

Innovation expenditure for 2018 was estimated at €175 million.

Business Innovation: 2016-2018

Cut-off date:
30 June 2020

This news release shows the data collected through the Community Innovation Survey for the three-year period 2016 to 2018.

Between 2016 and 2018, 865 enterprises employing at least 10 persons, or 37.6 per cent of the surveyed enterprises, undertook innovation activity. Results show that 448 enterprises were engaged in both product and business process innovation, 313 enterprises were engaged in business process innovation only, 85 enterprises were solely engaged in product innovation, and 19 enterprises performed Research and Development only or had ongoing/abandoned their innovation activities (Chart 1).

Innovation expenditure for 2018 was estimated at €175 million. Innovation expenditure (excl. R&D) was predominant with a total of €122.7 million (70.1 per cent), followed by intramural R&D amounting to €44.5 million (25.4 per cent). Enterprises with the highest total expenditure were in information and communication (NACE J); financial and insurance activities (NACE K) and manufacturing (NACE C) amounted to 35.7, 25.6 and 16.3 per cent respectively of the total expenditure (Chart 2, Table 2).

The survey shows that 25.3 per cent of all innovative enterprises indicated that they had at least one cooperation arrangement with other enterprises or organisation, with most enterprises (49.3 per cent) had a combination of more than one cooperation partner (Table 3).

Only 9.9 per cent (228 enterprises) of the surveyed enterprises applied for an intellectual property right or licence. Most enterprises (105 enterprises) applied for a trademark only. This was followed by enterprises that applied for more than one intellectual property rights (66 enterprises) and that used a trade secret only (40 enterprises) (Table 4).

Chart 1. Number of enterprises by type of innovation activity: 2016-2018

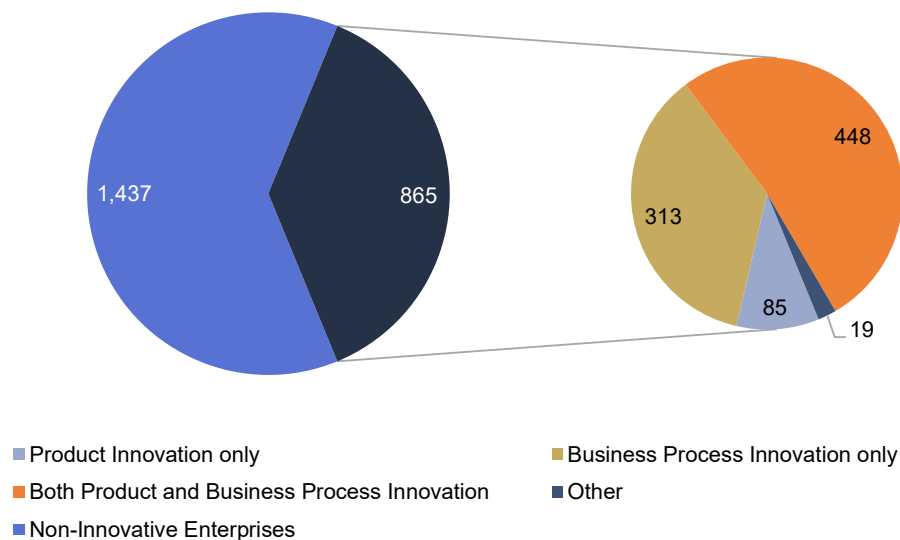
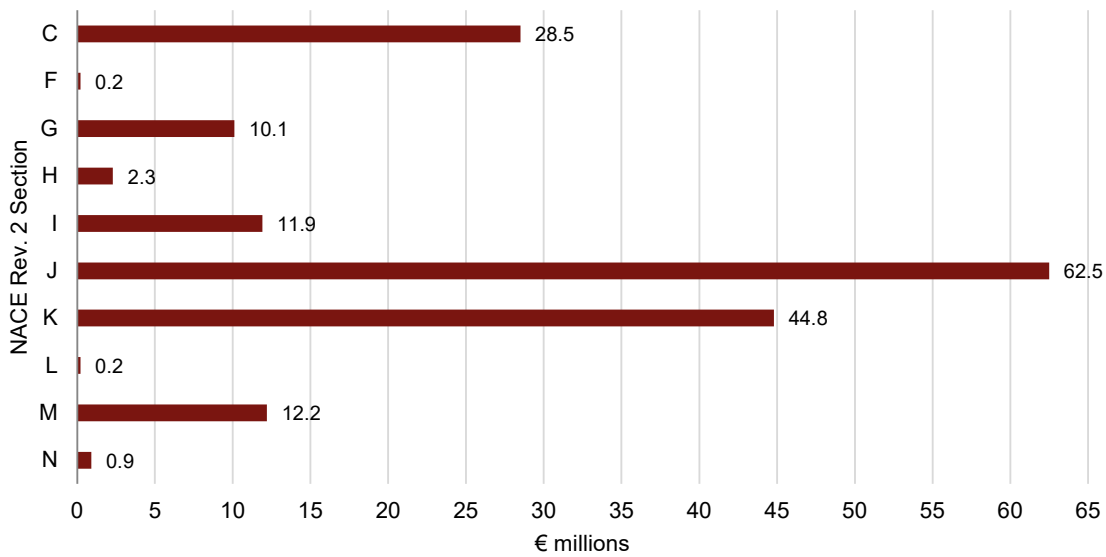


