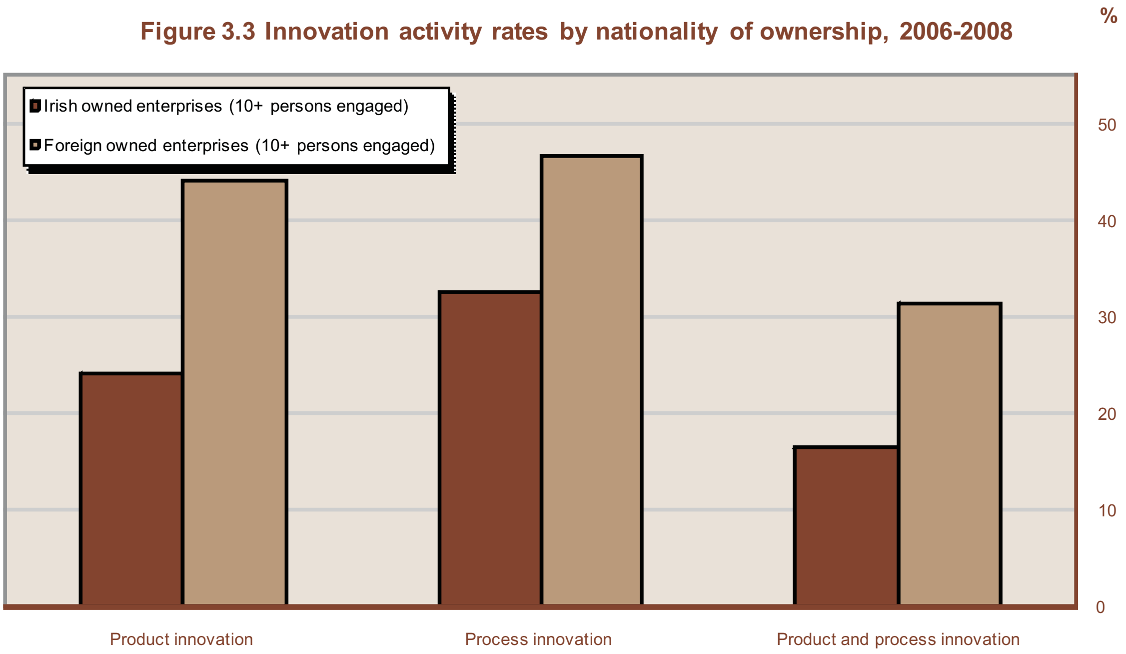
Figure 3.2 Detailed innovation activity rates by sector, 2006-2008



Source: CSO/Forfás - Community Innovation Survey 2006-2008.
Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71).

Foreign owned enterprises were more likely to be engaged in product innovations, process innovations or both product and process innovations. While 44% of foreign owned enterprises were engaged in product innovations just 24% of Irish owned enterprises were engaged in product innovations. In addition, close to a half (46%) of foreign owned enterprises were engaged in process innovations compared to one in three (32%) Irish owned enterprises. *See Figure 3.3 and Table 3. 1.*

Figure 3.3 Innovation activity rates by nationality of ownership, 2006-2008



Source: CSO/Forfás - Community Innovation Survey 2006-2008.
Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71).

Table 3.1 Detailed innovation activity rates by nationality of ownership, sector and number of persons engaged, 2006 - 2008

%

	Nationality of ownership		Sector of activity		Number of persons engaged			
	Irish (10+ persons engaged)	Foreign (10+ persons engaged)	Industrial sectors (10+ persons engaged)	Selected services sectors (10+ persons engaged)	10-49	50-249	250+	All enterprises (10+ persons engaged)
Product innovation	24.0	44.0	32.8	24.8	23.2	42.2	61.3	27.8
Process innovation	32.4	46.5	42.7	30.4	31.4	45.9	64.6	35.0
Product and process innovation	16.4	31.3	24.5	16.1	15.8	29.0	49.9	19.2
Ongoing innovation	1.0	1.0	0.9	1.1	0.9	1.6	0.0	1.0
Abandoned innovation	0.3	0.6	0.4	0.4	0.3	0.7	0.0	0.4
Any innovation[1]	**41.3**	**60.7**	**52.3**	**40.6**	**40.1**	**61.4**	**76.0**	**44.9**

Source: CSO/Forfás - Community Innovation Survey 2006 - 2008.

[1] Respondents could engage in more than one type of innovation, hence the sum of the categories does not equal the total.

Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71). See Appendix 2 for NACE classifications.

Chapter 4

Innovation: Detailed Types

Introduction

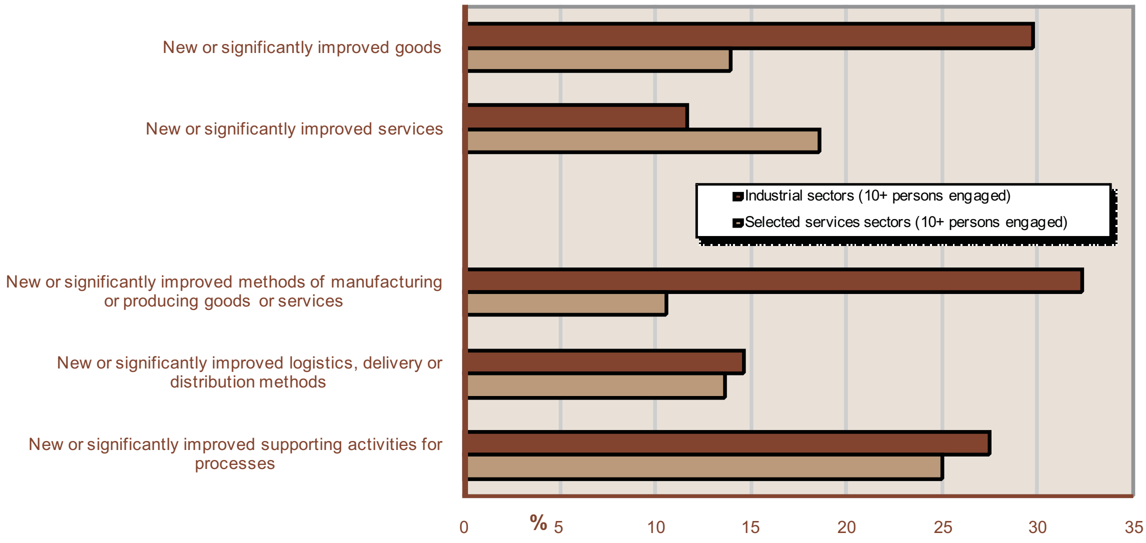
Enterprises who were product innovators could be engaged in developing new or significantly improved goods along with developing new or significantly improved services. Process innovations include developing new or significantly improved methods of manufacturing or producing goods or services; new or significantly improved logistics, delivery or distribution methods; along with new or significantly improved supporting activities for processes.

Product and Process Innovation Rates

One-fifth of all enterprises indicated that they were engaged in developing new or significantly improved goods while over 16% of enterprises indicated that they were engaged in developing new or significantly improved services as a part of their product innovations. Over a quarter of all enterprises were engaged in developing new or significantly improved supporting activities for processes. *See Table 4.1.*

Almost one in three (30%) of all enterprises in the industrial sector developed new or significantly improved goods compared to 14% of enterprises in the selected services sector while more enterprises in selected services sectors developed new or significantly improved services compared to enterprises in the industrial sector. Nearly one in three industrial enterprises developed new or significantly improved methods of manufacturing or producing goods or services compared to one in ten selected services sector enterprises. *See Figure 4.1 and Table 4.1.*

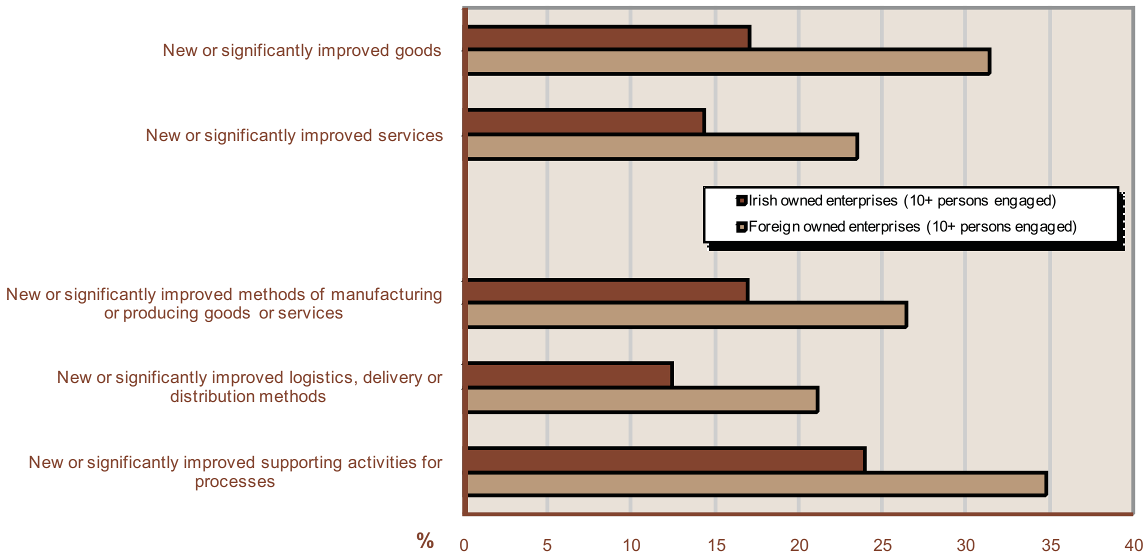
Figure 4.1 Detailed product and process innovation activity rates by sector, 2006 - 2008



Source: CSO/Forfás - Community Innovation Survey 2006-2008.
Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71).

Over 31% of all foreign owned enterprises were engaged in developing new or significantly improved goods as part of their product innovations over the period 2006-2008 inclusive compared to 17% of Irish owned enterprises. Foreign owned enterprises were also more likely to be engaged in any of the three types of process innovations. *See Figure 4.2 and Table 4.1.*

Figure 4.2 Detailed product and process innovation activity rates by nationality of ownership, 2006 - 2008



Source: CSO/Forfás - Community Innovation Survey 2006-2008.
Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71).

Table 4.1 Detailed product and process innovation activity rates by nationality of ownership, sector and number of persons engaged, 2006- 2008

%

	Nationality of ownership		Sector of activity		Number of persons engaged			
	Irish (10+ persons engaged)	Foreign (10+ persons engaged)	Industrial sectors (10+ persons engaged)	Selected services sectors (10+ persons engaged)	10-49	50-249	250+	All enterprises (10+ persons engaged)
Product innovations:								
New or significantly improved goods	17.1	31.4	29.8	13.9	15.7	34.2	44.5	**19.8**
New or significantly improved services	14.3	23.5	11.7	18.6	14.5	19.9	33.4	**16.1**
Any product innovation[1]	**24.0**	**44.0**	**32.8**	**24.8**	**23.2**	**42.2**	**61.3**	**27.8**
Process innovations:								
New or significantly improved methods of manufacturing or producing goods or services	16.9	26.4	32.3	10.6	14.8	30.8	48.0	**18.7**
New or significantly improved logistics, delivery or distribution methods	12.4	21.1	14.6	13.6	12.1	18.0	36.5	**14.0**
New or significantly improved supporting activities for processes	23.9	34.8	27.5	25.0	23.5	33.2	47.8	**26.0**
Any process innovation[2]	**32.4**	**46.5**	**42.7**	**30.4**	**31.4**	**45.9**	**64.6**	**35.0**
Any innovation	**41.3**	**60.7**	**52.3**	**40.6**	**40.1**	**61.4**	**76.0**	**44.9**

Source: CSO/Forfás - Community Innovation Survey 2006 - 2008.

[1] Respondents could engage in more than one type of product innovation, hence the sum of the categories does not equal the total.

[2] Respondents could engage in more than one type of process innovation, hence the sum of the categories does not equal the total.

Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71). See Appendix 2 for NACE classifications.

Chapter 5

Innovation Turnover

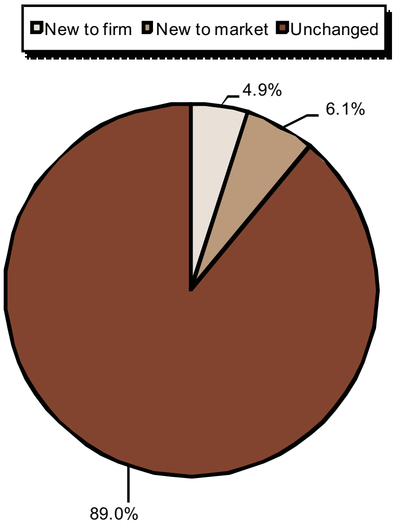
Introduction

Enterprises were asked to estimate how much of their total turnover was attributed to product innovations, separated into new to market innovations (a measure of novelty and creativity) and new to the firm innovations (those which were adopted by the firm but invented and created elsewhere).

Innovation Turnover

Just 11% of the turnover of all active and non-active innovators in 2008 in the industrial and selected services sectors was as a result of product innovations over the period 2006 to 2008. Large enterprises attributed the same proportion of their turnover in 2008 to new to firm and new to market product innovations at 6.2 % and 6.3% respectively. *See Figure 5.1 and Table 5.1.*

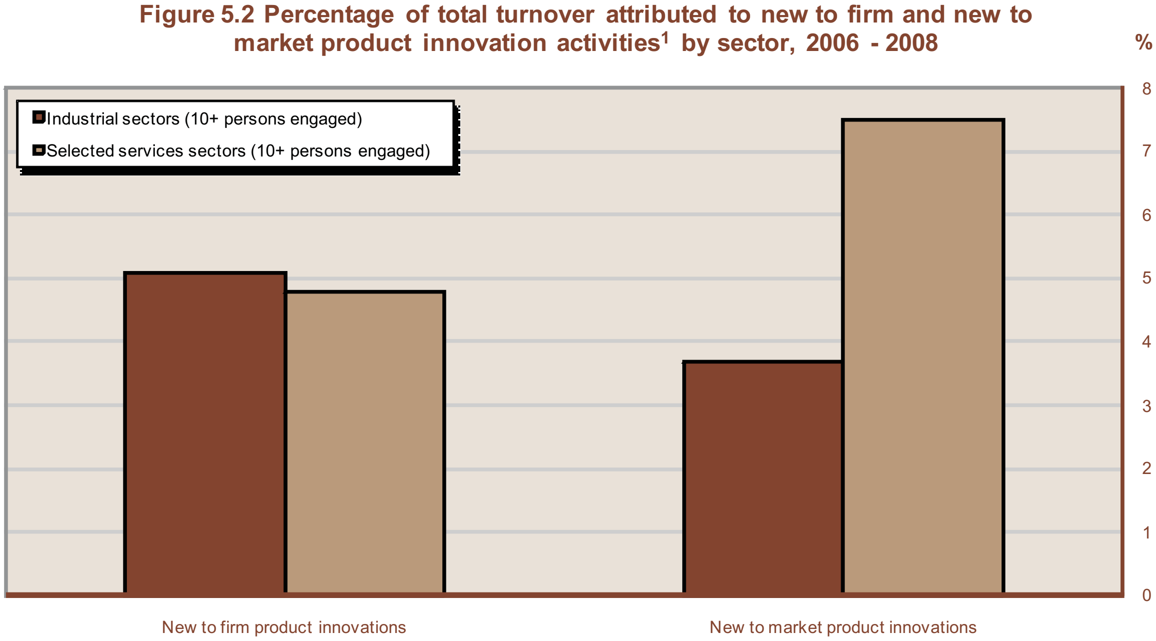
Figure 5.1 Percentage of total turnover attributed to product innovation activities[1] for all enterprises (10+ persons engaged), 2008



Source: CSO/Forfás - Community Innovation Survey 2006-2008.
[1] Product innovation activities during the period 2006-2008.
Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71)

Industrial enterprises attributed 5.1% of their turnover to new to firm product innovations compared to 4.8% of turnover of selected services sector enterprises. Enterprises in selected services, however, generated twice as much of their turnover from new to market product innovations when compared to enterprises in industrial sectors (8% compared to 4%). *See Figure 5.2 and Table 5.1.*

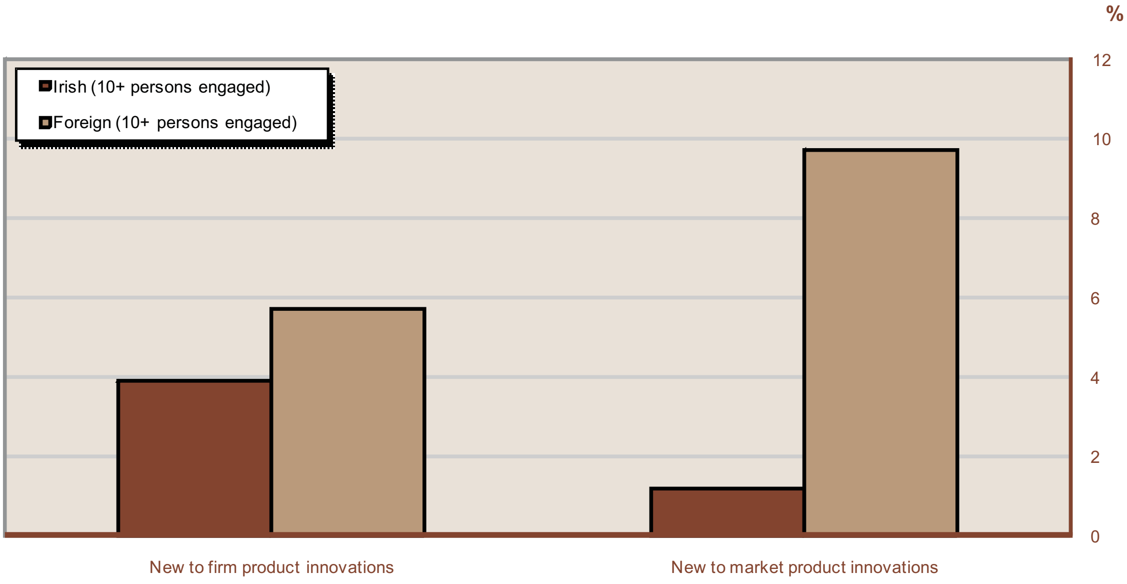
Figure 5.2 Percentage of total turnover attributed to new to firm and new to market product innovation activities[1] by sector, 2006 - 2008



Source: CSO/Forfás - Community Innovation Survey 2006-2008.
[1] Product innovation activities during the period 2006-2008.
Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71).

Irish owned enterprises generated 4% of their turnover from new to firm product innovations in 2008 compared to nearly 6% for foreign owned enterprises. Foreign owned enterprises however, generated eight times as much of their turnover from new to market innovations when compared to Irish owned enterprises in the same period. *See Figure 5.3 and Table 5.1.*

Figure 5.3 Percentage of total turnover attributed to new to firm and new to market product innovation activities[1] by nationality of ownership, 2006-2008



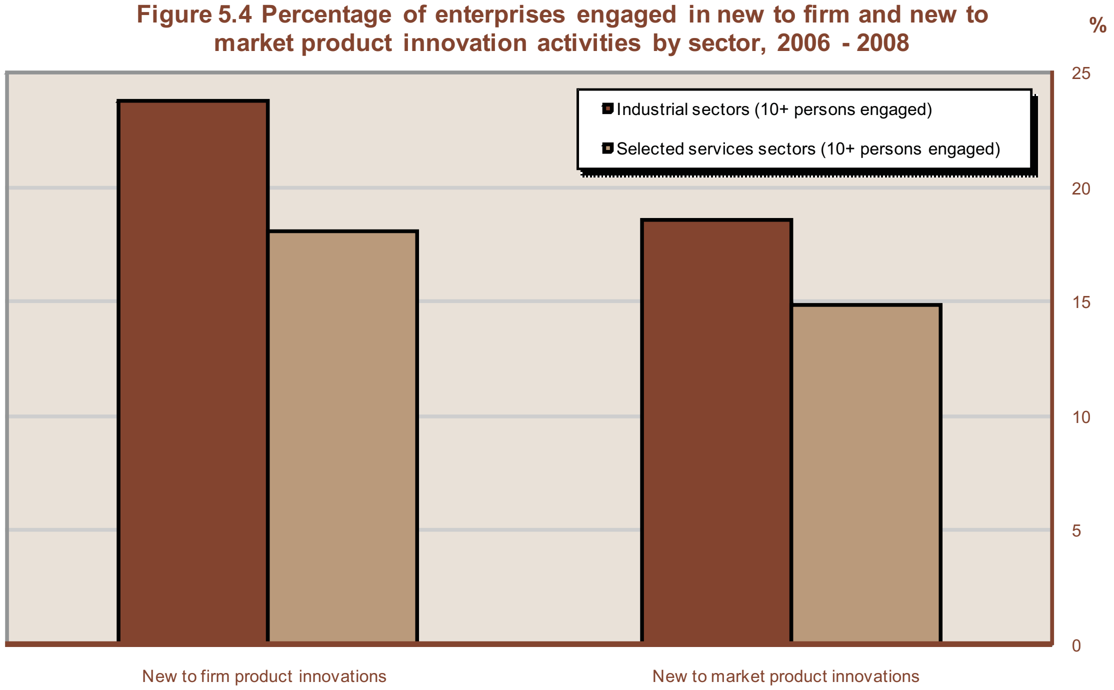
Source: CSO/Forfás - Community Innovation Survey 2006-2008.
[1] Product innovation activities during the period 2006-2008.
Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71).

