

# SLIM Ideas-to-Market Project

## Report 2:

### Innovation and Learning Needs of Croatian, Polish and UK SMEs

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Sample: 380 companies in Poland, Croatia and the UK

October 2013

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## 1. Introduction

The survey originates from the 'Stimulating Learning for Ideas to Market' (SLIM) project, which is part of the European Leonardo de Vinci 'Lifelong Learning' education and training programme. Its aim is to develop idea-to-market learning for a community of around 400 small businesses from the Republic of Croatia (as the European Union accession country until July 2013), Poland as the European Union recent member state, and the United Kingdom as the established European Union member state. The aim is to generate a comparison of entrepreneurial innovative activities of SMEs in each country. Moreover, the report aims to identify appropriate types of support, training and advice that small businesses need and can use to improve their business. The results of the survey will be used to develop an online course to help small businesses commercialise their ideas, in order to learn from businesses with the best experience as well as providing comparisons that will enable the Republic of Croatia, as the EU accession country, to maximise its educational potential in entrepreneurship.

The survey was performed from 12<sup>th</sup> May 2013 to 28<sup>th</sup> May 2013 in the Republic of Croatia and it was made online, in the Croatian language. It was translated from English to Croatian and back to English in order to check for its consistency. It was aimed at entrepreneurs and it was distributed to the internal database of entrepreneurs obtained by the University of Zagreb, FEB Zagreb's SLIM project team as well as the Croatian Chamber of Commerce. In Croatia 213 businesses have completed the survey. Polish sample had 100 respondents and UK 67. There was total of 380 questionnaires. Results are organised in the following fashion: entire sample including all three countries (Croatia, Poland and UK) is presented first, while in depth insight of each country follows accordingly.

## 2. Sample Characteristics

### Industry of the businesses

#### All

Table 1 and Graph 1 shows distribution of the businesses according to the industrial sectors in which they work. Out of 380 businesses, most of them (84) come from the services sector (23,8%), Manufacturing, 72 (20,4%) and Other, 54 (15,3% ), which cover more than 59% of the total sample. Distribution of the entire sample is visible in Table 1.

#### Croatia

Table 1 and Graph 1 shows distribution of the businesses according to the industry sectors in which they work. Out of the 213 businesses most of them come from the sector of Manufacturing, 47 (22,2%), Services, 46 (21,7%), and Other, 28 (13,2% ) which cover more than 57% of the total sample. Distribution of the entire sample is visible in Table 2.

### Poland

Table 1 and Graph 1 shows distribution of the businesses according to the industry sectors in which they work. Out of the 100 businesses most of them come from the sector of Services, 24 (24,7%), Manufacturing, 22 (22,7%) and Other, 15 (15,5% ) which cover more than 62% of the total sample. Distribution of the entire sample is visible in Table 3.

### UK

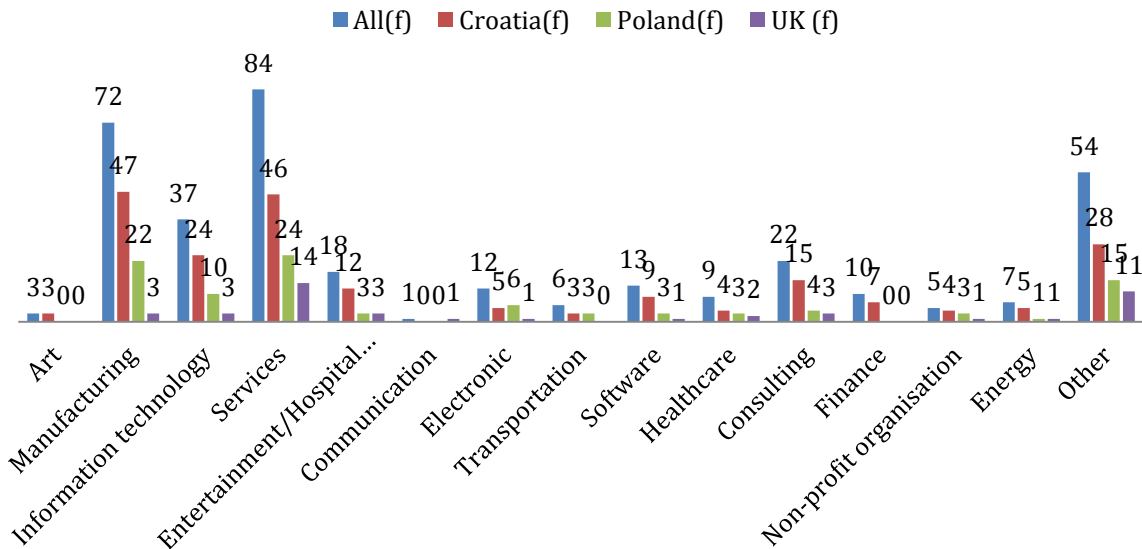
Table 1 and Graph 1 shows distribution of the businesses according to the industry sectors in which they work. Out of the 67 businesses most of them come from the sector of Services, 14 (31,8%), Other, 11 (25%), Manufacturing, 3 (6,8%), Information technology, 3 (6,8%), Entertainment/Hospitality, 3 (6,8%) and Consulting, 3 (6,8%), which cover 84% of the total sample. Distribution of the entire sample is visible in Table 1.