Chart 2. Innovation expenditure by industry: 2018



Most commonly high identified constraints to innovate included: excessive competition in the market (118 enterprises), lack of skilled employees within the enterprise (100 enterprises) and exorbitant innovation costs (86 enterprises) (Chart 4, Table 5).

Only 17.9 per cent of the total innovative enterprises successfully obtained either equity or debt finance, and only one in every five of these enterprises used (partly or fully) these fundings for R&D or other innovation activities (Table 6).

The number of innovative enterprises which had acquired technical services during the three years (2016 to 2018) was 436, which amounts to 50.4 per cent of the total innovative enterprises. Most enterprises (93.3 per cent) acquired such services from private business enterprises only (Chart 3, Table 7). Conferences, trade fairs or exhibitions and information from professional or industry associations were the main channels used by enterprises to acquire knowledge (Table 8).

Out of the total enterprises surveyed, 46.4 per cent formed part of an enterprise group, of which 75.7 per cent of these had their head office located in Malta while the remaining companies had their head office located in the European Union (EU), European Free Trade Association (EFTA) and rest of the world, amounting to 11.1, 1.0 and 12.2 per cent respectively (Chart 5, Table 9).

Chart 3. Innovative enterprises purchasing technical services: 2016-2018

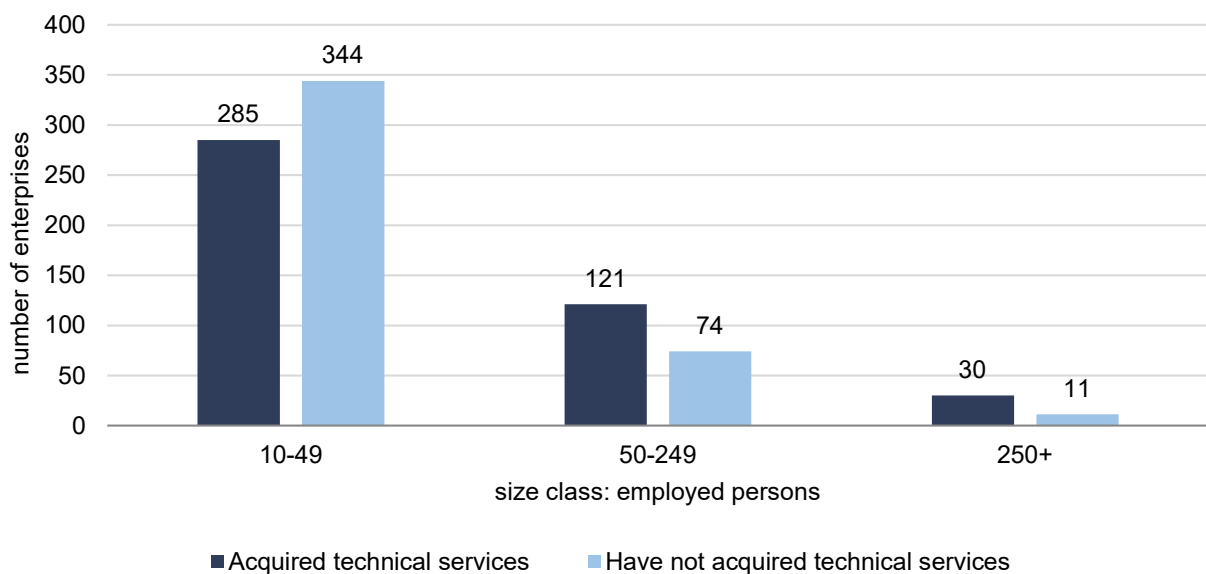


Table 1. NACE Rev. 2 Classification

Section	Division	Description
A	01 - 03	Agriculture, forestry and fishing
B	05 - 09	Mining and quarrying
C	10 - 33	Manufacturing
D	35	Electricity, gas, steam and air conditioning supply
E	36 - 39	Water supply, sewerage, waste management and remediation activities
F	41 - 43	Construction
G	45 - 47	Wholesale and retail trade; repair of motor vehicles and motorcycles
H	49 - 53	Transportation and storage
I	55 - 56	Accommodation and food service activities
J	58 - 63	Information and communication
K	64 - 66	Financial and insurance activities
L	68	Real estate activities