New to Firm and New to Market Product Innovations

A fifth of all enterprises with ten or more persons engaged had new to firm product innovations over the period 2006-2008 inclusive while over 16% of enterprises were engaged in new to market product innovations in the same period. *See Table 5.2.*

Nearly one in four industrial enterprises were engaged in new to firm product innovations compared to around one in five selected services sector enterprises. Again, nearly a fifth of all enterprises in the industrial sector were engaged in new to market product innovations compared to around a sixth of enterprises in selected services sectors. *See Figure 5.4 and Table 5.2.*

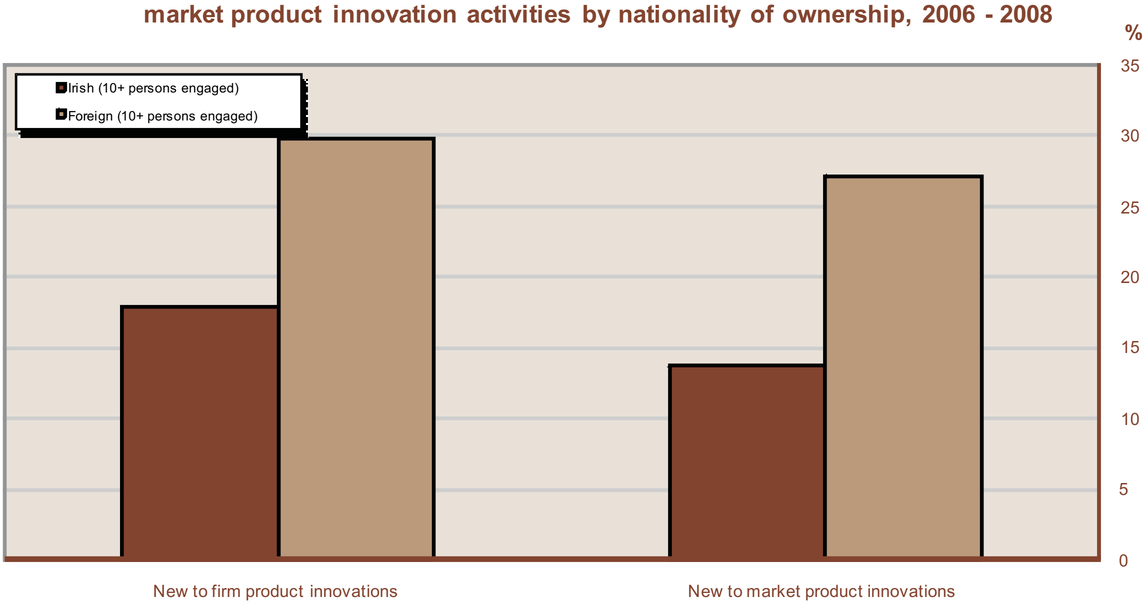
Figure 5.4 Percentage of enterprises engaged in new to firm and new to market product innovation activities by sector, 2006 - 2008



Source: CSO/Forfás - Community Innovation Survey 2006-2008.
Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71).

Slightly less than one in three of all foreign owned enterprises were engaged in new to firm product innovations compared to nearly one fifth of Irish owned enterprises while 27% of foreign owned enterprises were engaged in new to market product innovations compared to 14% of Irish owned enterprises. *See Figure 5.5 and Table 5.2.*

Figure 5.5 Percentage of enterprises engaged in new to firm and new to market product innovation activities by nationality of ownership, 2006 - 2008



Source: CSO/Forfás - Community Innovation Survey 2006-2008.
Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71).

Table 5.1 Percentage of total turnover attributed to new to firm and new to market product innovation activities[1] by nationality of ownership, sector and number of persons engaged, 2006 - 2008

%

	Nationality of ownership		Sector of activity		Number of persons engaged			
	Irish (10+ persons engaged)	Foreign (10+ persons engaged)	Industrial sectors (10+ persons engaged)	Selected services sectors (10+ persons engaged)	10-49	50-249	250+	All enterprises (10+ persons engaged)
Turnover:								
New to firm product innovations	3.9	5.7	5.1	4.8	2.7	3.7	6.2	**4.9**
New to market product innovations	1.2	9.7	3.7	7.5	3.6	7.8	6.3	**6.1**
Unchanged	94.9	84.7	91.1	87.7	93.6	88.5	87.5	**89.0**
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Source: CSO/Forfás - Community Innovation Survey 2006 - 2008.

[1] Product innovation activities during the period 2006-2008.

Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71). See Appendix 2 for NACE classifications.

Table 5.2 Percentage of enterprises engaged in new to firm and new to market product innovation activities[1] by nationality of ownership, sector and number of persons engaged, 2006 - 2008

%

	Nationality of ownership		Sector of activity		Number of persons engaged			
	Irish (10+ persons engaged)	Foreign (10+ persons engaged)	Industrial sectors (10+ persons engaged)	Selected services sectors (10+ persons engaged)	10-49	50-249	250+	All enterprises (10+ persons engaged)
New to firm product innovations	17.9	29.8	23.7	18.0	17.3	28.5	44.1	**20.2**
New to market product innovations	13.8	27.1	18.6	14.9	13.5	24.2	39.8	**16.3**

Source: CSO/Forfás - Community Innovation Survey 2006 - 2008.

[1] Product innovation activities during the period 2006-2008.

Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71). See Appendix 2 for NACE classifications.

Chapter 6

Innovation Expenditure

Introduction

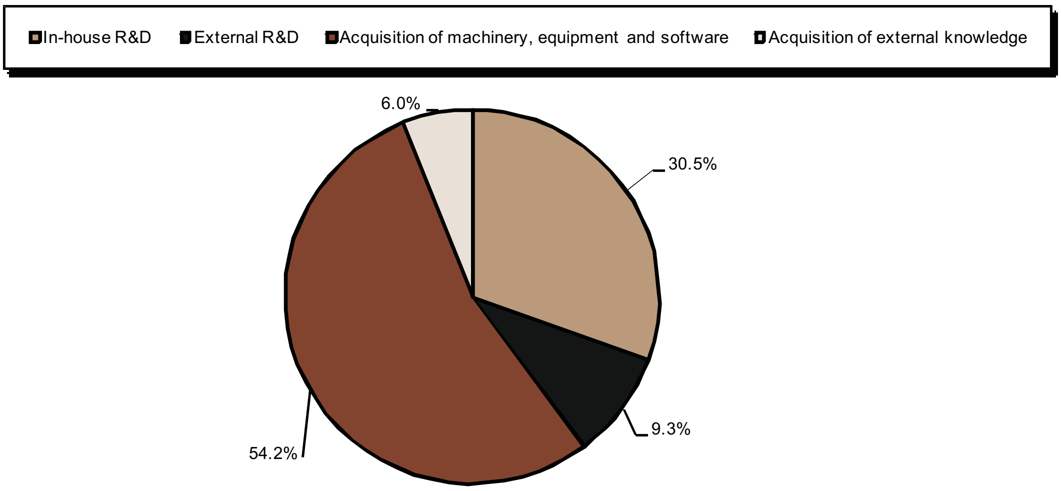
Enterprises were asked if they were active in any of the following categories and to estimate innovation spending on each of those categories in 2008: in-house R&D; purchase of external R&D; acquisition of machinery, equipment and software; acquisition of other external knowledge. More detailed information regarding expenditure by enterprises on R&D activities is available from the Business Expenditure on Research and Development (BERD) survey[1].

Innovation Expenditure

Total spending on innovation activities across the Irish economy is estimated to have been almost €5.3bn in 2008. Over half (54%) of all this expenditure was for the acquisition of machinery, equipment and software, on which nearly €2.9bn was spent in 2008. Just over 30% of expenditure or €1.6bn was spent on in-house R&D. The purchase of external R&D accounted for 9% of expenditure, while the acquisition of external knowledge accounted for 6%. *See Figure 6.1 and Table 6.1.*

[1] Results from the 2007-2008 BERD survey are available from the CSO website. Go to www.cso..ie and then go to Publications: Science, Technology and Research.

Figure 6.1 Percentage share of innovation expenditure by type of expenditure for all enterprises (10+ persons engaged), 2008

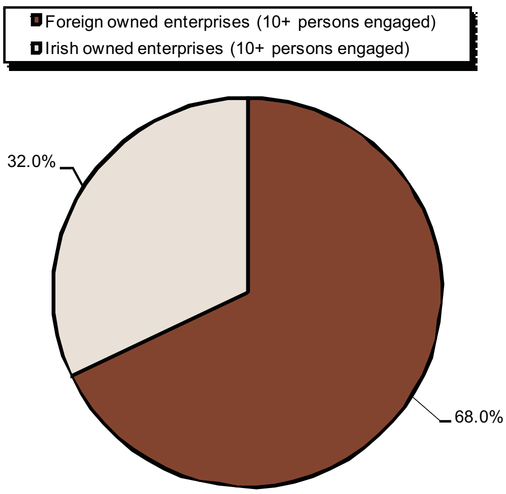


Source: CSO/Forfás - Community Innovation Survey 2006-2008.
Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71).

The total spend by industrial enterprises on innovation activities was over €3.5bn in 2008 while the total spend in selected services sectors was over €1.7bn. Industrial enterprises spent €2bn on machinery, equipment and software, €878m on in-house R&D, €390m on external R&D and €262m on acquisition of external knowledge. Selected services sectors had a similar spend pattern and spent €856m on machinery and equipment, €731m on in-house R&D, €102m on external R&D and €53m on acquisition of external knowledge. *See Table 6.1.*

Irish owned enterprises spent €1.7bn on innovation related activities in 2008 while foreign owned enterprises spent almost €3.6bn in the same period. Foreign owned enterprises were therefore responsible for 68% of all innovation-related expenditure in 2008. Irish owned enterprises spent €340m on in-house R&D in 2008 compared to foreign owned enterprises that spent nearly €1.3bn on in-house R&D in the period. *See Figure 6.2 and Table 6.1.*

Figure 6.2 Share of total innovation expenditure by nationality of ownership, 2008



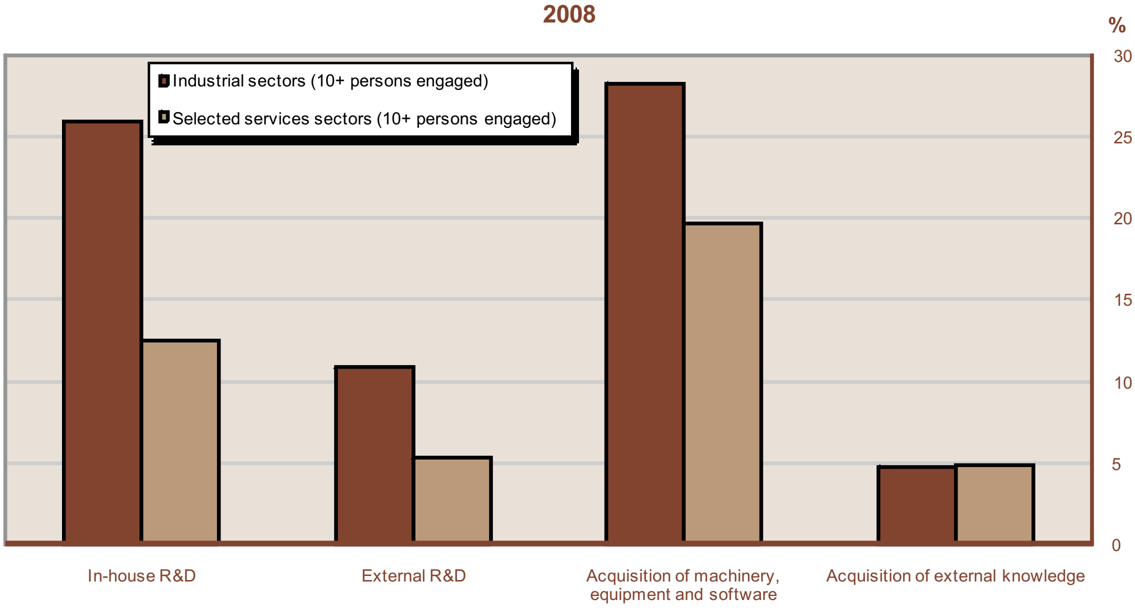
Source: CSO/Forfás - Community Innovation Survey 2006-2008.
Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71).

Enterprises Engaged in Innovation Expenditure

Close to one in three enterprises had innovation expenditure in 2008. Almost 27% of all small enterprises, 48% of medium sized enterprises and over 64% of all large enterprises had such expenditure in the period. *See Table 6.2.*

Industrial enterprises accounted for 40% innovation related expenditure in 2008 compared to 26% of enterprises in selected services sectors. Just over 28% of enterprises in the industrial sector purchased machinery, equipment or software related to innovation activities compared to nearly 20% of selected services sector enterprises. *See Figure 6.3 and Table 6.2.*

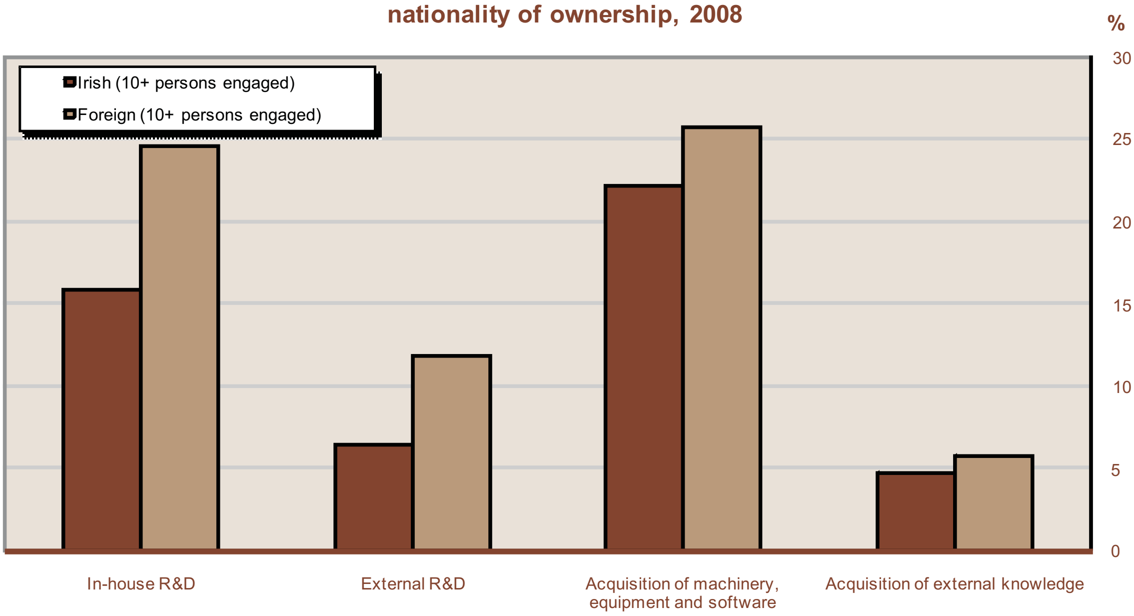
Figure 6.3 Percentage of enterprises with innovation expenditure by sector, 2008



Source: CSO/Forfás - Community Innovation Survey 2006-2008
Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71).

Nearly 30% of Irish owned enterprises had innovation related expenditure in 2008 compared to 39% of foreign owned enterprises. Around one in five Irish owned enterprises purchased machinery, equipment or software related to innovation activities in the period while more than one in four foreign owned enterprises made such purchases. *See Figure 6.4 and Table 6.2.*

Figure 6.4 Percentage of enterprises engaged in innovation expenditure by nationality of ownership, 2008



Source: CSO/Forfás - Community Innovation Survey 2006-2008
Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71).

Table 6.1 Innovation expenditure by nationality of ownership, sector and number of persons engaged, 2008

€m

	Nationality of ownership		Sector of activity		Number of persons engaged			
	Irish (10+ persons engaged)	Foreign (10+ persons engaged)	Industrial sectors (10+ persons engaged)	Selected services sectors (10+ persons engaged)	10-49	50-249	250+	All enterprises (10+ persons engaged)
In-house R&D	339.9	1268.8	877.7	731.0	166.8	431.7	1010.3	**1608.7**
Purchase of external R&D	57.9	434.7	390.3	102.3	28.3	205.6	258.7	**492.6**
Acquisition of machinery, equipment and software	1142.6	1721.0	2007.5	856.1	256.6	1162.9	1444.1	**2863.7**
Acquisition of other external knowledge	151.6	163.3	261.8	53.1	31.8	163.3	119.8	**314.9**
Total innovation expenditure	**1692.0**	**3587.8**	**3537.4**	**1742.5**	**483.5**	**1963.5**	**2832.8**	**5279.9**

Source: CSO/Forfás - Community Innovation Survey 2006 - 2008.

Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71). See Appendix 2 for NACE classifications.

Table 6.2 Percentage of enterprises engaged in innovation expenditure by nationality of ownership, sector and number of persons engaged, 2008

%

	Nationality of ownership		Sector of activity		Number of persons engaged			
	Irish (10+ persons engaged)	Foreign (10+ persons engaged)	Industrial sectors (10+ persons engaged)	Selected services sectors (10+ persons engaged)	10-49	50-249	250+	All enterprises (10+ persons engaged)
Engaged in:								
In-house R&D	15.9	24.6	26.0	12.5	12.9	31.7	54.0	**17.5**
Purchase of External R&D	6.4	11.8	10.9	5.3	5.4	13.7	22.9	**7.4**
Acquisition of machinery, equipment and software	22.2	25.8	28.3	19.7	20.2	33.0	36.1	**22.9**
Acquisition of other external knowledge	4.7	5.7	4.8	4.9	4.3	6.6	10.5	**4.9**
Total[1]	**29.6**	**39.0**	**40.0**	**26.3**	**26.5**	**47.8**	**64.3**	**31.4**

Source: CSO/Forfás - Community Innovation Survey 2006 - 2008.

[1] Respondents could engage in more than one innovation expenditure category, hence the sum of the categories does not equal the total.

Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71). See Appendix 2 for NACE classifications.