M	69 - 75	Professional, scientific and technical activities
N	77 - 82	Administrative and support service activities
O	84	Public administration and defence; compulsory social security
P	85	Education
Q	86 - 88	Human health and social work activities
R	90 - 93	Arts, entertainment and recreation
S	94 - 96	Other service activities
T	97 - 98	Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use
U	99	Activities of extraterritorial organisations and bodies

Table 2. Enterprises with innovation expenditure by industry and type: 2018 ...

NACE Rev. 2	Economic Industry	No. of enterprises	Innovation (excl. R&D) ¹	Intramural R&D ²	Extramural R&D	Total	Percentage total
			€000				
10	Manufacture of food products	8	100	834	-	934	0.5
17	Manufacture of paper and paper products	4	908	-	-	908	0.5
18	Printing and reproduction of recorded media	3	907	-	-	907	0.5
21	Manufacture of basic pharmaceutical products and pharmaceutical preparations	6	50	2,373	694	3,117	1.8
22	Manufacture of rubber and plastic products	8	282	646	103	1,031	0.6
23	Manufacture of other non-metallic mineral products	6	254	-	32	286	0.2
25	Manufacture of fabricated metal products, except machinery and equipment	6	1,550	25	1,565	3,140	1.8
26	Manufacture of computer, electronic and optical products	6	2,553	2,888	141	5,582	3.2
27	Manufacture of electrical equipment	5	55	384	250	689	0.4
28	Manufacture of machinery and equipment n.e.c.	5	80	931	100	1,111	0.6
33	Repair and installation of machinery and equipment	3	209	48	-	257	0.1
various	Other manufacturing (See methodological notes)	14	7,291	3,164	111	10,566	6.0
43	Specialised construction activities	3	81	-	-	81	0.0
46	Wholesale trade, except of motor vehicles and motorcycles	41	1,152	7,291	312	8,755	5.0
47	Retail trade, except of motor vehicles and motorcycles	27	704	275	45	1,024	0.6
52	Warehousing and support activities for transportation	5	233	264	20	517	0.3
55	Accommodation	10	11,023	-	35	11,058	6.3
56	Food and beverage service activities	17	848	-	10	858	0.5
58	Publishing activities	5	1,834	268	13	2,115	1.2
59	Motion picture, video and television programme production, sound recording	3	360	9	-	369	0.2