Chapter 7

Innovation Cooperation

Introduction

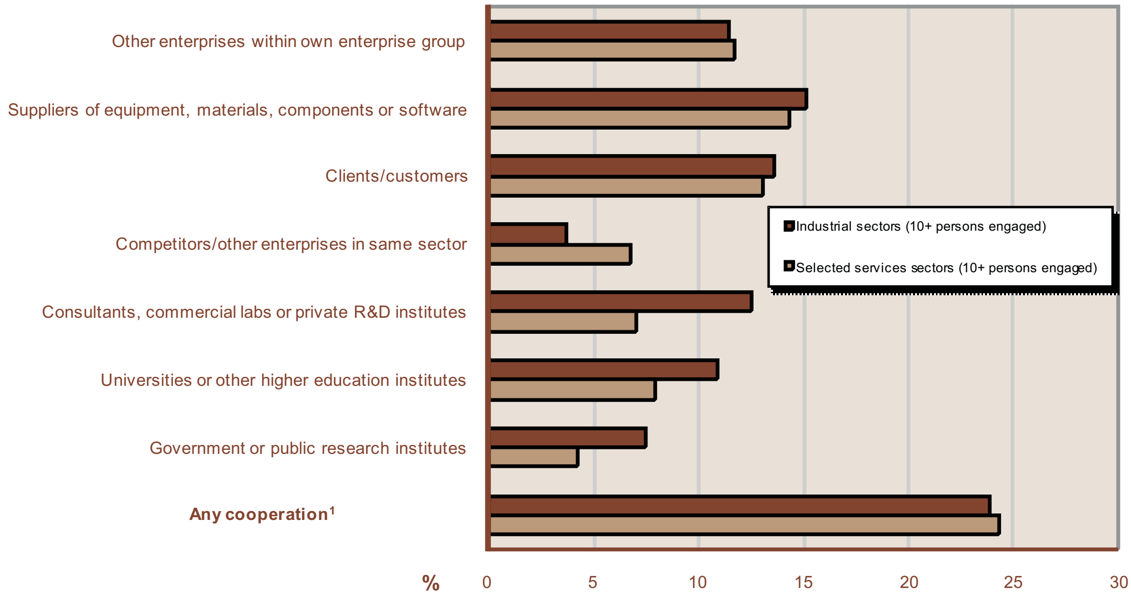
In developing new to market or new to firm product and process innovations, firms can develop these within their own firm or within their enterprise group. Alternatively, firms may engage in innovation cooperation with other sources to help develop these innovations.

Innovation Cooperation Partners

Close to a quarter of all innovation active enterprises indicated that they engaged in some cooperation activity when developing their innovations. Nearly half (49%) of all large innovation active enterprises were involved in innovation partnerships compared to a fifth (20%) of small enterprises. Suppliers of equipment, materials, components or software were the most commonly cited innovation partners, with almost 15% of all enterprises having innovation cooperation with these suppliers. *See Table 7.1.*

Around one in four of both industrial enterprises and selected services sector enterprises that were innovation active, indicated that they were engaged in innovation cooperation. Innovation cooperation partnerships with suppliers of equipment, materials, components or software were the most likely innovation partnerships in both industry (15%) and selected services sectors (14%). *See Figure 7.1 and Table 7.1.*

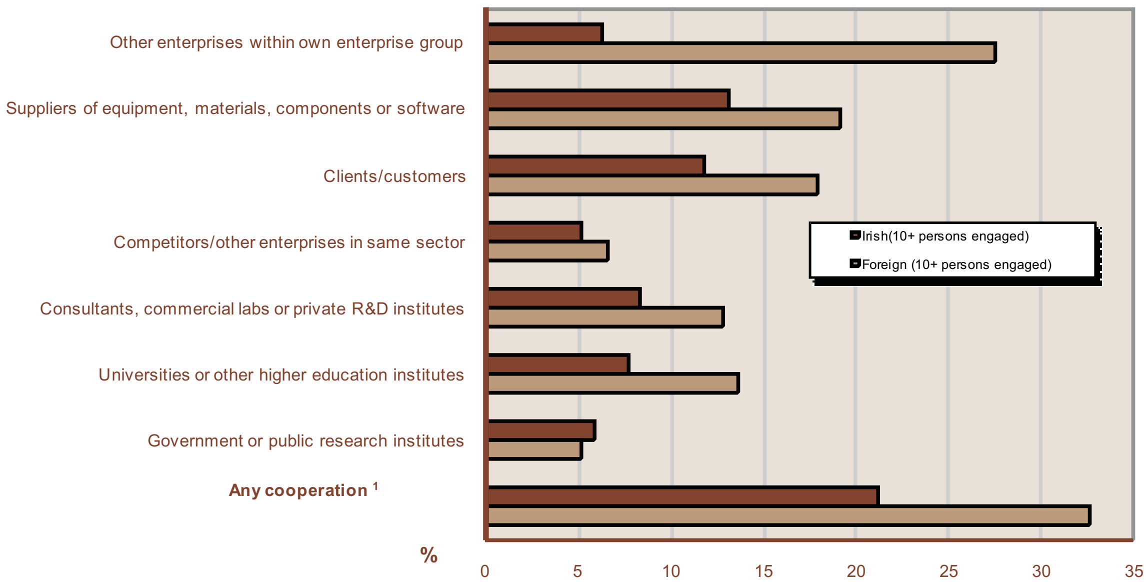
Figure 7.1 Type of cooperation partner for innovative enterprises by sector, 2006 - 2008



Source: CSO/Forfás - Community Innovation Survey 2006-2008.
[1] Respondents could engage in more than one innovation cooperation category, hence the sum of the categories does not equal the total.
Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71).

Over a fifth of all Irish owned enterprises engaged in innovation cooperation in the period 2006-2008 inclusive, while a third of all foreign owned enterprises engaged in such innovation cooperation. Excluding cooperation with government or public research institutes, foreign owned enterprises were more likely to cooperate in all types of innovation cooperation categories when compared to their Irish counterparts. *See Figure 7.2 and Table 7.1.*

Figure 7.2 Type of cooperation partner for innovative enterprises by nationality of ownership, 2006 - 2008

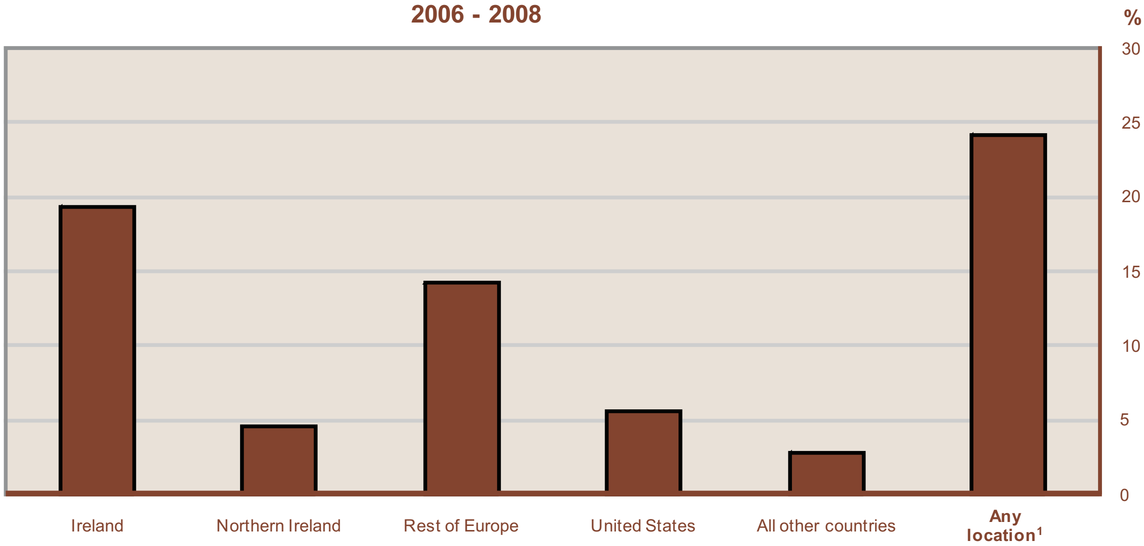


Source: CSO/Forfás - Community Innovation Survey 2006-2008.
[1] Respondents could engage in more than one innovation cooperation category, hence the sum of the categories does not equal the total.
Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71).

Innovation Cooperation Locations

Around a fifth of all enterprises were engaged in innovation cooperation with partners who were located in Ireland, compared to 14% of enterprises who were engaged with partners in the Rest of Europe. *See Figure 7.3 and Table 7.2.*

Figure 7.3 Location of cooperation partner for innovative enterprises, 2006 - 2008



Source: CSO/Forfás - Community Innovation Survey 2006-2008

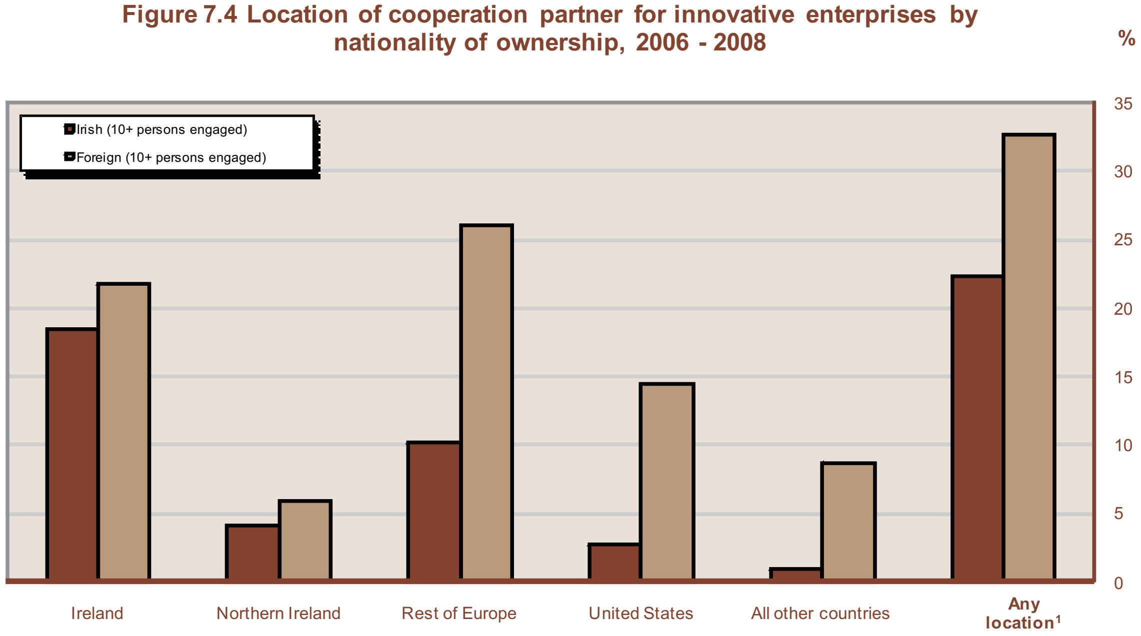
[1] Respondents could be engaged in more than one innovation cooperation category in each location, hence the sum of the categories does not equal the total.

Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71).

In both the industrial and selected services sectors, around a fifth of all enterprises engaged in innovation cooperation with innovation partners that were located in Ireland. Nearly 16% of industrial enterprises were engaged in innovation cooperation with partners in the Rest of Europe compared to 13% of selected services sector enterprises. *See Table 7.2.*

Over 18% of Irish owned enterprises were engaged in innovation cooperation with enterprises located in Ireland while over 10% of Irish enterprises cooperated with partners located in the Rest of Europe. One in four (26%) of all foreign owned enterprises were engaged in innovation cooperation with enterprises located in the Rest of Europe while 22% cooperated with partners in Ireland. *See Figure 7.4 and Table 7.2.*

Figure 7.4 Location of cooperation partner for innovative enterprises by nationality of ownership, 2006 - 2008



Source: CSO/Forfás - Community Innovation Survey 2006-2008
[1] Respondents could be engaged in more than one innovation cooperation category in each location, hence the sum of the categories does not equal the total.
Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71).

Table 7.1 Type of cooperation partner for innovative enterprises by nationality of ownership, sector and number of persons engaged, 2006-2008

%

	Nationality of ownership		Sector of activity		Number of persons engaged			
	Irish (10+ persons engaged)	Foreign (10+ persons engaged)	Industrial sectors (10+ persons engaged)	Selected services sectors (10+ persons engaged)	10-49	50-249	250+	All enterprises (10+ persons engaged)
Other enterprises within own enterprise group	6.2	27.5	11.4	11.7	8.0	16.4	34.8	**11.6**
Suppliers of equipment, materials, components or software	13.1	19.1	15.1	14.3	12.2	18.8	27.1	**14.6**
Clients/customers	11.8	17.9	13.6	13.1	11.2	17.6	22.6	**13.3**
Competitors/other enterprises in same sector	5.1	6.6	3.7	6.8	5.0	6.5	7.3	**5.5**
Consultants, commercial labs or private R&D institutes	8.3	12.8	12.5	7.0	7.0	13.8	21.2	**9.4**
Universities or other higher education institutes	7.7	13.6	10.9	7.9	6.4	12.7	28.1	**9.2**
Government or public research institutes	5.8	5.1	7.5	4.2	4.2	8.9	9.8	**5.6**
Any cooperation[1]	**21.2**	**32.6**	**23.9**	**24.3**	**20.0**	**30.2**	**48.6**	**24.1**

Source: CSO/Forfás - Community Innovation Survey 2006 - 2008.

[1] Respondents could engage in more than one innovation cooperation category, hence the sum of the categories does not equal the total.

Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71). See Appendix 2 for NACE classifications.

Table 7.2 Location of cooperation partner for innovative enterprises by nationality of ownership, sector and number of persons engaged, 2006 - 2008

%

	Nationality of ownership		Sector of activity		Number of persons engaged			
	Irish (10+ persons engaged)	Foreign (10+ persons engaged)	Industrial sectors (10+ persons engaged)	Selected services sectors (10+ persons engaged)	10-49	50-249	250+	All enterprises (10+ persons engaged)
Ireland	18.4	21.8	20.3	18.5	16.0	23.7	40.5	**19.3**
Northern Ireland	4.2	5.9	4.7	4.6	4.0	5.8	7.8	**4.6**
Rest of Europe	10.2	26.0	15.7	13.1	11.3	18.3	33.1	**14.2**
United States	2.7	14.4	6.4	5.1	3.6	8.2	19.7	**5.6**
All other countries	0.9	8.7	1.8	3.6	2.2	2.5	11.9	**2.8**
Any location[1]	**21.2**	**32.6**	**23.9**	**24.3**	**20.0**	**30.2**	**48.6**	**24.1**

Source: CSO/Forfás - Community Innovation Survey 2006 - 2008.

[1] Respondents could be engaged in more than one innovation cooperation category in each location, hence the sum of the categories does not equal the total.

Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71). See Appendix 2 for NACE classifications.

Chapter 8

Barriers to Innovation

Introduction

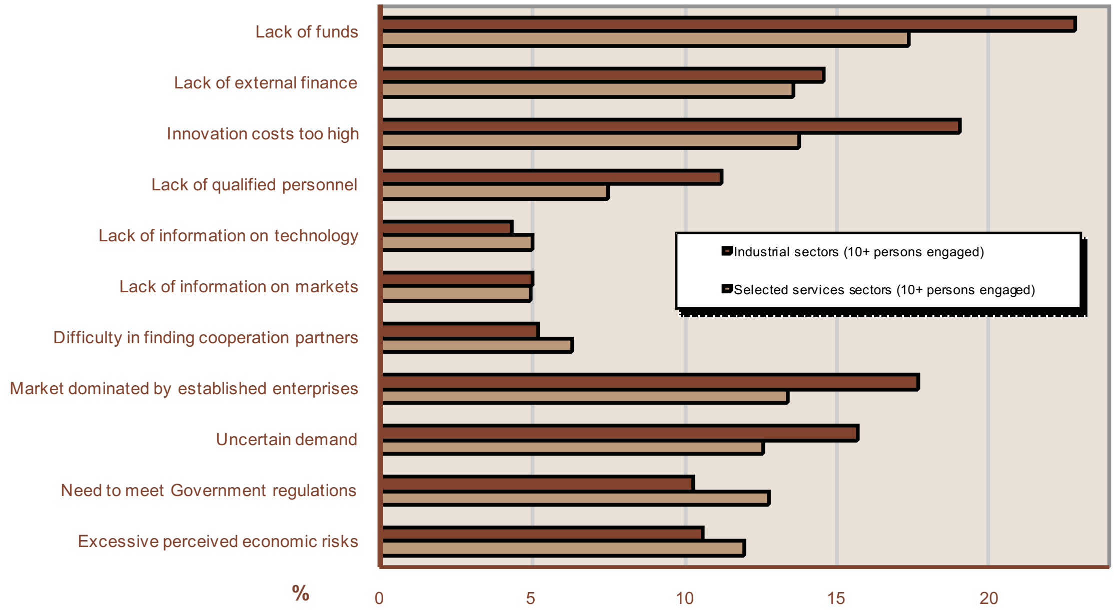
A number of factors which might have curtailed innovation activities were listed in the survey and enterprises were asked to rank each of the factors as being of high, medium, low or no importance. Enterprises were also asked to rank reasons why they did not innovate over the period. Results are shown for factors and reasons that enterprises indicated as being of high importance.

Barriers to Innovation

Those enterprises that were both innovative and non-innovative indicated that the three largest hampering factors were lack of funds, high costs and markets that were dominated by established enterprises. Almost 20% of innovative enterprises indicated that lack of funds was a highly important factor hampering innovation compared to nearly 12% of non-innovative enterprises. In excess of 16% of innovation active firms cited high costs as a high hampering factor. *See Table 8.1.*

The largest hampering factor for innovative enterprises in industry was a lack of funds, with nearly a quarter of industrial enterprises citing this as a high hampering factor. Selected services sector enterprises also cited a lack of funds as their largest hampering factor, with over 17% of service enterprises being hampered by this factor. *See Figure 8.1 and Table 8.1.*

Figure 8.1 Highly important hampering factors to innovation activites for innovative enterprises by sector, 2006 - 2008

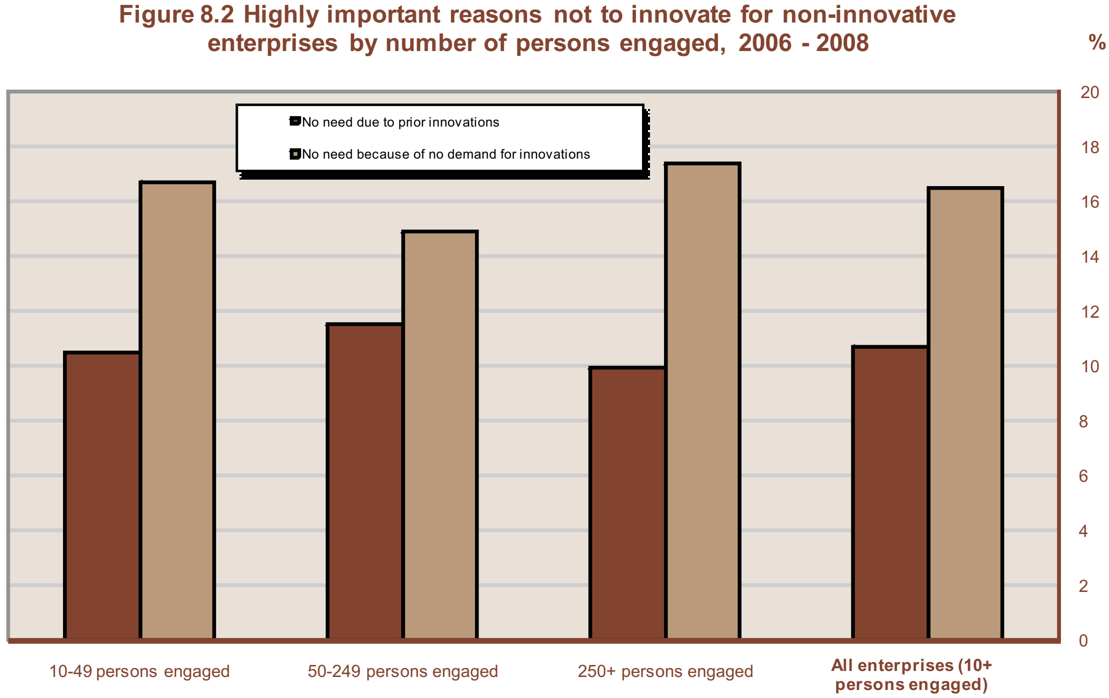


Source: CSO/Forfás - Community Innovation Survey 2006-2008
Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71).

Reasons not to Innovate

Almost 17% of enterprises who were not engaged in innovative activities indicated that a highly important factor in not innovating was that there was no demand for innovations. Less than 7% of innovation active enterprises indicated this to be the case. *See Figure 8.2 and Table 8.2.*

Figure 8.2 Highly important reasons not to innovate for non-innovative enterprises by number of persons engaged, 2006 - 2008



Source: CSO/Forfás - Community Innovation Survey 2006-2008
Note: Includes industry (NACE 05-33, 35-39; Selected services sectors (NACE 46, 49-53, 58, 61-66, 71).

Similar percentages of non-innovative industrial and selected services sector enterprises indicated that a highly important reason not to innovate was because of there being no demand for innovations. *See Table 8.2.*

Table 8.1 Highly important hampering factors to innovation activites for innovative enterprises by sector and number of persons engaged, 2006 - 2008

%

	Sector of activity				Number of persons engaged							
	Industrial sectors (10+ persons engaged)		Selected services sectors (10+ persons engaged)		10-49		50-249		250+		All enterprises (10+ persons engaged)	
	Innovative enterprises	*Non-innovative enterprises*	*Innovative enterprises*	*Non-innovative enterprises*	*Innovative enterprises*	*Non-innovative enterprises*	*Innovative enterprises*	*Non-innovative enterprises*	*Innovative enterprises*	*Non-innovative enterprises*	*Innovative enterprises*	*Non-innovative enterprises*
Lack of funds	22.9	16.1	17.4	9.4	21.9	12.1	14.0	7.4	16.5	9.5	**19.8**	**11.6**
Lack of external finance	14.6	14.5	13.6	7.9	16.0	10.5	8.6	6.2	11.0	8.1	**14.0**	**10.0**
Innovation costs too high	19.1	18.3	13.8	9.1	17.2	12.6	14.4	8.2	9.8	13.0	**16.1**	**12.1**
Lack of qualified personnel	11.2	6.4	7.5	5.6	9.9	6.4	7.0	2.5	7.3	2.3	**9.1**	**5.9**
Lack of information on technology	4.3	5.9	5.0	3.4	5.7	4.6	2.3	1.7	1.1	0.0	**4.7**	**4.2**
Lack of information on markets	5.0	5.9	4.9	3.2	5.8	4.4	3.0	1.6	1.9	3.6	**4.9**	**4.1**
Difficulty in finding cooperation partners	5.2	5.9	6.3	2.6	7.1	4.0	2.9	1.6	2.1	0.0	**5.9**	**3.6**
Market dominated by established enterprises	17.7	15.4	13.4	10.4	15.6	12.1	15.4	10.6	10.4	12.8	**15.2**	**12.0**
Uncertain demand	15.7	10.6	12.6	8.8	13.9	9.4	15.3	8.0	9.5	17.7	**13.9**	**9.4**
Need to meet Government regulations	10.3	8.6	12.8	7.4	12.7	7.9	7.8	5.9	13.9	11.2	**11.7**	**7.8**
Excessive perceived economic risks	10.6	10.9	12.0	7.0	12.8	8.6	8.9	4.9	4.4	10.8	**11.4**	**8.2**

Source: CSO/Forfás - Community Innovation Survey 2006 - 2008.

Note: Includes industry(NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71). See Appendix 2 for NACE classifications.

Table 8.2 Highly important reasons not to innovate by sector and number of persons engaged, 2006 - 2008

%

	Sector of activity				Number of persons engaged							
	Industrial sectors (10+ persons engaged)		Selected services sectors (10+ persons engaged)		10-49		50-249		250+		All enterprises (10+ persons engaged)	
	Innovative enterprises	*Non-innovative enterprises*	*Innovative enterprises*	*Non-innovative enterprises*	*Innovative enterprises*	*Non-innovative enterprises*	*Innovative enterprises*	*Non-innovative enterprises*	*Innovative enterprises*	*Non-innovative enterprises*	*Innovative enterprises*	*Non-innovative enterprises*
No need due to prior innovations	4.7	12.4	5.6	14.4	5.6	10.5	5.2	11.5	1.6	9.9	**5.2**	**10.7**
No need because of no demand for innovations	7.5	17.0	5.7	16.3	7.4	16.7	4.8	14.9	1.7	17.4	**6.5**	**16.5**

Source: CSO/Forfás - Community Innovation Survey 2006 - 2008.

Note: Includes industry(NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71). See Appendix 2 for NACE classifications.

Chapter 9

Organisational Innovation

Introduction

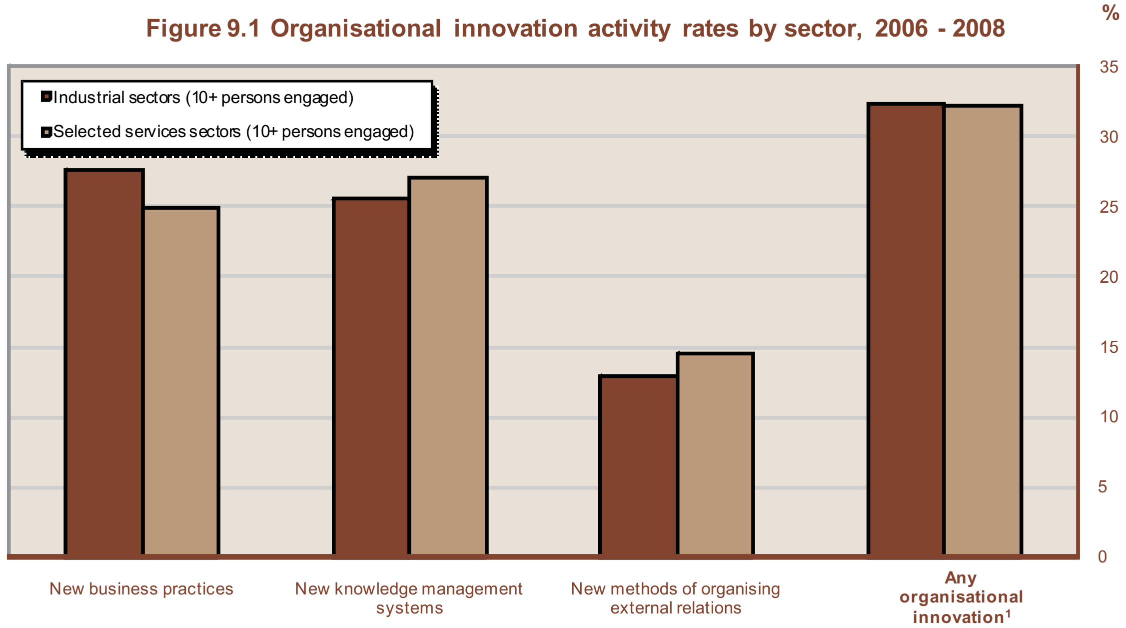
Enterprises were asked details of organisational innovations which they introduced in the period 2006-2008 and the highly important effects of introducing these organisational innovations.

Organisational Innovation

Nearly one-third (32%) of all enterprises carried out an organisational innovation between 2006 and 2008. The introduction of new business practices and new knowledge management systems were the most common forms of organisational innovation with 26% of all enterprises indicating that they engaged in both these activities. An organisational innovation was introduced by two in three large enterprises between 2006 and 2008. *See Table 9.1.*

Industrial enterprises and selected services sector enterprises had very similar rates in respect of organisational innovations. *See Figure 9.1 and Table 9.1.*

Figure 9.1 Organisational innovation activity rates by sector, 2006 - 2008



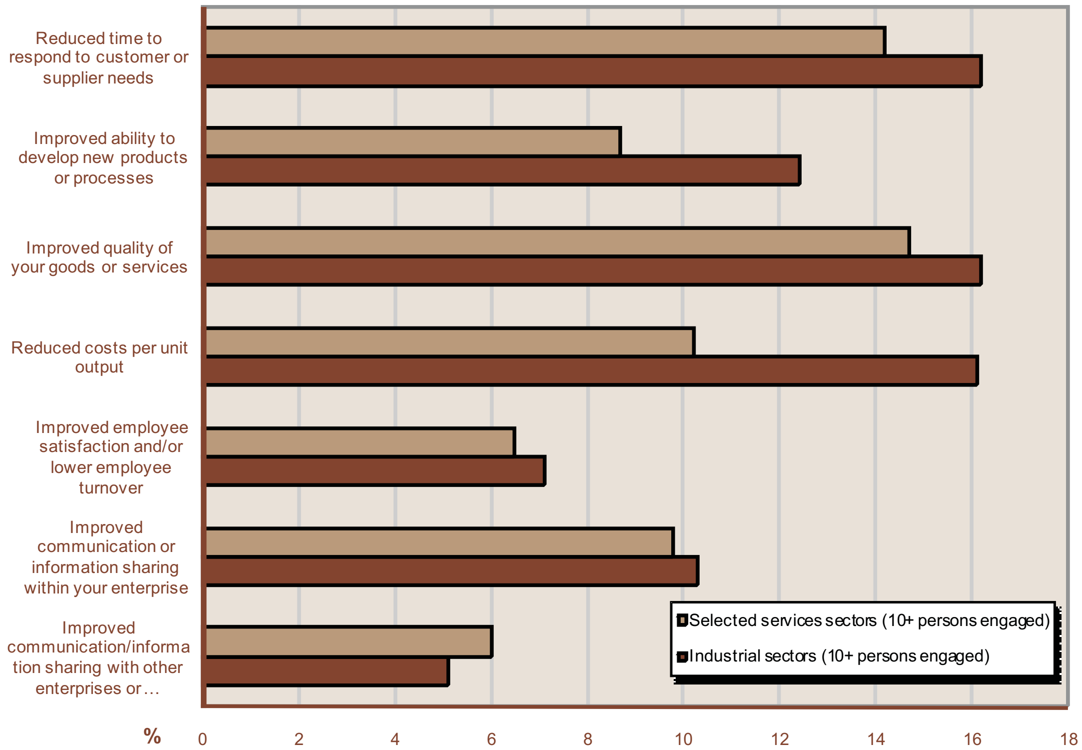
Source: CSO/Forfás - Community Innovation Survey 2006-2008.
[1] Respondents could engage in more than one type of organisational innovation, hence the sum of the categories does not equal the total.
Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71).

Effects of Organisational Innovation

Over 15% of all enterprises indicated that a highly important effect of introducing organisational innovations was an improved quality in goods or services, and similarly, just under 15% of enterprises indicated that a highly important effect was the reduction in time responding to customer or supplier needs. *See Table 9.2.*

Likewise, over 16% of industrial enterprises indicated that highly important effects of introducing organisational innovations were improved quality in goods or services along with a reduction in time in responding to customer or supplier needs. Again, this compares to over 14% of selected services sector enterprises that indicated the highly important effects of introducing organisational innovations were both the improvement of goods or services and the reduction in time in responding to customer or supplier needs. *See Figure 9.2 and Table 9.2.*

Figure 9.2 Highly important effects from introducing organisational innovations[1] by sector, 2006 - 2008



Source: CSO/Forfás - Community Innovation Survey 2006-2008.
[1] Respondents could engage in more than one type of organisational innovation, hence the sum of the categories does not equal the total.
Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71).

Table 9.1 Organisational innovation activity rates by sector and number of persons engaged, 2006 - 2008

%

	Sector of activity		Number of persons engaged			All enterprises (10+ persons engaged)
	Industrial sectors (10+ persons engaged)	Selected services sectors (10+ persons engaged)	10-49	50-249	250+	
New business practices	27.6	24.9	22.1	36.4	61.1	**25.9**
New knowledge management systems	25.6	27.1	23.5	35.3	52.1	**26.5**
New methods of organising external relations	12.9	14.5	12.2	18.3	31.1	**13.9**
Any organisational innovation	**32.3**	**32.2**	**28.4**	**43.7**	**65.9**	**32.3**

Source: CSO/Forfás - Community Innovation Survey 2006 - 2008.

[1] Respondents could be engaged in more than one innovation cooperation category in each location, hence the sum of the categories does not equal the total.

Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71). See Appendix 2 for NACE classifications.

Table 9.2 Highly important effects from introducing organisational innovations by sector and number of persons engaged, 2006 - 2008

%

	Sector of activity		Number of persons engaged			All enterprises (10+ persons engaged)
	Industrial sectors (10+ persons engaged)	Selected services sectors (10+ persons engaged)	10-49	50-249	250+	
Reduced time to respond to customer or supplier needs	16.2	14.2	12.5	21.3	39.9	**14.9**
Improved ability to develop new products or processes	12.4	8.7	7.8	17.0	28.9	**10.1**
Improved quality of your goods or services	16.2	14.7	12.8	22.0	37.7	**15.3**
Reduced costs per unit output	16.1	10.2	9.4	20.8	39.8	**12.4**
Improved employee satisfaction and/or lower employee	7.1	6.5	5.7	9.2	17.2	**6.7**
Improved communication or information sharing within	10.3	9.8	8.8	12.9	21.7	**9.9**
Improved communication/information sharing with other	5.1	6.0	4.8	7.5	15.7	**5.6**

Source: CSO/Forfás - Community Innovation Survey 2006 - 2008.

Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71). See Appendix 2 for NACE classifications.

Chapter 10

Marketing Innovation

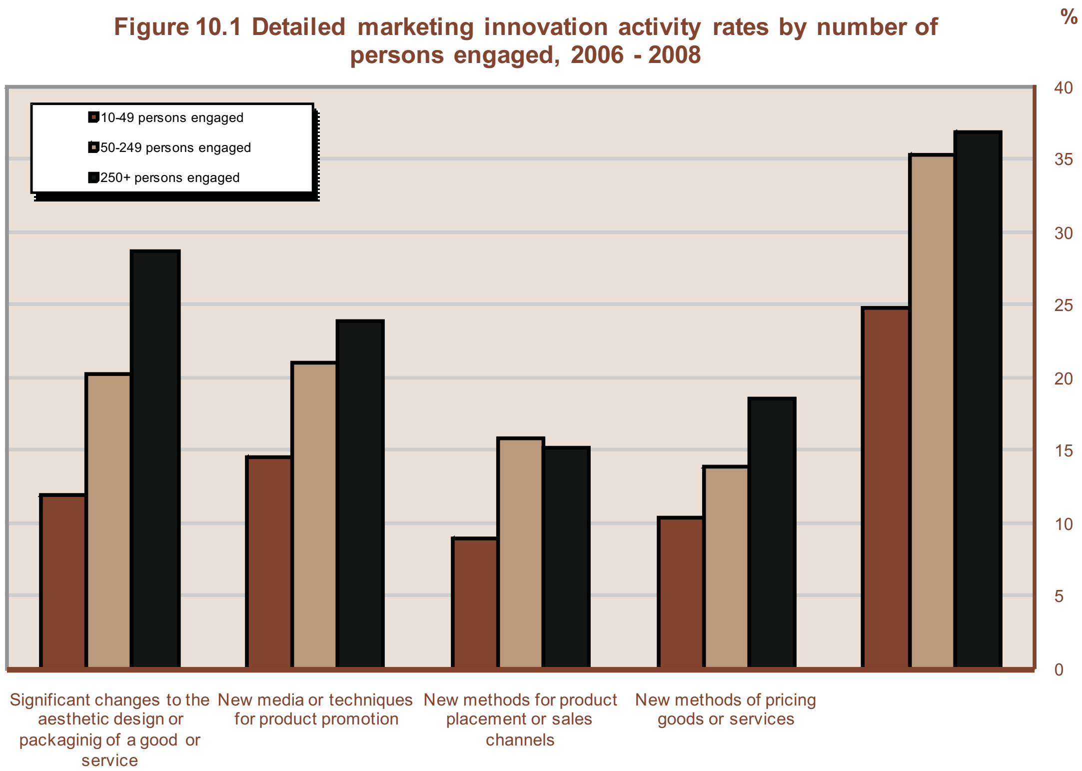
Introduction

Enterprises were asked details of marketing innovations which they introduced in the period 2006-2008 and the objectives of introducing these marketing innovations.

Marketing Innovation

Over one in four of all enterprises (27%) carried out a marketing innovation between 2006 and 2008. The most common form of marketing innovation was the introduction of new media or techniques for product promotion and 16% of all enterprises indicated that they engaged in this activity. Almost 14% of all enterprises introduced significant changes to the aesthetic design or packaging of a good or service. A marketing innovation was introduced by over one in three medium and large enterprises between 2006 and 2008. *See Figure 10.1 and Table 10.1.*

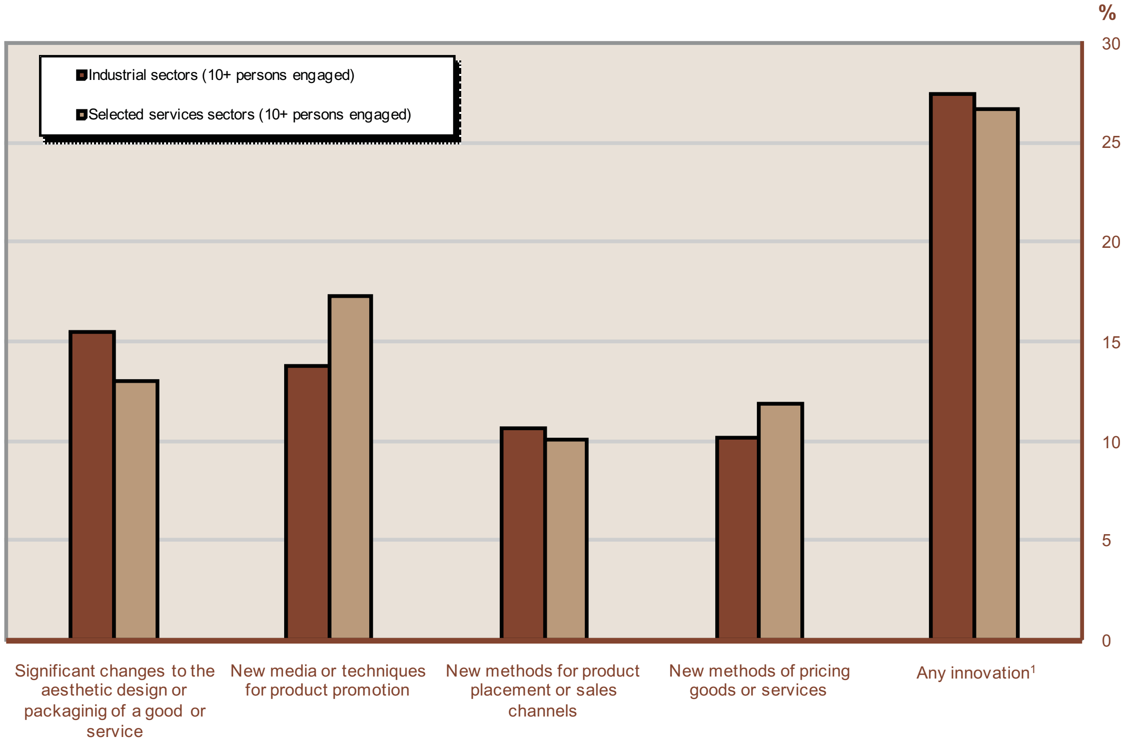
Figure 10.1 Detailed marketing innovation activity rates by number of persons engaged, 2006 - 2008



Source: CSO/Forfás - Community Innovation Survey 2006-2008.
Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66,71).
[1] Respondents could engage in more than one marketing innovation activity, hence the sum of the categories does not equal the total.