... Table 2. Enterprises with innovation expenditure by industry and type: 2018

NACE Rev. 2	Economic Industry	No. of enterprises	Innovation (excl. R&D) ¹	Intramural R&D ²	Extramural R&D	Total	Percentage total
			€000				
61	Telecommunications	4	18,417	-	-	18,417	10.5
62	Computer programming	41	19,652	19,129	2,160	40,941	23.4
63	Information service activities	3	638	15	-	653	0.4
64	Financial service activities, except insurance and pension funding	8	25,766	50	-	25,816	14.7
65	Insurance	3	25	150	57	232	0.1
66	Activities auxiliary to financial services and insurance activities	20	14,430	3,795	504	18,729	10.7
68	Real estate activities	3	111	-	72	183	0.1
69	Legal and accounting activities	6	314	28	-	342	0.2
70	Activities of head offices; management consultancy activities	7	256	-	89	345	0.2
71	Architectural and engineering activities; technical testing and analysis	12	4,695	1,294	225	6,214	3.6
73	Advertising and market research	14	3,367	151	994	4,512	2.6
74	Other professional, scientific and technical activities	5	358	307	100	765	0.4
78	Employment activities	4	160	-	-	160	0.1
80	Security and investigation activities	3	26	10	-	36	0.0
82	Office administrative, office support and other business support activities	4	630	-	140	770	0.4
various	Other non-manufacturing (see methodological notes)	22	3,345	157	109	3,611	2.1
Total		344	122,664	44,486	7,881	175,031	100.0

¹ This is composed of expenditure arising due to own personnel working on innovation, services, materials, supplies purchased from others for innovation, and capital goods for innovation (acquisition of machinery, equipment, software, IPRs, buildings etc.)

² Intramural R&D coverage in the survey is based on the Innovation methodology. Actual R&D expenditure for 2018 should be taken from NSO Release 120/2020 due to a more extensive coverage (refer to methodological note 5).

Table 3. Innovative enterprises having cooperation arrangements by size class: 2016-2018

	Size class: employed persons			
	10-49	50-249	250+	Total
Total innovative enterprises	629	195	41	865
No cooperation arrangement	494	129	23	646
At least one cooperation arrangement	135	66	18	219
Private business enterprises outside the enterprise group only	23	18	4	45
Enterprises within the enterprise group only	8	2	1	11
Private business enterprises outside the enterprise group and enterprises within the enterprise group only	11	3	3	17
Private business enterprises outside the enterprise group and universities or other higher education institutes only	5	2	-	7
Universities or other higher education institutes, government or public research institutes, clients or customers from the public sector and non-profit organisations only	18	10	3	31
Combination of multiple cooperation partners ¹	70	31	7	108

¹ This includes enterprises which had a combination from all the six types of cooperation partners

Table 4. Enterprises applying for intellectual property rights or licensing by size class: 2016-2018

	Size class: employed persons			
	10-49	50-249	250+	Total
Total Enterprises	1,829	393	80	2,302
No type of intellectual property rights or licensing	1,670	337	67	2,074
At least one type of intellectual property rights or licensing	159	56	13	228
Registered a trademark only	76	24	5	105
Use trade secrets only	29	10	1	40
Applied for a patent only	4	5	2	11
Claim copyright only	1	3	1	5
Registered an industrial design right only	1	-	-	1
Applied for more than one type of intellectual property rights or licensing	48	14	4	66

Table 5. Non-innovative enterprises by type of obstacle to innovate: 2016-2018

Constraint	Degree of importance			Not a constraint	
	High	Medium	Low		
Financial	Innovation costs too high	86	175	132	1,044
	Lack of internal finance for innovation	43	125	155	1,114
	Difficulties in obtaining public grants or subsidies	40	80	162	1,155
	Lack of credit or private equity	30	91	177	1,139
Market	Uncertain market demand for the enterprise's ideas	32	89	179	1,137
	Too much competition in the market	118	137	141	1,041
Management	Different priorities within the enterprise	78	137	163	1,059
	Lack of skilled employees within the enterprise	100	177	130	1,030
	Lack of collaboration partners	28	70	157	1,182
	Lack of access to external knowledge	18	74	184	1,161

Chart 4. Non-innovative enterprises by type of obstacle to innovate and scale of importance: 2016-2018