Industrial enterprises and selected services sector enterprises had very similar rates with respect to marketing innovations. *See Figure 10.2 and Table 10.1.*

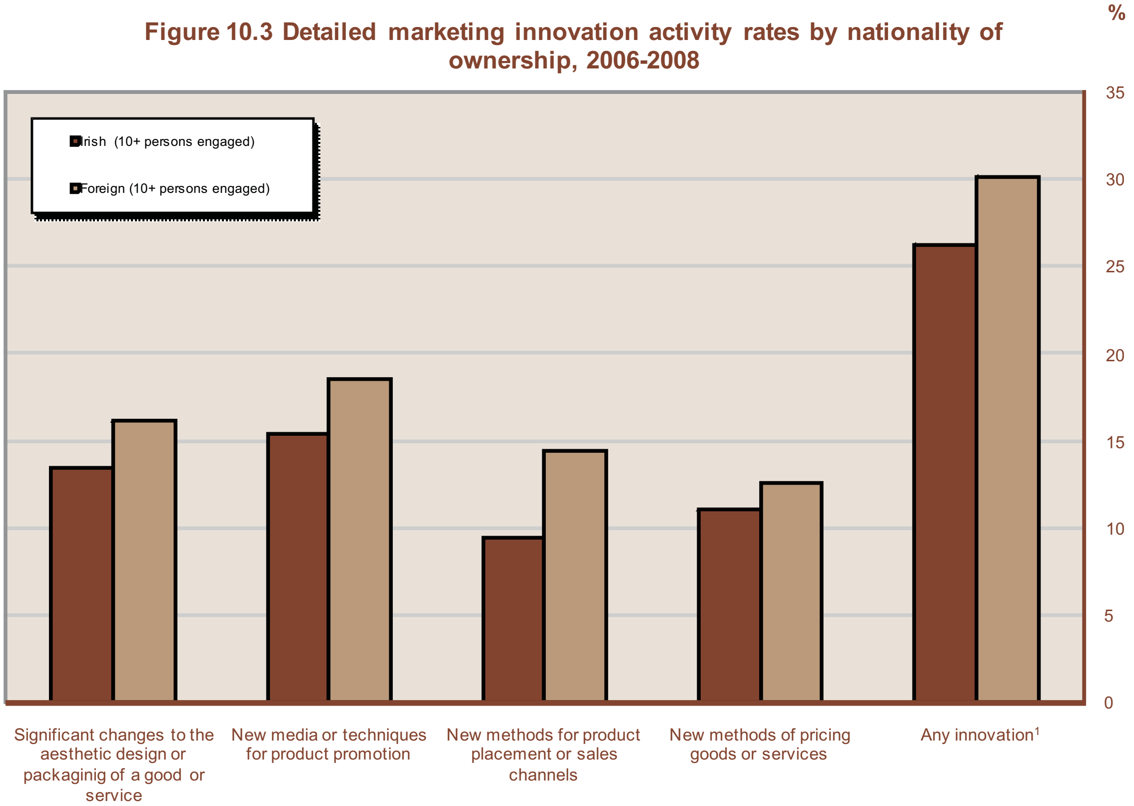
Figure 10.2 Detailed marketing innovation activity rates by sector, 2006-2008



Source: CSO/Forfás - Community Innovation Survey 2006-2008.
Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71).
[1]Respondents could engage in more than one marketing innovation activity, hence the sum of the categories does not equal the total.

Almost one in three foreign owned enterprises introduced a marketing innovation in the period 2006-2008 compared to over one in four Irish owned enterprises. Nearly 19% of foreign owned enterprises introduced new media or techniques for product promotion compared to over 15% of Irish owned enterprises. Again, 16% of foreign owned enterprises introduced significant changes to the aesthetic design or packaging of a good or service while over 13% of Irish enterprises indicated that they engaged in this activity. *See Figure 10.3 and Table 10.1.*

Figure 10.3 Detailed marketing innovation activity rates by nationality of ownership, 2006-2008



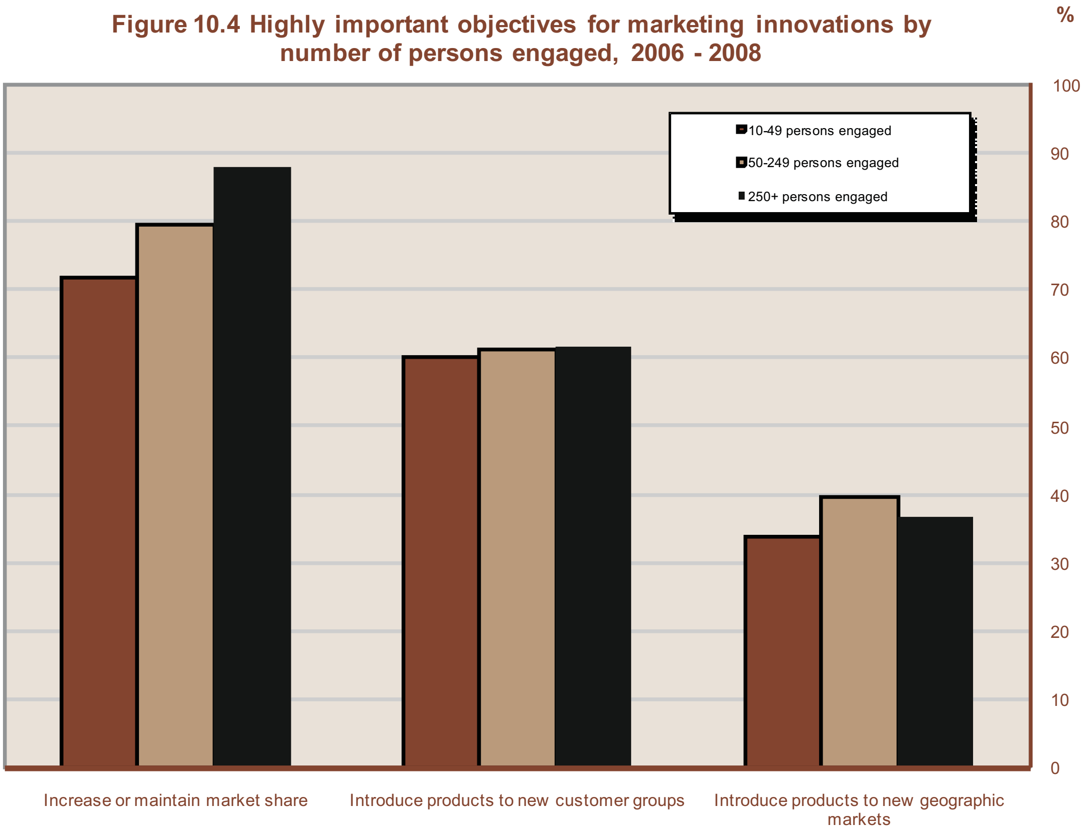
Source: CSO/Forfás - Community Innovation Survey 2006-2008.
Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66 and 71).
[1] Repondents could engage in more than one marketing innovation activity, hence the sum of the categories does not equal the total.

Objectives of Marketing Innovations

Three-quarters of all enterprises indicated that a highly important objective of introducing marketing innovations was to increase or maintain market share while three in five enterprises indicated that a highly important objective was to introduce products to new customer groups. *See Table 10.2.*

Nearly nine in ten large enterprises indicated that a highly important reason for introducing marketing innovations was increased or maintained market share while seven in ten small enterprises cited this factor. *See Figure 10.4 and Table 10.2.*

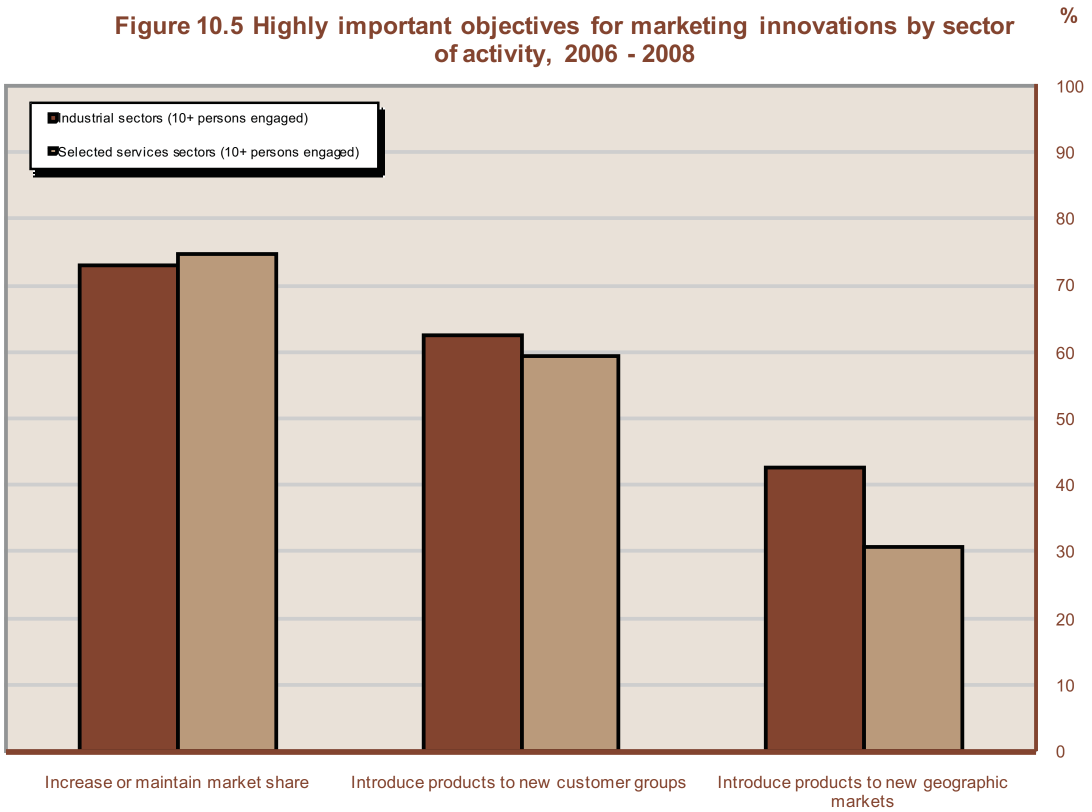
Figure 10.4 Highly important objectives for marketing innovations by number of persons engaged, 2006 - 2008



Source: CSO/Forfás - Community Innovation Survey 2006-2008.
Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71).

Industrial enterprises and selected services sector enterprises indicated similar rates with respect to the objectives of marketing innovations. *See Figure 10.5 and Table 10.2.*

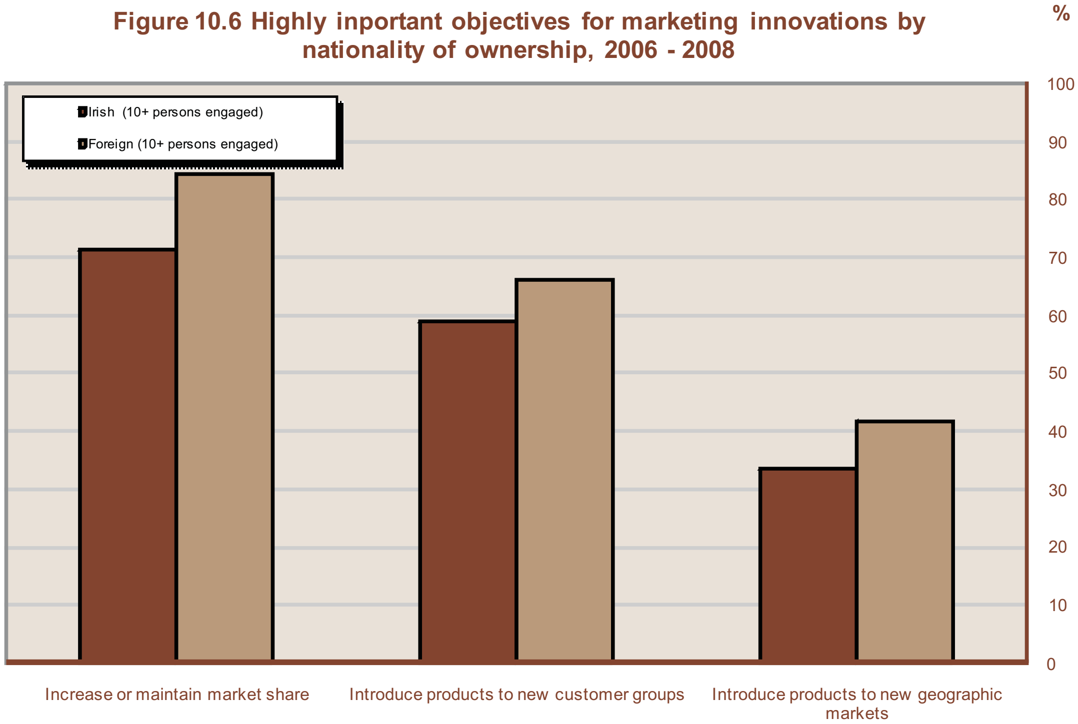
Figure 10.5 Highly important objectives for marketing innovations by sector of activity, 2006 - 2008



Source: CSO/Forfás - Community Innovation Survey 2006-2008.
Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71).

Over eight in ten foreign owned enterprises indicated that a highly important objective of introducing marketing innovations was to increase or maintain market share compared to seven in ten Irish enterprises identifying this factor. *See Figure 10.6 and Table 10.2.*

Figure 10.6 Highly inportant objectives for marketing innovations by nationality of ownership, 2006 - 2008



Source: CSO/Forfás - Community Innovation Survey 2006-2008.
Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71).

Table 10.1 Marketing innovation activity rates by nationality of ownership, sector and number of persons engaged, 2006 - 2008

%

	Nationality of ownership		Sector of activity		Number of persons engaged			
	Irish (10+ persons engaged)	Foreign (10+ persons engaged)	Industrial sectors (10+ persons engaged)	Selected services sectors (10+ persons engaged)	10-49	50-249	250+	All enterprises (10+ persons engaged)
Significant changes to the aesthetic design or packaginig of a good or service	13.4	16.1	15.5	13.0	12.0	20.2	28.7	**13.9**
New media or techniques for product promotion	15.4	18.5	13.8	17.3	14.6	21.0	23.9	**16.0**
New methods for product placement or sales channels	9.4	14.4	10.6	10.1	9.0	15.9	15.2	**10.3**
New methods of pricing goods or services	11.0	12.6	10.2	11.9	10.4	13.9	18.6	**11.3**
Any innovation[1]	**26.2**	**30.1**	**27.4**	**26.7**	**24.8**	**35.3**	**36.9**	**27.0**

Source: CSO/Forfás - Community Innovation Survey 2006 - 2008.

[1] Respondents could engage in more than one type of marketing innovation, hence the sum of the categories does not equal the total.

Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71). See Appendix 2 for NACE classifications.

Table 10.2 Highly important objectives for marketing innovations, by nationality of ownership, sector and number of persons engaged, 2006 - 2008

%

	Nationality of ownership		Sector of activity		Number of persons engaged			
	Irish (10+ persons engaged)	Foreign (10+ persons engaged)	Industrial sectors (10+ persons engaged)	Selected services sectors (10+ persons engaged)	10-49	50-249	250+	All enterprises (10+ persons engaged)
Increase or maintain market share	71.4	84.4	73.1	74.8	71.7	79.5	87.8	**74.2**
Introduce products to new customer groups	59.0	66.0	62.4	59.3	60.1	61.3	61.7	**60.5**
Introduce products to new geographic markets	33.4	41.7	42.5	30.7	33.7	39.7	36.7	**35.1**

Source: CSO/Forfás - Community Innovation Survey 2006 - 2008.

Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, and 71). See Appendix 2 for NACE classifications.

Chapter 11

Environmental Innovation

Introduction

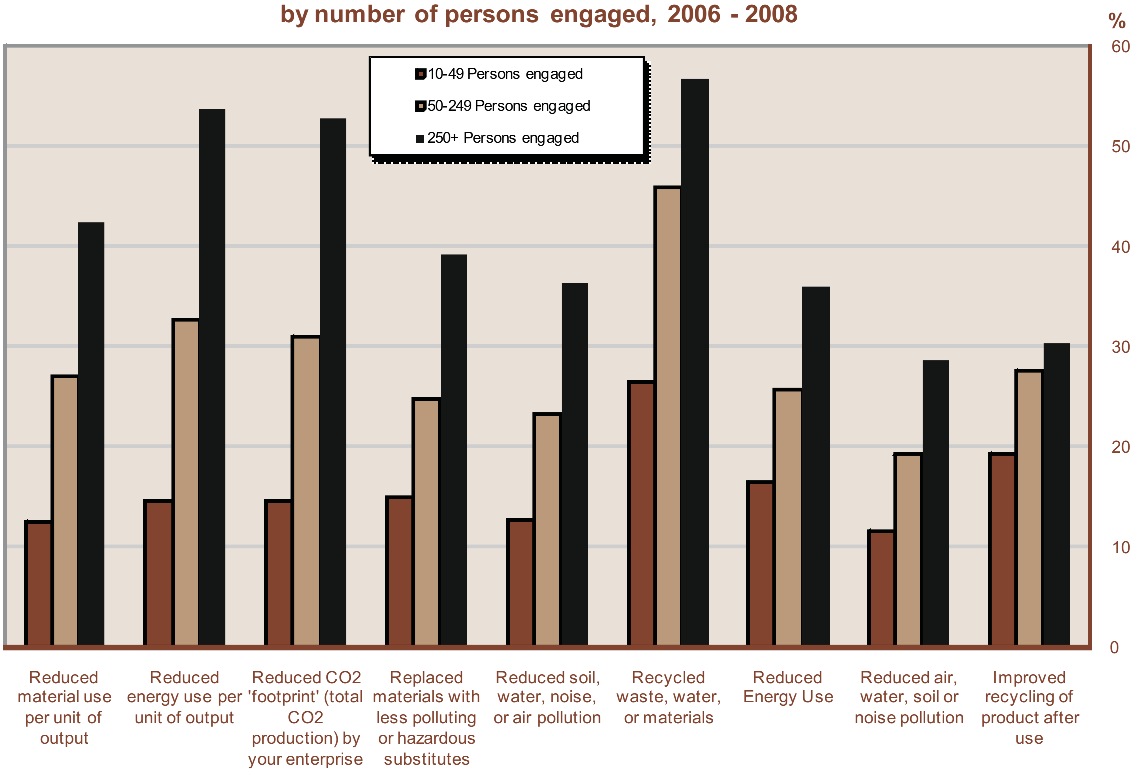
A pilot module was included in the CIS 2006-2008 that included some new questions on innovations with environmental benefits. An environmental innovation is a new or significantly improved product (good or service), process, organisational method or marketing method that creates environmental benefits compared to alternatives. Enterprises were also asked the reasons for the introduction of these environmental innovations.

Innovations with Environmental Benefits

Over 11% of all enterprises introduced a product (good or service), a process, organisational or marketing innovation with an environmental benefit between 2006 and 2008. The most common environmental benefit during the production of a good or service was recycled waste, water or materials with nearly 31% of all enterprises accruing this environmental benefit. Similarly, 21% of all enterprises indicated a benefit of improved recycling of product after use. *See Table 11.1.*

The larger the enterprise the more likely it was to create environmental benefits; over one in three (35%) large enterprises indicated an environmental benefit arising from the introduction of some type of innovation compared to just 7% of small enterprises. Over half of large enterprises benefited from recycled waste, water or materials. *See Figure 11.1 and Table 11.1.*

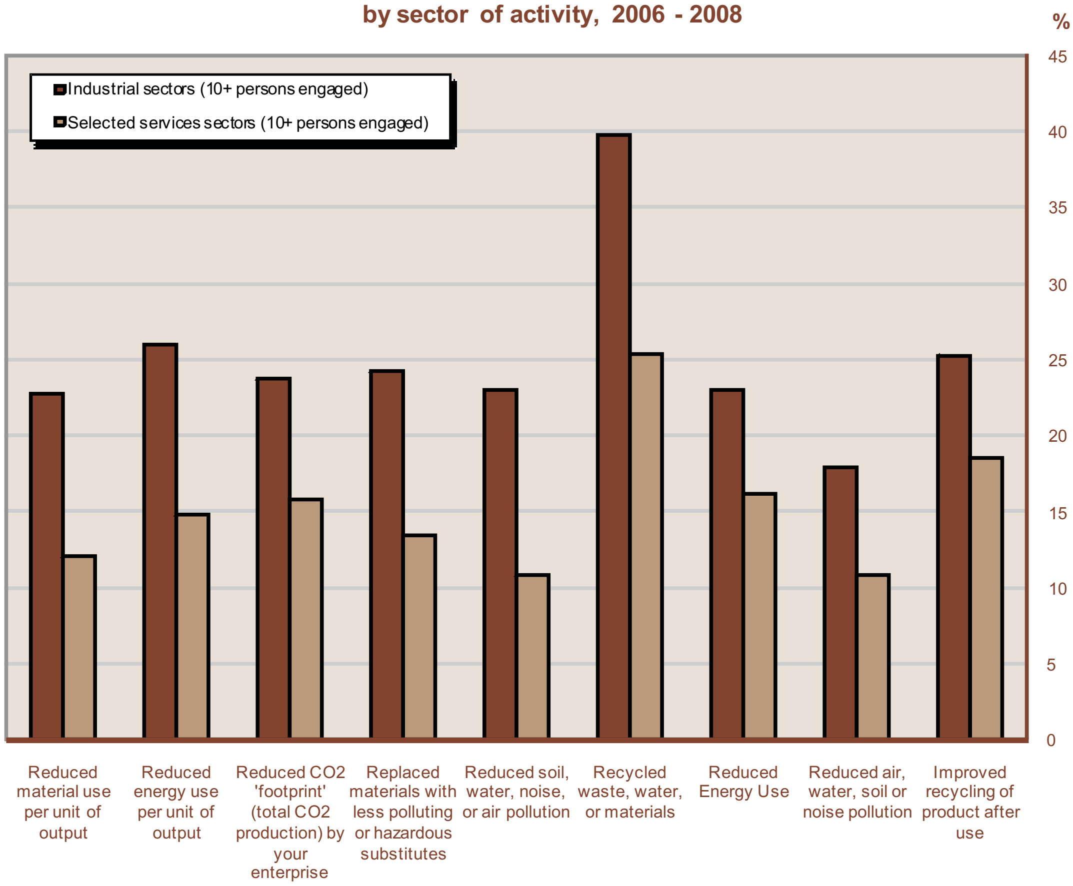
Figure 11.1 Environmental benefits from the introduction of an innovation by number of persons engaged, 2006 - 2008



Source: CSO/Forfás - Community Innovation Survey 2006-2008.
Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71).

Over 15% of all industrial enterprises indicated that they had some form of environmental benefit from innovations introduced in comparison to 9% in the selected services sector in the period between 2006 and 2008. Industrial enterprises showed higher rates of environmental benefits across all categories when compared to selected services sector enterprises. *See Figure 11.2 and Table 11.1.*

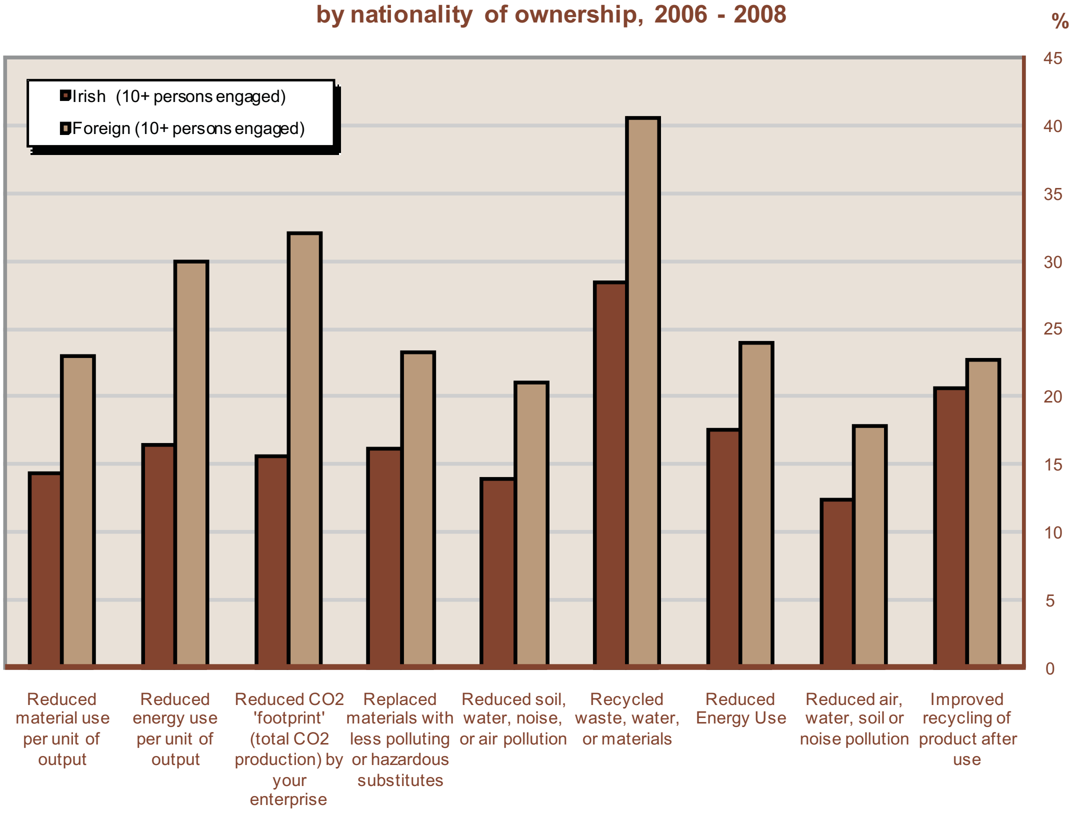
Figure 11.2 Environmental benefits from the introduction of an innovation by sector of activity, 2006 - 2008



Source: CSO/Forfás - Community Innovation Survey 2006-2008.
Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71).

Foreign owned enterprises showed higher rates of environmental benefits across all categories when compared to Irish owned enterprises. Again, the most common form of environmental benefit was from recycled waste, water or materials, with rates of 41% and 28% for foreign owned and Irish owned firms respectively. *See Figure 11.3 and Table 11.1.*

Figure 11.3 Environmental benefits from the introduction of an innovation by nationality of ownership, 2006 - 2008

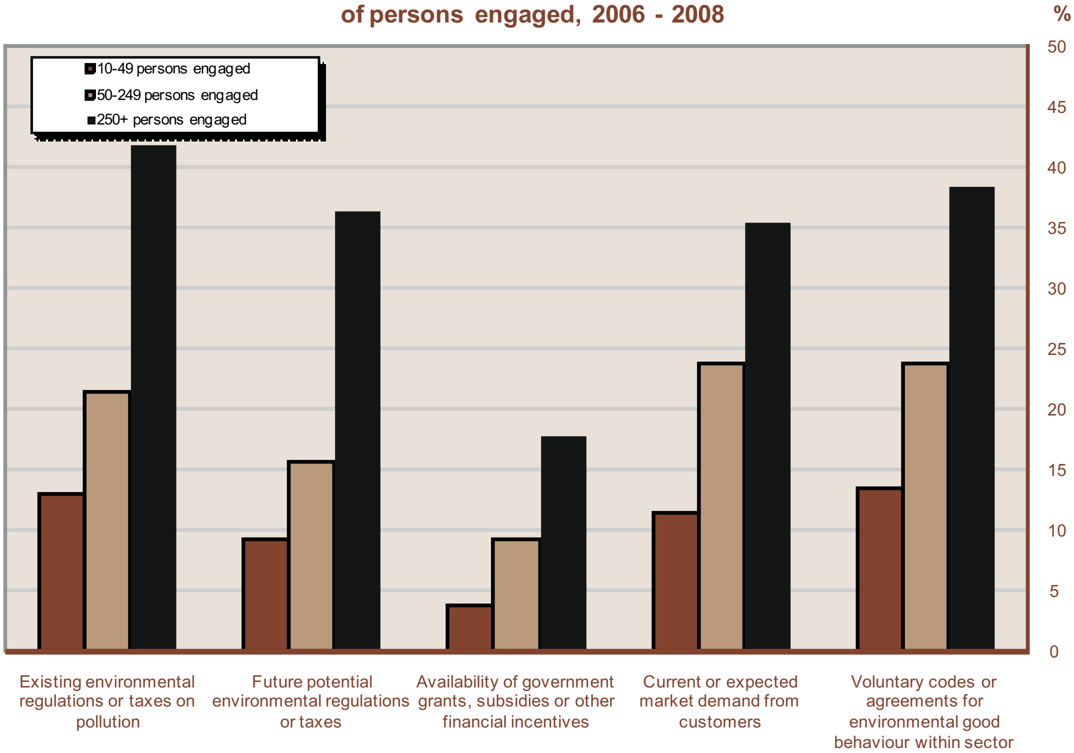


Source: CSO/Forfás - Community Innovation Survey 2006-2008.
Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71).

Reasons to Introduce Environmental Innovations

Over 16% of all enterprises introduced an environmental innovation in response to voluntary codes or agreement for environmental good practice within their sector while over 15% of all enterprises introduced an environmental innovation in response to existing environmental regulations or taxes on pollution. Four in ten large enterprises indicated that they introduced an environmental innovation in response to existing environmental regulations or taxes on pollution compared to one in eight small enterprises. *See Figure 11.4 and Table 11.2.*

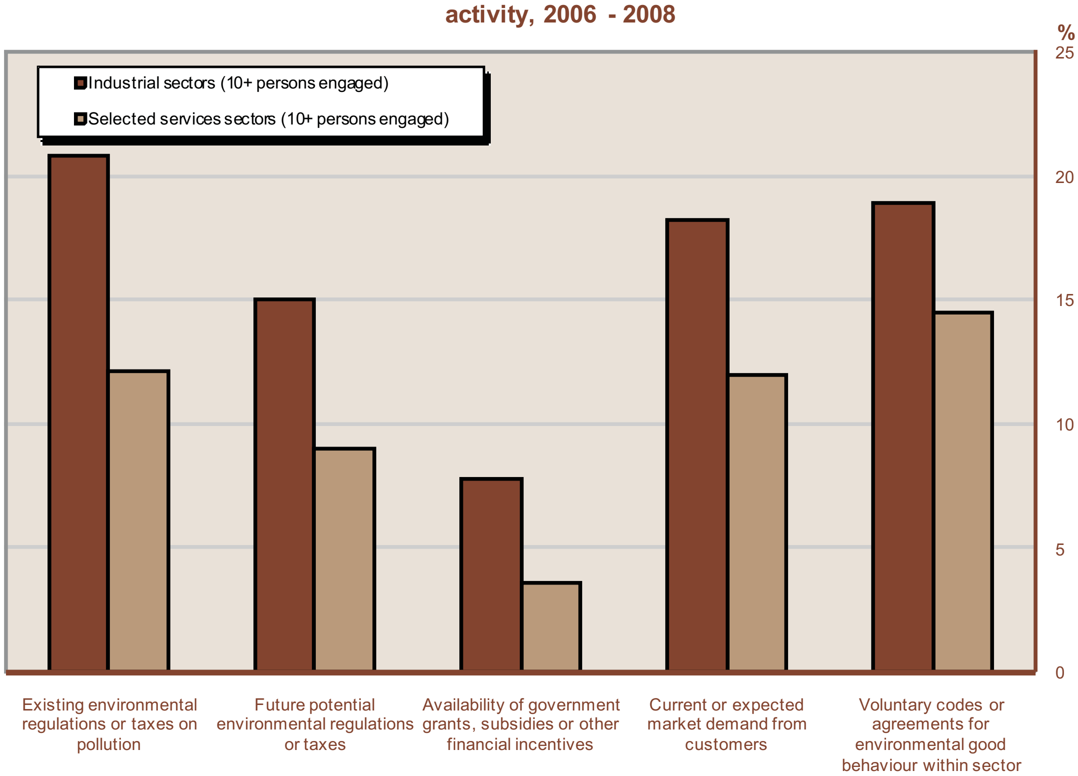
Figure 11.4 Reasons to introduce an environmental innovation by number of persons engaged, 2006 - 2008



Source: CSO/Forfás - Community Innovation Survey 2006-2008.
Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71).

Enterprises in the Industrial sector indicated higher rates of environmental innovations in response to all reasons listed than those in the selected services sector. *See Figure 11.5 and Table 11.2.*

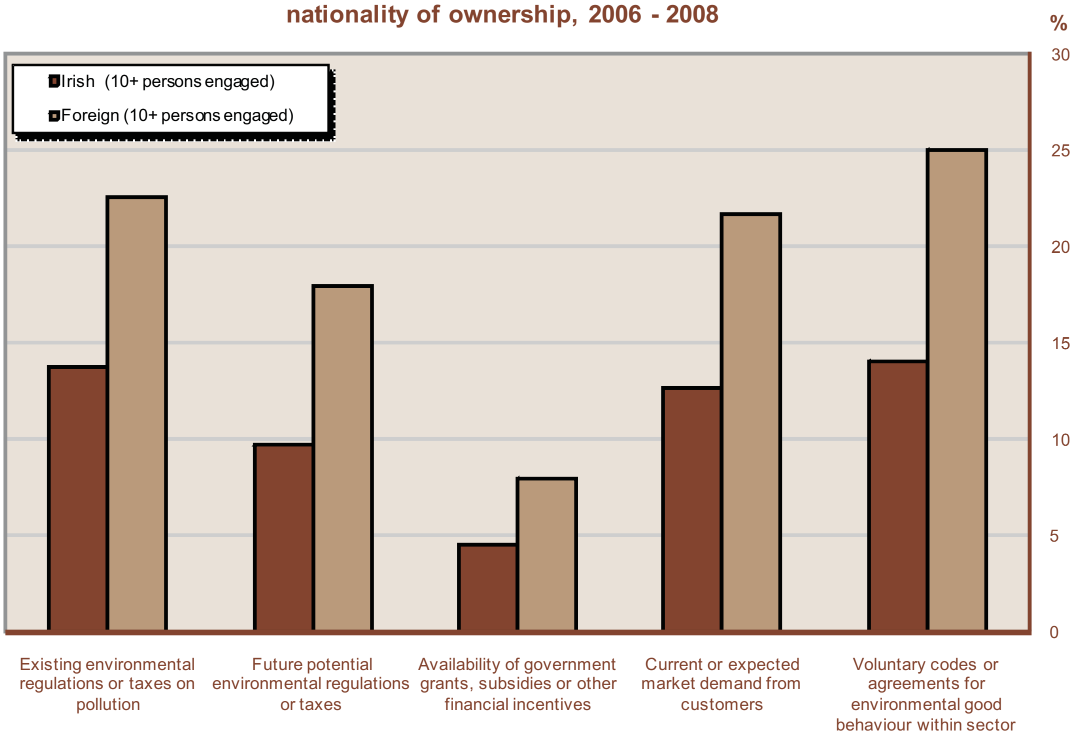
Figure 11.5 Reasons to introduce an environmental innovation by sector of activity, 2006 - 2008



Source: CSO/Forfás - Community Innovation Survey 2006-2008.
Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71).

One in four foreign owned enterprises introduced an environmental innovation in response to voluntary codes or agreements for environmental good practice within their sector compared to one in seven of Irish owned enterprises. *See Figure 11.6 and Table 11.2.*

Figure 11.6 Reasons to introduce an environmental innovation by nationality of ownership, 2006 - 2008



Source: CSO/Forfás - Community Innovation Survey 2006-2008.
Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66, 71).

Table 11.1 Environmental benefits[1] from the introduction of an innovation, by nationality of ownership, sector and number of persons engaged, 2006 - 2008

%

	Nationality of ownership		Sector of activity		Number of persons engaged			
	Irish (10+ persons engaged)	Foreign (10+ persons engaged)	Industrial sectors (10+ persons engaged)	Selected services sectors (10+ persons engaged)	10-49	50-249	250+	All enterprises (10+ persons engaged)
During Production:								
Reduced material use per unit of output	14.3	23.0	22.7	12.0	12.5	26.9	42.5	**16.0**
Reduced energy use per unit of output	16.4	29.9	26.0	14.8	14.5	32.6	53.8	**18.9**
Reduced CO_2 'footprint' (total CO_2 production) by your enterprise	15.6	32.1	23.7	15.8	14.6	31.0	52.9	**18.7**
Replaced materials with less polluting or hazardous substitutes	16.1	23.3	24.3	13.4	15.0	24.8	39.2	**17.5**
Reduced soil, water, noise, or air pollution	14.0	21.1	23.0	10.8	12.7	23.3	36.4	**15.3**
Recycled waste, water, or materials	28.4	40.6	39.8	25.3	26.4	45.8	56.7	**30.7**
After Sales Use:								
Reduced Energy Use	17.5	24.0	23.0	16.2	16.5	25.6	36.1	**18.7**
Reduced air, water, soil or noise pollution	12.4	17.9	17.9	10.8	11.6	19.3	28.6	**13.4**
Improved recycling of product after use	20.6	22.7	25.2	18.5	19.2	27.5	30.3	**21.0**
Any Environmental Benefit[2]	**9.7**	**18.0**	**15.2**	**9.0**	**7.3**	**25.5**	**35.4**	**11.3**

Source: CSO/Forfás - Community Innovation Survey 2006 - 2008.

[1] An environmental innovation is a new or significantly improved product, process, organisational method or marketing method that creates environmental benefits compared to alternatives. The environmental benefit can be the primary objective of the innovation or the result of other innovation objectives, and can occur during the production of a good or service, or during the after sale use of a good or service by the end user

[2] Repondents could experience more than one environmental benefit from the introduction of an innovation, hence the sum of the categories does not equal the total.

Note: Includes industry(NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66 and 71). See Appendix 2 for NACE classifications.

Table 11.2 Reasons to introduce an environmental innovation[1], by nationality of ownership, sector and number of persons engaged, 2006 - 2008

%

	Nationality of ownership		Sector of activity		Number of persons engaged			
	Irish (10+ persons engaged)	Foreign (10+ persons engaged)	Industrial sectors (10+ persons engaged)	Selected services sectors (10+ persons engaged)	10-49	50-249	250+	All enterprises (10+ persons engaged)
Existing environmental regulations or taxes on pollution	13.7	22.5	20.8	12.1	12.9	21.4	41.8	**15.4**
Future potential environmental regulations or taxes	9.7	17.9	15.0	9.0	9.2	15.7	36.3	**11.2**
Availability of government grants, subsidies or other financial incentives	4.5	7.9	7.8	3.6	3.7	9.2	17.7	**5.1**
Current or expected market demand from customers	12.6	21.7	18.2	12.0	11.4	23.7	35.4	**14.3**
Voluntary codes or agreements for environmental good behaviour within sector	14.0	25.0	18.9	14.5	13.5	23.7	38.3	**16.1**

Source: CSO/Forfás - Community Innovation Survey 2006 - 2008.

Note: Includes industry (NACE 05-33, 35-39); Selected services sectors (NACE 46, 49-53, 58, 61-66 and 71). See Appendix 2 for NACE classifications.

[1] An environmental innovation is a new or significantly improved product, process, organisational method or marketing method that creates environmental benefits compared to alternatives. The environmental benefit can be the primary objective of the innovation or the result of other innovation objectives, and can occur during the production of a good or service, or during the after sale use of a good or service by the end user

Chapter 12

International Innovation Rates

Introduction

The Community Innovation Survey is carried out in all EU member states and comparable results can therefore be looked at across the entire community. However, the 2008 results for the EU member states will not be available until the last quarter of 2010. The results for the other EU member states will be posted on the CSO website when they become available. Consequently, for the purpose of this chapter, the CIS 2008 results for Ireland are compared to the most recent available data for the rest of the European community i.e. 2006. Note: The business classification used for CIS 2006 was based on NACE Rev 1.1[1] while the business classification used for CIS 2008 is based on NACE Rev.2[2].