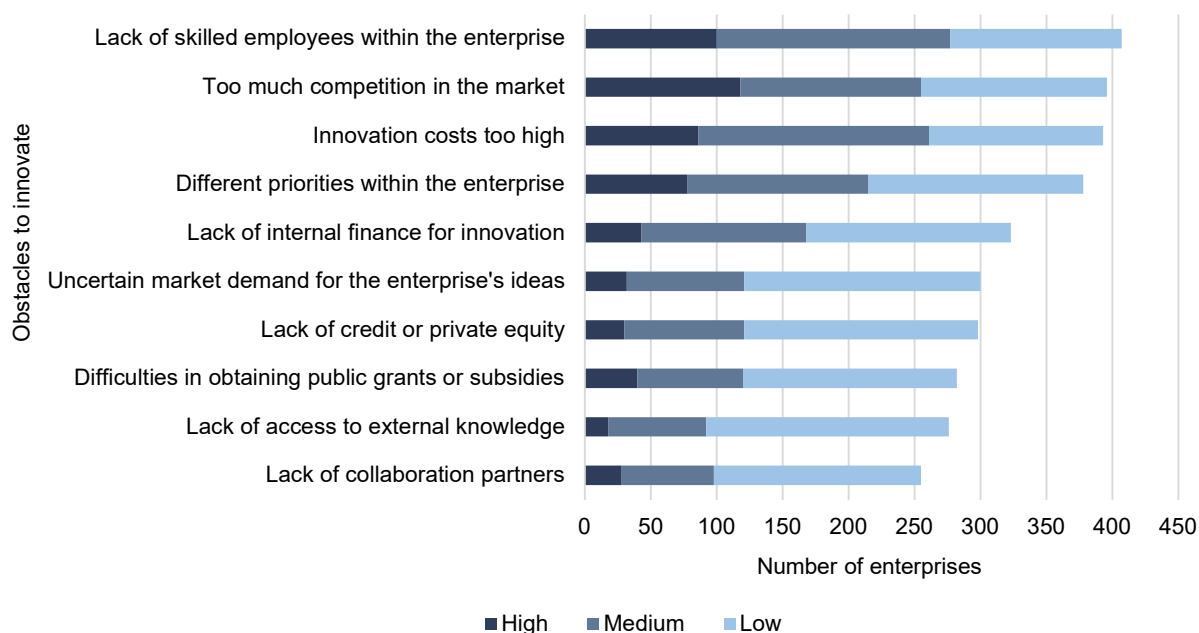


Table 6. Funding prospects for innovative enterprises: 2016-2018

	Type of funding	
	Equity finance	Debt finance
Total innovative enterprises	865	865
Have not tried to obtain funding	824	733
Funding attempt unsuccessful	9	9
Funding attempt successful	32	123
of which was partly or fully used for R&D and/or other innovation activities	9	23

Table 7. Innovative enterprises purchasing technical services¹: 2016-2018

	Size class: employed persons			
	10-49	50-249	250+	Total
Total Innovative Enterprises	629	195	41	865
Have not acquired technical services	344	74	11	429
Acquired technical services	285	121	30	436
...from private business enterprises only	271	108	28	407
...from public research organisations, universities or other higher education institutions only	3	1	-	4
...from both private business enterprises and public research organisations, universities or other higher education institutions	11	12	2	25

¹ Technical service includes any consulting activity that involves any kind of technical, scientific or engineering information, e.g. engineering services, measurements and testing services, industrial design services, R&D services, installation, refitting and retrofitting services.

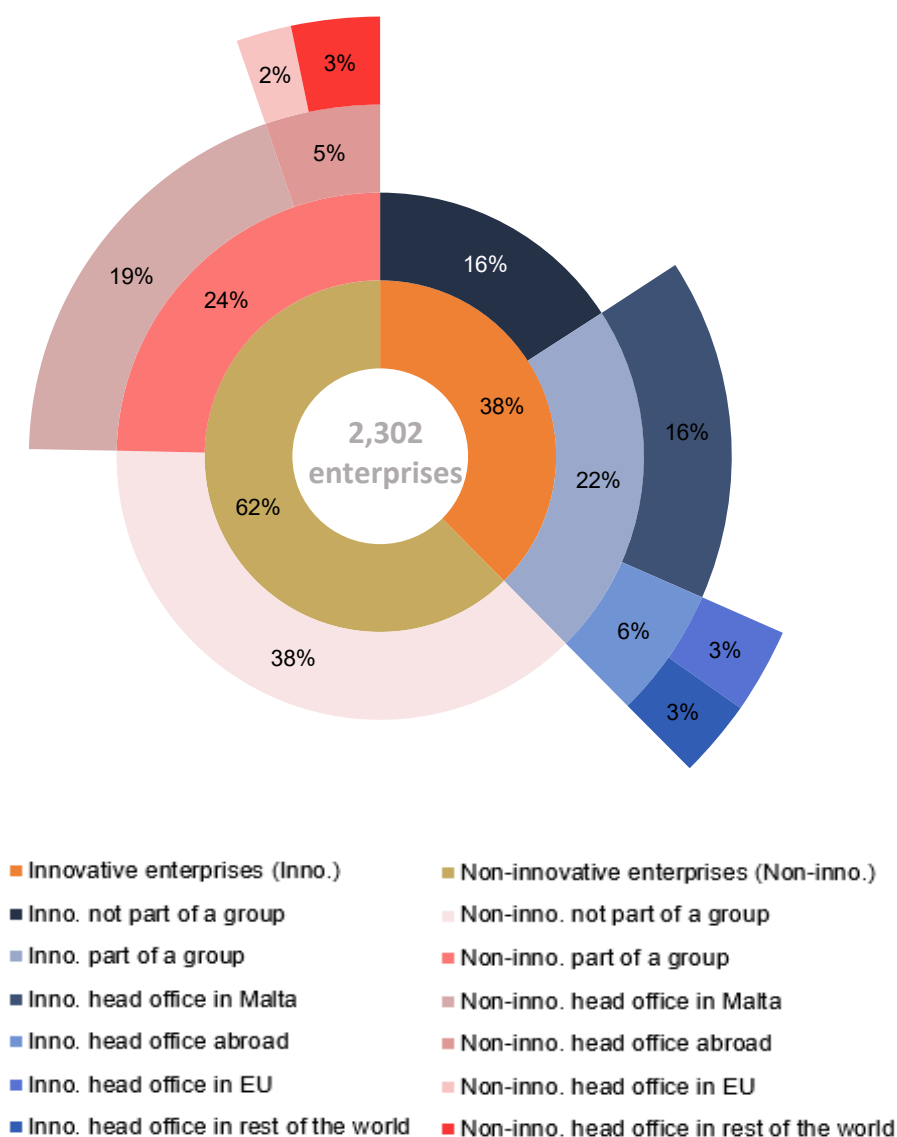
Table 8. Enterprises acquiring knowledge through different channels: 2016-2018

	Size class: employed persons					
	10-49		50-249		250+	
	1,829		393		80	
	Yes	No	Yes	No	Yes	No
Conferences, trade fairs or exhibitions	720	1,109	205	188	45	35
Scientific/technical journals or trade publications	364	1,465	111	282	24	56
Information from professional or industry associations	614	1,215	204	189	37	43
Information from published patents	75	1,754	23	370	6	74
Information from standardisation documents or committees	234	1,595	101	292	22	58
Social web-based networks or crowd-surfing	434	1,395	132	261	17	63
Open business-to-business platforms or open-source software	248	1,581	86	307	14	66
Extracting knowledge or design information from goods or services (reverse engineering)	156	1,673	61	332	14	66

Table 9. Enterprises forming part of a group by innovation status: 2018

	Innovative enterprises	Non-innovative enterprises	Total
Total Enterprises	865	1,437	2,302
Not part of an enterprise group	365	869	1,234
Part of an enterprise group	500	568	1,068
of which the head office is located in Malta	362	446	808
of which the head office is located abroad	138	122	260
European Union (EU)	72	47	119
European Free Trade Association (EFTA)	7	4	11
Rest of the world	59	71	130

Chart 5. Percentage distribution of enterprises forming part of a group by innovation status: 2018



Methodological Notes

1. The Community Innovation Survey collects information about innovative activities carried out in a specific three-year period in the business sector. The target population is the minimum coverage requested, namely total enterprises with 10 employed persons or more.
2. The statistical unit surveyed is the enterprise as per Council Regulation (EEC) No 2186/93. The Survey is conducted in accordance with the Commission Regulation on Innovation Statistics No 995/2012 and the Oslo Manual (2018 edition).
3. The data collection of this survey was funded by the European Union under a grant agreement.
4. The following activities (NACE Rev. 2) are included in the target population:
 - Mining and quarrying (NACE B: 05-09);
 - Manufacturing (NACE C: 10-33);
 - Electricity, gas steam and air conditioning supply (NACE D: 35);
 - Water supply; sewerage, waste management and remediation activities (NACE E: 36-39);
 - Wholesale trade, except of motor vehicles and motorcycles (NACE 46);
 - Transportation and storage (NACE H: 49-53);
 - Information and communication (NACE J: 58-63);
 - Financial and insurance activities (NACE K: 64-66);
 - Architectural and engineering activities; technical testing and analysis (NACE 71);
 - Scientific research and development (NACE 72);
 - Advertising and market research (NACE 73).