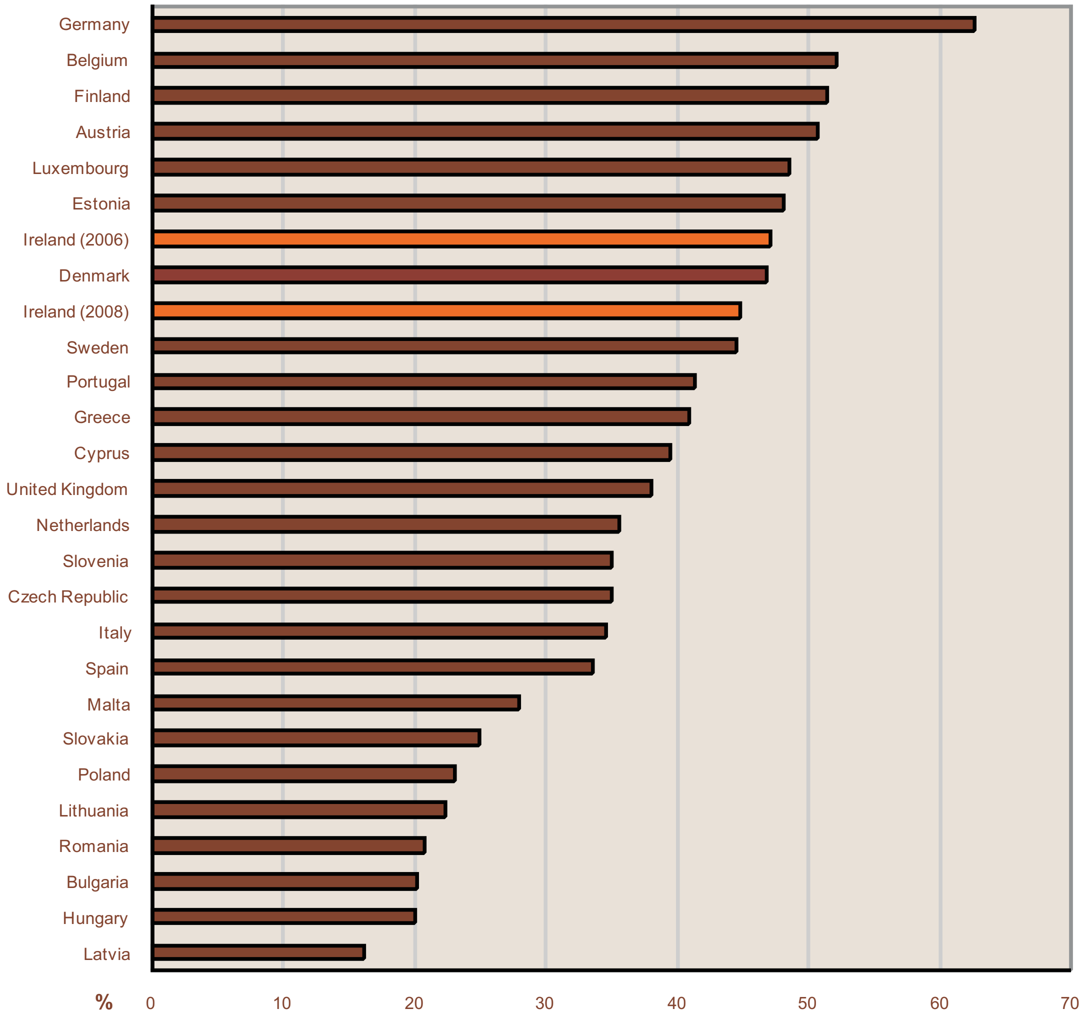
International Innovation Rates

In 2006, innovation activity rates for enterprises in industry and selected services sectors with at least ten persons engaged were highest in Germany (63%), Belgium (52%) and Finland (51%) while 47% of enterprises in Ireland were innovation active. In 2008, 45% of such enterprises in Ireland were innovation active. Almost 90% of turnover in Germany was generated by enterprises that were innovation active, compared to 82% in Finland, 80% in Luxembourg and 79% in Austria while 75% of turnover in Ireland was generated by innovation active enterprises in 2006. In 2008, 65% of turnover in Ireland was generated by innovation active enterprises. Almost 86% of all persons engaged in Germany worked in enterprises which were innovation active compared to 68% of persons engaged in Ireland in 2006. Almost 66% of all persons engaged in Ireland worked in enterprises which were innovation active in 2008. *See Figure 12.1 and Table 12.1.*

[1] Key to Nace Rev 1.1 classification can be accessed at the CSO website at www.cso.ie surveys and methodology/classifications/classifications of industrial activity.

[2] Key to Nace Rev 2 classification can be accessed at the CSO website at www.cso.ie surveys and methodology/classifications/classifications of industrial activity.

Figure 12.1 Percentage of total enterprises with innovation activities, 2004-2006



Source: Eurostat - Community Innovation Survey 2004-2006
Note: Nace Rev 1.1 includes industry (NACE 10-37, 40-41); Selected services sectors (Nace 51, 60-67, 72, 74.2, 74.3)
Note: Ireland 2008 NACE Rev 2 includes industry (NACE 05-33, 35-39) Selected services sectors (NACE 46, 49-53, 58, 61-66, 71)

Table 12.1 Principal international innovation activity rates for all enterprises (10+ persons engaged), 2004 - 2006

%

	% of total enterprises with innovation activities	% of total turnover that is generated by enterprises with innovation activities	% of total persons engaged who work in enterprises with innovation activities
European Union (EU27)	**:**	**:**	**:**
Belgium	52.2	73.6	72.6
Bulgaria	20.2	39.5	37.4
Czech Republic	35.0	62.0	61.4
Denmark	46.9	51.6	71.9
Germany	62.6	89.5	85.9
Estonia	48.2	69.9	68.8
Ireland (2006)	**47.2**	**75.1**	**68.0**
Ireland (2008)	**44.9**	**64.6**	**65.9**
Greece	40.9	72.8	78.1
Spain	33.6	70.2	58.9
France	:	:	:
Italy	34.6	62.1	58.0
Cyprus	39.5	71.0	63.7
Latvia	16.2	42.4	39.1
Lithuania	22.3	60.5	45.6
Luxembourg	48.5	79.5	71.0
Hungary	20.1	62.6	47.5
Malta	28.0	59.5	57.9
Netherlands	35.5	59.9	57.7
Austria	50.6	78.9	76.9
Poland	23.0	60.2	53.7
Portugal	41.3	64.4	61.9
Romania	20.7	47.9	40.3
Slovenia	35.1	65.3	64.3
Slovakia	24.9	57.7	53.4
Finland	51.4	81.8	77.6
Sweden	44.6	66.0	60.2
United Kingdom	38.1	34.9	:

Source: Eurostat - Community Innovation Survey 2004 - 2006.

Note: Turnover and persons engaged in 2006.

Note: NACE Rev 1.1 includes industry (NACE 10-37, 40-41); Selected servics sectors (NACE 51, 60-67, 72, 74.2 and 74.3). See Appendix 2 for NACE classifications.

Note: Ireland 2008 NACE Rev 2 includes industry (NACE 05-33, 35-39); Selected servics sectors (NACE 46, 49-53, 58, 61-66, 71). See Appendix 2 for NACE classifications.

: Data not available

Enterprises in Estonia estimated that they spent almost 4% of their turnover in 2006 on innovation related activities. This compares to 3% in Sweden and Germany. Enterprises in Ireland estimated that they spent almost 2% of their turnover on such activities in 2006 and 2008. Almost 69% of enterprises in Cyprus who were innovation active engaged in innovation cooperation activities while 58% of innovation active enterprises in Finland were part of such innovation cooperation arrangements in 2006. Innovative enterprises in Ireland in 2006 and 2008 were less likely to engage in such cooperation. *See Table 12.2.*

Table 12.2 Other international innovation activity rates for all enterprises (10+ persons engaged), 2004 - 2006

%

	% of total turnover attributed to product innovation activities (new to firm and new to market)	% of total turnover that is spent on innovation activities	% of innovative enterprises engaged in innovation cooperation
European Union (EU27)	**:**	**:**	**:**
Belgium	13.6	2.4	35.3
Bulgaria	10.3	0.9	21.2
Czech Republic	14.6	1.5	38.3
Denmark	7.8	1.6	34.2
Germany	19.2	2.9	16.7
Estonia	13.7	3.8	39.5
Ireland (2006)	**12.6**	**1.7**	**27.0**
Ireland (2008)	**11.0**	**1.7**	**24.1**
Greece	25.6	1.3	34.8
Spain	15.9	1.1	17.0
France	:	:	:
Italy	9.1	:	13.5
Cyprus	12.3	2.4	68.8
Latvia	3.3	:	39.1
Lithuania	12.4	0.9	51.2
Luxembourg	12.4	1.9	33.3
Hungary	10.5	1.1	39.0
Malta	28.6	1.5	23.6
Netherlands	10.9	1.3	38.3
Austria	13.6	:	38.9
Poland	10.1	1.2	48.2
Portugal	13.3	1.5	18.1
Romania	18.5	1.3	16.5
Slovenia	13.3	1.9	50.2
Slovakia	16.7	1.7	35.8
Finland	15.7	:	57.7
Sweden	:	3.3	40.0
United Kingdom	8.5	:	29.5

Source: Eurostat - Community Innovation Survey 2004 - 2006.

Note: Turnover in 2006.

Note: NACE Rev 1.1 includes industry (NACE 10-37, 40-41); Selected servics sectors (NACE 51, 60-67, 72, 74.2 and 74.3). See Appendix 2 for NACE classifications.

Note: Ireland 2008 NACE Rev 2 includes industry (NACE 05-33, 35-39); Selected servics sectors (NACE 46, 49-53, 58, 61-66, 71). See Appendix 2 for NACE classifications.

: Data not available

Chapter 13

Other Business Indicators and Innovation

Introduction

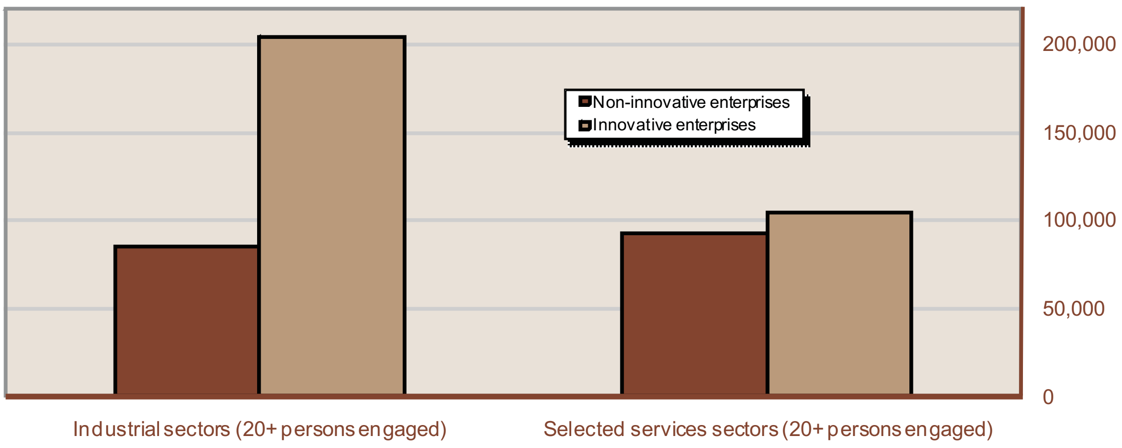
Detailed business statistics are collected annually by the CSO in the Census of Industrial Production (CIP) and Annual Services Inquiry (ASI) surveys. An analysis was done matching the earlier CIS2006 results with both these CIP and ASI survey results for 2006 to allow additional findings to be presented in the CIS2006 report. It was not possible to do this analysis for 2008 as CIP and ASI final results for 2008 will not be available until later this year. The analysis for 2008 will be carried out and presented on the CSO website when this data becomes available. Consequently, the results for the CIS2006 matching analysis are re-presented here. It is important to note that the results presented in this chapter should be regarded as indicative measures only as they are calculated based on a smaller matched sample. The business classification used for 2006 was based on NACE Rev 1.1[1], and do not cover enterprises in NACE sectors 65-67 (Financial intermediation).

Gross Value Added

In 2006, innovation active enterprises had an average Gross Value Added (GVA) per person engaged of over €164,000 compared to €89,000 in non-innovative enterprises. There was also a significant difference in average GVA per person engaged in industrial enterprises where innovative enterprises had an average GVA per person engaged of €204,000 compared to €85,000 for non-innovative enterprises. There was less difference in the selected services sector where enterprises engaged in innovation activities had GVA per person engaged of €105,000 compared to €93,000 for non-innovative active enterprises. *See Figure 13.1 and Table 13.1.*

[1] Key to NACE Rev 1.1 classification can be accessed at the CSO website at www.cso.ie

Figure 13.1 Gross value added per person engaged in innovative and non-innovative enterprises by sector, 2006



Source: CSO/Forfás - Community Innovation Survey 2004-2006; CIP 2006, ASI 2006.
Note: Innovation activities over the period 2004-2006.
Note: Includes industry (NACE 10-37, 40-41); Selected services sectors (NACE 51, 60-64, 72, 74.2, 74.3).

Table 13.1 Gross value added per person engaged in innovative and non-innovative enterprises[1] by sector, 2006

€

	Non-innovative enterprises	Innovative enterprises	All enterprises
Industrial sectors (20+ persons engaged)	84,845	204,214	**181,908**
Selected services sectors (20+ persons engaged)	92,811	104,518	**101,021**
All enterprises (20+ persons engaged)	**89,254**	**164,264**	**146,584**

Source: CSO/Forfás - Community Innovation Survey 2004 - 2006; Annual Services Inquiry 2006; Census of Industrial Production 2006.
[1] Innovation activities over the period 2004-2006.
Note: Includes industry (NACE 10-37, 40-41); Selected services sectors (NACE 51, 60-64, 72, 74.2 and 74.3). See Appendix 2 for NACE classifications.

Labour Costs

Labour costs per person engaged were higher in innovative enterprises when compared to non-innovative enterprises. Labour costs per person engaged for all enterprises with at least 20 persons engaged were €51,000 for innovative enterprises compared to €41,000 for non-innovative enterprises. The differential for industrial enterprises was 39% compared to 16% in the selected services sector. *See Table 13.2.*

Table 13.2 Labour costs per person engaged in innovative and non-innovative enterprises[1] by sector, 2006

€

	Non-innovative enterprises	Innovative enterprises	All enterprises
Industrial sectors (20+ persons engaged)	36,157	50,105	**47,499**
Selected services sectors (20+ persons engaged)	44,408	51,434	**49,336**
All enterprises (20+ persons engaged)	**40,723**	**50,638**	**48,301**

Source: CSO/Forfás - Community Innovation Survey 2004 - 2006; Annual Services Inquiry 2006; Census of Industrial Production 2006.
[1] Innovation activities over the period 2004-2006.
Note: Includes industry (NACE 10-37, 40-41); Selected services sectors (NACE 51, 60-64, 72, 74.2 and 74.3). See Appendix 2 for NACE classifications.

Capital Acquisitions

The rate of capital acquisitions for both innovative and non-innovative enterprises was similar. While exactly 87% of innovative enterprises had capital acquisitions in 2006, 82% of non-innovative enterprises made such acquisitions. There was a similar pattern in both the industrial and selected services sector. *See Table 13.3.*

Table 13.3 Percentage of innovative and non-innovative enterprises[1] with capital acquisitions by sector, 2006

%

	Non-innovative enterprises	Innovative enterprises	All enterprises
Industrial sectors (20+ persons engaged)	79.8	84.2	**82.7**
Selected services sectors (20+ persons engaged)	83.1	91.4	**87.2**
All enterprises (20+ persons engaged)	**81.8**	**87.0**	**84.9**

Source: CSO/Forfás - Community Innovation Survey 2004 - 2006; Annual Services Inquiry 2006; Census of Industrial Production 2006.

[1] Innovation activities over the period 2004-2006.

Note: Includes industry (NACE 10-37, 40-41); Selected services sectors (NACE 51, 60-64, 72, 74.2 and 74.3). See Appendix 2 for NACE classifications.

Exports

In 2006, innovative enterprises were more likely to be engaged in the exporting of goods and services when compared to non-innovative enterprises. Almost two thirds of enterprises who were innovation active had exports, compared to two fifths of non-innovative enterprises. In excess of 75% of innovation active industrial enterprises engaged in export activities compared to 56% of non-innovation active enterprises. Just over 50% of all innovation active enterprises in the selected services sector engaged in exporting in 2006 compared to 28% of non-innovative enterprises in the sector. *See Table 13.4.*

Table 13.4 Percentage of innovative and non-innovative enterprises[1] engaged in exporting by sector, 2006

%

	Non-innovative enterprises	Innovative enterprises	All enterprises
Industrial sectors (20+ persons engaged)	55.6	75.1	**68.7**
Selected services sectors (20+ persons engaged)	27.6	50.6	**39.1**
All enterprises (20+ persons engaged)	**39.4**	**65.3**	**54.6**

Source: CSO/Forfás - Community Innovation Survey 2004 - 2006; Annual Services Inquiry 2006; Census of Industrial Production 2006.

[1] Innovation activities over the period 2004-2006.

Note: Includes industry (NACE 10-37, 40-41); Selected services sectors (NACE 51, 60-64, 72, 74.2 and 74.3). See Appendix 2 for NACE classifications.

E-Commerce

Almost four in every five innovative enterprises had a website in 2006 compared to three in every five non-innovative enterprises. Move than three quarters of innovation active industrial enterprises had a website compared to just over half of non-innovative enterprises in the sector while almost 81% of innovative enterprises in the selected services sector had a website compared to 68% of non-innovative enterprises. *See Table 13.5.*

Table 13.5 Percentage of innovative and non-innovative enterprises[1] with a website by sector, 2006

%

	Non-innovative enterprises	Innovative enterprises	All enterprises
Industrial sectors (20+ persons engaged)	52.6	76.3	**68.5**
Selected services sectors (20+ persons engaged)	67.5	80.5	**74.0**
All enterprises (20+ persons engaged)	**61.3**	**77.9**	**71.1**

Source: CSO/Forfás - Community Innovation Survey 2004 - 2006; Annual Services Inquiry 2006; Census of Industrial Production 2006.

[1] Innovation activities over the period 2004-2006.

Note: Includes industry (NACE 10-37, 40-41); Selected services sectors (NACE 51, 60-64, 72, 74.2 and 74.3). See Appendix 2 for NACE classifications.

Just under half of all innovative enterprises in the industrial sector had orders via e-commerce in 2006 compared to 39% of non-innovative enterprises. In the selected services sector, 42% of innovative enterprises received such orders compared to 36% of non-innovative enterprises. *See Table 13.6.*

Table 13.6 Percentage of innovative and non-innovative enterprises[1] with orders via e-commerce[2] by sector, 2006

%

	Non-innovative enterprises	Innovative enterprises	All enterprises
Industrial sectors (20+ persons engaged)	38.5	47.9	**44.8**
Selected services sectors (20+ persons engaged)	35.7	42.0	**38.8**
All enterprises (20+ persons engaged)	**36.9**	**45.5**	**42.0**

Source: CSO/Forfás - Community Innovation Survey 2004 - 2006; Annual Services Inquiry 2006; Census of Industrial Production 2006.

[1] Innovation activities over the period 2004-2006.

[2] Enterprises who received orders via email, EDI (Electronic Data Interchange) or internet in 2006.

Note: Includes industry (NACE 10-37, 40-41); Selected services sectors (NACE 51, 60-64, 72, 74.2 and 74.3). See Appendix 2 for NACE classifications.

Appendix 1

Background Notes

Introduction

The Community Innovation Survey (CIS) 2008 is a survey of innovation activities of enterprises in Ireland and other EU Member States. The CIS is carried out under Commission Regulation (EC) No 1450/2004 implementing Decision No 1608/2003/EC. The survey collects information about product and process innovation as well as organisational innovation along with other key variables during the three year period 2006 to 2008 inclusive. Most questions cover new or significantly improved goods or services or the implementation of new or significantly improved processes, logistics or distribution methods.

The CIS 2008 was jointly conducted by the CSO and Forfás to increase efficiency in the collection of statistical data and to reduce the burden on the participating enterprises. Data were collected in accordance with Section 33 of the Statistics Act, 1993 and with EU law and the survey was carried out under the agreed set of international rules as laid out in the OECD Oslo manual. Data are strictly confidential and will be used only for statistical purposes.

Note: Methodological changes have been introduced in the CIS 2006-2008. The business classification used for CIS 2006-2008 survey is now based on the Statistical Classification of Economic Activities in the European Community (NACE Rev.2). CIS 2004-2006 was based on NACE Rev1.1. As a consequence of this, no conclusions should be drawn regarding the direction or scale of any real changes between CIS 2006-2008 and CIS 2004-2006.

Survey

The CIS survey sampled enterprises with ten or more persons engaged in the selected NACE categories as shown in Appendix 2. The CSO and Forfás jointly conducted the survey as a postal survey. A total of 4,650 survey forms were issued to the sampled enterprises from the CSO's Business Register in June, 2009. Reminders were then issued in end of June 2009 and July 2009. The sample returns were grossed using this Register population to produce overall results. Appreciation is extended to enterprises who took the time to complete and return survey forms.

Questionnaire

The CIS questionnaire is included in Appendix 4 and is also available from the CSO website. Go to www.cso.ie and then go to Business Sectors: Science and Technology.

Appendix 2

Key to NACE Rev 2 Classification

The selected NACE divisions below are included in the results of the CIS 2006-2008.

Industry (All divisions) – Divisions 05 to 39

05	Mining of coal and lignite
06	Extraction of crude petroleum
07	Mining of metal ores
08	Other mining and quarrying
09	Mining support service activities
10	Manufacture of food products
11	Manufacture of beverages
12	Manufacture of tobacco products
13	Manufacture of textiles
14	Manufacture of wearing apparel
15	Manufacture of leather and related products
16	Manufacture of wood and products of wood and cork; except furniture; manufacture of articles of straw and plaiting materials
17	Manufacture of paper and paper products
18	Manufacture of reproduction of recorded media
19	Manufacture of coke and refined petroleum products
20	Manufacture of chemicals and chemical products
21	Manufacture of basic pharmaceutical products and pharmaceutical preparations
22	Manufacture of rubber and plastic products
23	Manufacture of other non-metallic mineral products
24	Manufacture of basic metals
25	Manufacture of fabricated metal products, except machinery and equipment
26	Manufacture of computer, electronic and optical products
27	Manufacture of electrical equipment
28	Manufacture of machinery and equipment n.e.c.
29	Manufacture of motor vehicles, trailers and semi-trailers
30	Manufacture of other transport equipment

31 Manufacture of furniture
32 Other manufacturing
33 Repair and installation of machinery and equipment
35 Electricity, gas, steam and air conditioning supply
36 Water collection, treatment and supply
37 Sewerage
38 Waste collection, treatment and disposal activities; materials recovery
39 Remediation activities and other waste management services

Services – Divisions 45 to 99

45* Wholesale and retail trade and repair of motor vehicles and motorcycles
46 Wholesale trade, except of motor vehicles and motorcycles
47* Retail trade, except of motor vehicles and motorcycles
49 Land transport; transport via pipelines
50 Water transport
51 Air transport
52 Warehousing and support activities for transportation
53 Postal and courier activities
55* Accommodation
56* Food and beverage service activities
58 Publishing activities
59* Motion picture, video and television programme production, sound recording and music publishing activities
60* Programming and broadcasting activities
61 Telecommunications
62 Computer programming, consultancy and related activities
63 Information service activities
64 Financial service activities, except insurance and pension funding
65 Insurance, reinsurance and pension funding, except compulsory social security
66 Activities auxiliary to financial services and insurance activities
68* Real estate activities
69* Legal and accounting activities
70* Activities of head offices; management consultancy activities
71 Architectural and engineering activities; technical testing and analysis
72* Scientific research and development
73* Advertising and market research
74* Other professional, scientific and technical activities
75* Veterinary activities
77* Rental and leasing activities
78* Employment activities
79* Travel agency, tour operator and other reservation service and related activities
80* Security and investigation activities
81* Services to buildings and landscape activities
82* Office administrative, office support and other business support activities
84* Public administration and defence; compulsory social security
85* Education
86* Human health activities
87* Residential care activities

88* Social work activities without accommodation
90* Creative, arts and entertainment activities
91* Libraries, archives, museums and other cultural activities
92* Gambling and betting activities
93* Sports activities and amusement and recreation activities
94* Activities of membership organisations
95* Repair of computers and personal and household goods
96* Other personal service activities
97* Activities of households as employers of domestic personnel
98* Undifferentiated goods-and services-producing activities of private households for own use
99* Activities of extraterritorial organisations and bodies

* Not included in CIS 2006 - 2008

Appendix 3

Definitions

Product Innovation: The introduction of a new good or service or a significantly improved good or service with respect to its capabilities. The product innovation could either be new to the market or new to the firm.

Process Innovation: The introduction of a new or significantly improved production process, distribution method, or support activity for goods and services. The process innovation could either be new to the market or new to the firm.

New to Market Innovation: An innovation activity, which saw the introduction of a new good or service by the firm onto its operating market before other competitors.

New to Firm Innovation: An innovation activity which saw the introduction of a significantly improved good or service to the firm, that was already available from competitors in the operating sector.

Innovation Expenditure: Spending on activities to support and implement production or process innovations.

Organisational Innovation: The implementation of new or significant changes in firm structure or management methods that are intended to improve your firms use of knowledge, the quality of your goods and services or the efficiency of work flows.

Marketing Innovation: The implementation of a new marketing concept or strategy that differs significantly from your enterprise's existing marketing methods and which has not been used before.

Environmental Innovation: An environmental innovation is a new or significantly improved product (good or service), process, organisational method or marketing method that creates environmental benefits compared to alternatives.

Appendix 4

CIS Survey 2006-2008 Form

CONFIDENTIAL

29700

If above details are incorrect, please amend and mark X in this box ☐

Central Statistics Office
An Phríomh-Oifig Staidrimh

Forfás

Enquiries to:
LoCall: 1890 313 414 (ROI)
0870 876 0256 (UK/NI)
021 453 5350 Ext: 5355
Fax: 021 453 5553
e-mail: bsi@cso.ie
Web: www.cso.ie

Enquiries to:
Forfás S&T Indicators Unit: 01 607 3224
e-mail: andrew.stockman@forfas.ie
Web: www.forfas.ie

The Community Innovation Survey 2008

The 2008 Community Innovation Survey

The Community Innovation Survey is a survey of innovation activities of businesses in Ireland and other EU Member States. Data from the survey allow benchmarking exercises to be carried out comparing innovation performance in Ireland with other European nations. Data and analysis from the survey also provide backing to policymaking to promote further support for innovation across the economy.

The survey collects information about product and process innovation as well as organisational and marketing innovation during the three year period 2006 to 2008 inclusive. Most questions cover new or significantly improved goods or services or the implementation of new or significantly improved processes, logistics or distribution methods. In order to be able to compare enterprises with and without innovation activities, we request all enterprises to respond to all questions, unless otherwise instructed.

The Community Innovation Survey has previously been conducted by Forfás. The survey is now being jointly conducted by the CSO and Forfás under Section 11 of the Statistics Act, 1993, to increase efficiency in the collection of statistical data and to reduce the burden on the participating enterprises.

The information you provide will be treated as **strictly confidential** in accordance with Section 33 of the Statistics Act, 1993 and with EU law. It will be used only for statistical purposes.

Thank you in advance for your participation in this survey. We would be grateful if you could complete and return this form in the Freepost envelope provided before 14th August 2009. The form is in a computer readable format and we would appreciate if you could complete it as clearly as possible.

Note: You can complete an online version of this form at https://eforms.cso.ie - To submit the form you will need Adobe Reader 8 or higher which can be downloaded free of charge from www.adobe.com.

Gerard O'Hanlon
Director General, CSO

Martin Cronin
CEO, Forfás

Unless otherwise indicated please answer each question by marking X in the appropriate box(es)

1. General information about the enterprise

1.1 In 2008, was your enterprise part of an enterprise group? (a group consists of two or more legally defined enterprises under common ownership. Each enterprise in the group can serve different markets, as with national or regional subsidiaries, or serve different product markets. The head office is also part of an enterprise group.)

Yes ☐ → In which country is the head office of your group located? ☐

No ☐

If your enterprise is part of an enterprise group, please answer all further questions only for the enterprise for which you are responsible in Ireland. Exclude all subsidiaries or parent enterprises.

1.2 In which geographic markets did your enterprise sell goods and/or services during the three years 2006 to 2008?

	Yes	No
Local / regional within Ireland	☐	☐
National	☐	☐
Northern Ireland	☐	☐
Other European Union (EU) countries, EFTA or EU candidate countries*	☐	☐
All other countries	☐	☐

* Include the following European Union (EU) countries, EFTA or EU candidate countries: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Great Britain, Greece, Hungary, Iceland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Macedonia, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Switzerland, Turkey, Spain and Sweden

2. Product (a good or a service) innovation

A product innovation is the market introduction of a **new** or **significantly** improved good or service with respect to its capabilities, user friendliness, components or sub-systems.

- Product innovations (new or improved) must be new to your enterprise, but they do not need to be new to your market.
- Product innovations could have been originally developed by your enterprise or by other enterprises.

2.1 During the three years 2006 to 2008, did your enterprise introduce :

	Yes	No
New or significantly improved goods. (Exclude the simple resale of new goods purchased from other enterprises and changes of a solely aesthetic nature).	☐	☐
New or significantly improved services.	☐	☐

If **no** to both options go to Section 3

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2.2 **Were any of your product innovations during the three years 2006 to 2008 :**

	Yes	No
New to your market? Your enterprise introduced a new or significantly improved good or service onto your market before your competitors (it may have already been available in other markets)	☐	☐
Only new to your firm? Your enterprise introduced a new or significantly improved good or service that was already available from your competitors in your market	☐	☐

Using the previous definitions, please estimate how your total turnover in 2008 was distributed between the following categories.

New or significantly improved goods and service innovations introduced during 2006 to 2008 that were **new to your market**	☐☐☐ %
New or significantly improved goods and service innovations introduced during 2006 to 2008 that were **new to your enterprise but not new to the market**	☐☐☐ %
Goods and services that were **unchanged or only marginally modified** during 2006 to 2008 (include the resale of new goods or services purchased from other enterprises)	☐☐☐ %
Total turnover in 2008	1 0 0 %

3. Process innovation

A process innovation is the implementation of a **new** or **significantly** improved production process, distribution method, or support activity for your goods or services.

- Process innovations must be new to your enterprise, but they do not need to be new to your market.
- The innovation could have been originally developed by your enterprise or by other enterprises.
- Exclude purely organisational innovations - these are covered in section 9.

3.1 **During the three years 2006 to 2008, did your enterprise introduce :**

	Yes	No
New or significantly improved methods of manufacturing or producing goods or services	☐	☐
New or significantly improved logistics, delivery or distribution methods for your inputs, goods or services	☐	☐
New or significantly improved supporting activities for your processes, such as maintenance systems or operations for purchasing, accounting or computing	☐	☐

4. Ongoing or abandoned innovation activities for process and product innovations

Innovation activities include the acquisition of machinery, equipment, software and licenses; engineering and development work, industrial design, training, marketing and R&D when they are **specifically** undertaken to develop and/or implement a product or process innovation. Also include basic R&D as an innovation activity even when not related to a product and/or process innovation.

4.1 **During 2006 to 2008 did your enterprise have any innovation activities that did not result in a product or process innovation because the activities were:**

	Yes	No
Abandoned or suspended before completion	☐	☐
Still ongoing at the end of 2008	☐	☐

If your enterprise had no product or process innovations or innovation activity during 2006 to 2008 (no to all options in questions 2.1, 3.1 and 4.1) then go to section 7. Otherwise, go to section 5.

5. Innovation activities and expenditures for process and product innovations

Example

Please enter all monetary values in € and to the nearest 1,000 .

€ 000's

€10,000 = ☐☐☐,☐10,000

5.1 During the three years 2006 to 2008, did your enterprise engage in the following innovation activities and if so what were those expenditures <u>in 2008 only</u>?

	Yes	No	2008 Expenditure
In-House R&D (Include capital expenditures on buildings and equipment specifically for R&D) Creative work undertaken within your enterprise to increase the stock of knowledge for developing new and improved products and processes (include software development in-house that meets this requirement).	☐	☐	☐☐☐,☐☐☐,000
Purchase of External R&D Same activities as above, but performed by other enterprises (including other enterprises or subsidiaries within your group) or by public or private research organisations and purchased by your enterprise	☐	☐	☐☐☐,☐☐☐,000
Acquisition of machinery, equipment and software (Exclude expenditures on equipment specifically for R&D) Acquisition of advanced machinery, equipment and computer hardware or software to produce new or significantly improved products and processes	☐	☐	☐☐☐,☐☐☐,000
Acquisition of other external knowledge Purchase or licensing of patents and non-patented inventions, know-how and other types of knowledge from other enterprises or organisations for the development of new or significantly improved products and processes	☐	☐	☐☐☐,☐☐☐,000
Total Innovation Expenditure 2008			☐,☐☐☐,☐☐☐,000

6. Co-operation for innovation activities

6.1 During the three years 2006 to 2008, did your enterprise co-operate on any of your innovation activities with other enterprises or institutions? Innovation co-operation is active participation with other enterprises or non-commercial institutions on innovation activities. Both partners do not need to commercially benefit. Exclude pure contracting out of work with no active co-operation.

Yes ☐ **No** ☐ → If **no** go to Section 7

6.2 Please indicate the type of co-operation partner by location (tick all that apply)

Type of co-operation partner	Ireland	Northern Ireland	Other Europe*	United States	China or India	All other countries
A. Other enterprises within your enterprise group	☐	☐	☐	☐	☐	☐
B. Suppliers of equipment, materials, components or software	☐	☐	☐	☐	☐	☐
C. Clients or customers	☐	☐	☐	☐	☐	☐
D. Competitors or other enterprises in your sector	☐	☐	☐	☐	☐	☐
E. Consultants, commercial labs or private R&D institutes	☐	☐	☐	☐	☐	☐
F. Universities or other higher education institutions	☐	☐	☐	☐	☐	☐
G. Government or public research institutes	☐	☐	☐	☐	☐	☐

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* Include the following European Union (EU) countries, EFTA or EU candidate countries: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Great Britain, Greece, Hungary, Iceland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Macedonia, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Switzerland, Turkey, Spain, and Sweden

7. Factors hampering innovation activities

7.1 During the three years 2006 to 2008, how important were the following factors in hampering your innovation activities or projects or influencing a decision not to innovate?

		Degree of Importance: High	Medium	Low	Factor not experienced
Cost factors	Lack of funds within your enterprise or group	☐	☐	☐	☐
	Lack of finance from sources outside your enterprise	☐	☐	☐	☐
	Innovation costs too high	☐	☐	☐	☐
Knowledge factors	Lack of qualified personnel	☐	☐	☐	☐
	Lack of information on technology	☐	☐	☐	☐
	Lack of information on markets	☐	☐	☐	☐
	Difficulty in finding cooperation partners for innovation	☐	☐	☐	☐
Market factors	Market dominated by established enterprises	☐	☐	☐	☐
	Uncertain demand for innovative goods or services	☐	☐	☐	☐
	Need to meet Government regulations	☐	☐	☐	☐
	Excessive perceived economic risks	☐	☐	☐	☐
Reasons not to innovate	No need due to prior innovations	☐	☐	☐	☐
	No need because of no demand for innovations	☐	☐	☐	☐

8. Innovation objectives during 2006 to 2008

8.1 How important were each of the following objectives for your activities to develop product (good or service) or process innovations between 2006 and 2008?

If your enterprise had several projects for product and process innovations, make an overall evaluation

	High	Medium	Low	Not relevant
Increase range of goods or services	☐	☐	☐	☐
Replace outdated products or processes	☐	☐	☐	☐
Enter new markets	☐	☐	☐	☐
Increase market share	☐	☐	☐	☐
Improve quality of goods or services	☐	☐	☐	☐
Improve flexibility for producing goods or services	☐	☐	☐	☐
Increase capacity for producing goods or services	☐	☐	☐	☐
Improve health and safety	☐	☐	☐	☐
Reduce labour costs per unit output	☐	☐	☐	☐

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9. Organisational innovation

An organisational innovation is a new organisational method in your enterprise's business practices (including knowledge management), workplace organisation or external relations that has not been previously used by your enterprise.

- It must be the result of strategic decisions taken by management
- Exclude mergers or acquisitions, even if for the first time

9.1 During the three years 2006 to 2008, did your enterprise introduce:

	Yes	No
New **business practices** for organising procedures (i.e. supply chain management, business re-engineering, knowledge management, lean production, quality management etc.)	☐	☐
New methods of **organising work responsibilities and decision-making** (i.e. first use of a new system of employee responsibilities, team work, decentralisation, integration or de-integration of departments, education/training systems, etc)	☐	☐
New methods of **organising external relations** with other firms or public institutions (i.e. first use of alliances, partnerships, outsourcing or sub-contracting, etc)	☐	☐

If **no** to all options go to Section 10 otherwise go to Question 9.2

9.2 How important were each of the following objectives for your enterprises' organisational innovations introduced between 2006 and 2008 inclusive?

If your enterprise introduced several organisational innovations, make an overall evaluation

	High	Medium	Low	Not relevant
Reduced time to respond to customer or supplier needs	☐	☐	☐	☐
Improved ability to develop new products or processes	☐	☐	☐	☐
Improved quality of your goods or services	☐	☐	☐	☐
Reduced costs per unit output	☐	☐	☐	☐
Improved employee satisfaction and/or lower employee turnover	☐	☐	☐	☐
Improved communication or information sharing within your enterprise	☐	☐	☐	☐
Improved communication/information sharing with other enterprises or institutions	☐	☐	☐	☐

10. Marketing innovation

A marketing innovation is the implementation of a new marketing concept or strategy that differs significantly from your enterprise's existing marketing methods and which has not been used before.

- It requires significant changes in product design or packaging, product placement, product promotion or pricing
- Exclude seasonal, regular and other routine changes in marketing methods

10.1 During the three years 2006 to 2008, did your enterprise introduce:

	Yes	No
Significant changes to the aesthetic **design** or **packaging** of a good or service (exclude changes that alter the product's functional or user characteristics - these are product innovations)	☐	☐
New media or techniques for **product promotion** (i.e. first time use of a new advertising media, a new brand image, introduction of loyalty cards, etc)	☐	☐
New methods for **product placement** or sales channels (i.e. first time use of franchising or distribution licenses, direct selling, exclusive retailing, new concepts for product presentation, etc)	☐	☐
New methods of **pricing** goods or services (i.e. first time use of variable pricing by demand, discount systems, etc)	☐	☐

If **no** to all options go to Section 11 otherwise go to Question 10.2

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10.2 How important were each of the following objectives for your enterprise's marketing innovations introduced between 2006 and 2008 inclusive?

If your enterprise introduced several marketing innovations, make an overall evaluation

	High	Medium	Low	Not relevant
Increase or maintain market share	☐	☐	☐	☐
Introduce products to new customer groups	☐	☐	☐	☐
Introduce products to new geographic markets	☐	☐	☐	☐

11. Innovations with environmental benefits

An environmental innovation is a new or significantly improved product (good or service), process, organisational method or marketing method that creates environmental benefits compared to alternatives.

- The environmental benefits can be the primary objective of the innovation or the result of other innovation objectives.
- The environmental benefits of an innovation can occur during the production of a good or service, or during the after sales use of a good or service by the end user.

11.1 During the three years 2006 to 2008, did your enterprise introduce a product (good or service) process, organisational or marketing innovation with any of the following environmental benefits?

Environmental benefits from the production of goods or services within your enterprise	Yes	No
Reduced material use per unit of output	☐	☐
Reduced energy use per unit of output	☐	☐
Reduced CO_2 'footprint' (total CO_2 production) by your enterprise	☐	☐
Replaced materials with less polluting or hazardous substitutes	☐	☐
Reduced soil, water, noise, or air pollution	☐	☐
Recycled waste, water, or materials	☐	☐
Environmental benefits from the after sales use of a good or service by the end user		
Reduced energy use	☐	☐
Reduced air, water, soil or noise pollution	☐	☐
Improved recycling of product after use	☐	☐

11.2 During 2006 to 2008, did your enterprise introduce an environmental innovation in response to:

	Yes	No
Existing environmental regulations or taxes on pollution	☐	☐
Environmental regulations or taxes that you expected to be introduced in the future	☐	☐
Availability of government grants, subsidies or other financial incentives for environmental innovation	☐	☐
Current or expected market demand from your customers for environmental innovations	☐	☐
Voluntary codes or agreements for environmental good practice within your sector	☐	☐

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11.3 **Does your enterprise have procedures in place to regularly identify and reduce your enterprise's environmental impacts?**
(For example preparing environmental audits, setting environmental performance goals, ISO 14001 certification, etc).
(select the most appropriate option only)

☐ Yes: implemented before January 2006

☐ Yes: implemented or significantly improved after January 2006

☐ No

Your comments and feedback

We welcome your feedback. Please tell us what you think about this form and also let us know what type of published data would be useful to your business.

How long did it take you to complete this form? ☐☐☐ mins

Comments:

Signature ....

Position in enterprise ....

Date ..../................../ **2009**

Phone (   ) ....

e-mail ....

Website www...

Thank you for taking the time to complete this form.

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