Additional coverage was also conducted for the following non-core activities:

- Agriculture, forestry and fishing (NACE A: 01-03);
 - Construction (NACE F: 41-43);
 - Wholesale and retail trade and repair of motor vehicles and motorcycles (NACE 45);
 - Retail trade, except of motor vehicles and motorcycles (NACE 47);
 - Accommodation and food service activities (NACE I: 55-56);
 - Real estate activities (NACE L: 68);
 - Legal and accounting activities (NACE 69);
 - Activities of head offices; management consultancy activities (NACE 70);
 - Other professional, scientific and technical activities (NACE 74);
 - Veterinary activities (NACE 75);
 - Rental and leasing activities (NACE 77);
 - Employment activities (NACE 78);
 - Travel agency, tour operator and other reservation services and related activities (NACE 79);
 - Security and investigation activities (NACE 80);
 - Services to buildings and landscape activities (NACE 81);
 - Office administrative, office support and other business support activities (NACE 82).
5. Notes on Table 2

5.1: Research and Development (R&D) Intramural Expenditure reported in Table 2 is collected from the Community Innovation Survey (CIS) 2018, which due to difference in the coverage of the survey is to be used only for the compilation for the Total Innovation expenditure for 2018. Actual R&D expenditure for 2018 should be taken from News Release 120/2020 - Research and Development in Malta: 2016-2018.

5.2: The following NACE sections were aggregated due to confidentiality:

‘Other manufacturing’ includes NACE divisions:

- Manufacture of beverages (NACE 11);
- Manufacture of wearing apparel (NACE 14);
- Manufacture of chemicals and chemical products (NACE 20);
- Manufacture of motor vehicles, trailers and semi-trailers (NACE 29);
- Manufacture of furniture (NACE 31);
- Other manufacturing (NACE 32).

‘Other non-manufacturing’ includes NACE divisions:

- Fishing and aquaculture (NACE 3);
- Electricity, gas, steam and air conditioning supply (NACE 35);
- Waste collection, treatment and disposal activities; materials recovery (NACE 38);
- Remediation activities and other waste management services (NACE 39);
- Construction of buildings (NACE 41);
- Civil engineering (NACE 42);
- Sale of motor vehicles (NACE 45);

- Land transport and transport via pipelines (NACE 49);
- Water transport (NACE 50);
- Air transport (NACE 51);
- Postal and courier activities (NACE 53);
- Programming and broadcasting activities (NACE 60);
- Rental and leasing activities (NACE 77);
- Travel agency, tour operator reservation service and related activities (NACE 79).

6. More information relating to this news release may be accessed at:

Statistical concepts: <http://nso.gov.mt/metadata/concepts.aspx>

Metadata: <https://nso.gov.mt/metadata/reports.aspx?id=25>

Classifications: <https://nso.gov.mt/metadata/classificationdetails.aspx?id=NACE%20Rev.%202>

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8. Definitions

➤ Total enterprises:

➤ Enterprises with innovation activity

- Product and/or business process innovation
 - Product innovators only
 - Business process innovators only
 - Both product and business process innovation
- Enterprises with abandoned and/or ongoing innovation activity

➤ Non-innovative enterprises

- Enterprises which did not record any innovation activity in the reference years

- A **product innovation** is a new or improved good or service that differs significantly from the firm's previous goods or services and which has been implemented on the market. It includes significant changes to the design of a good and digital goods or services while excludes the simple re-sale of new goods and changes of a solely aesthetic nature.

- A **business process innovation** is a new or improved business process for one or more business functions that differs significantly from the firm's previous business processes and which has been implemented within the firm.