Table 1. Industry of the businesses

Industry sector	All(f)	%	Croatia(f)	%	Poland(f)	%	UK (f)	%
Art	3	,8	3	1,4	0	0	0	0
Manufacturing	72	20,4	47	22,2	22	22,7	3	6,8
Information technology	37	10,5	24	11,3	10	10,3	3	6,8
Services	84	23,8	46	21,7	24	24,7	14	31,8
Entertainment/Hospitality	18	5,1	12	5,7	3	3,1	3	6,8
Communication	1	,3	0	0,0	0	0,0	1	2,3
Electronic	12	3,4	5	2,4	6	6,2	1	2,3
Transportation	6	1,7	3	1,4	3	3,1	0	0,0
Software	13	3,7	9	4,2	3	3,1	1	2,3
Healthcare	9	2,5	4	1,9	3	3,1	2	4,5
Consulting	22	6,2	15	7,1	4	4,1	3	6,8
Finance	10	2,8	7	3,3	0	0,0	0	0,0
Non-profit organisation	5	1,4	4	1,9	3	3,1	1	2,3
Energy	7	2,0	5	2,4	1	1,0	1	2,3
Other	54	15,3	28	13,2	15	15,5	11	25,0
Total	353	100,0	212	100,0	97	100,0	44	100,0
Missing	27		1		3		23	
Total	380		213		100		67	

Source: Authors' calculation.

Graph 1. Industry of the businesses



Source: Authors' calculation.

### Size of the businesses

#### All

Table 2 and Graph 2 represent the size of the businesses in the complete sample. 38 businesses have only 1 employee (11,1% of the sample), 146 businesses have between 2 and 10 employees (42,7% of the sample), 109 businesses have between 11 and 50 employees (31,3% of the sample), 40 businesses have between 51 and 250 employees (11,7% of the sample), while 9 businesses have more than 251 employees (2,6% of the sample).

#### Croatia

Table 2 and Graph 2 represent the size of the businesses in the sample of Croatia. 21 businesses have only 1 employee (10% of the sample), 96 businesses have between 2 and 10 employees (45,5% of the sample), 67 businesses have between 11 and 50 employees (31,8% of the sample), 21 businesses have between 51 and 250 employees (10% of the sample), while 6 businesses have more than 251 employees (2,8% of the sample).

#### Poland

Table 2 and Graph 2 represent the size of the businesses in the sample of Poland. 6 businesses have only 1 employee (6,8% of the sample), 27 businesses have between 2 and 10 employees (30,7% of the sample), 35 businesses have between 11 and 50 employees (39,8% of the sample), 17 businesses have between 51 and 250 employees (19,3% of the sample), while 3 businesses have more than 251 employees (3,4% of the sample).

#### UK

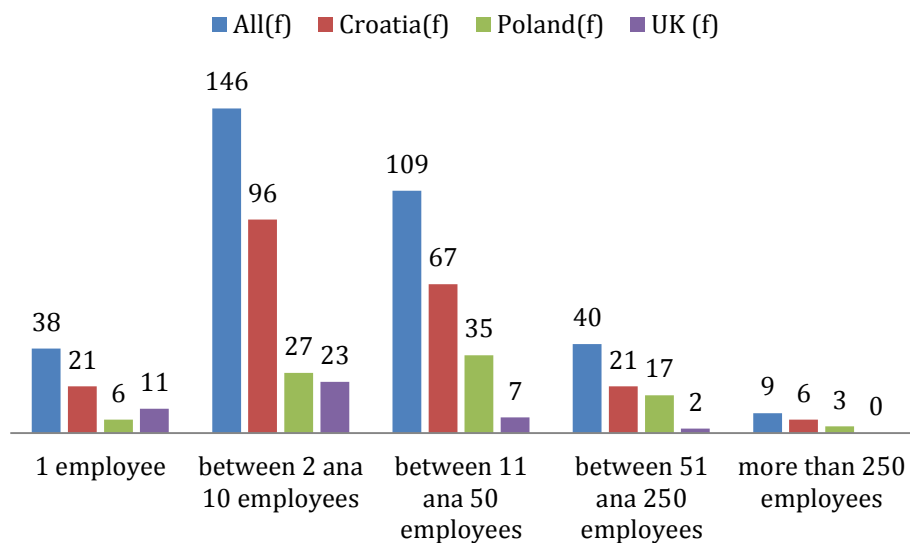
Table 2 and Graph 2 represent the size of the businesses in the sample of UK. 11 businesses have only 1 employee (25,6% of the sample), 23 businesses have between 2 and 10 employees (53,5% of the sample), 7 businesses have between 11 and 50 employees (16,3% of the sample), while 2 businesses have between 51 and 250 employees (4,7% of the sample).

Table 2. Size of the business

Number of employees	All(f)	%	Croatia(f)	%	Poland(f)	%	UK (f)	%
1 employee	38	11,1	21	10,0	6	6,8	11	25,6
between 2 ana 10 employees	146	42,7	96	45,5	27	30,7	23	53,5
between 11 ana 50 employees	109	31,9	67	31,8	35	39,8	7	16,3
between 51 ana 250 employees	40	11,7	21	10,0	17	19,3	2	4,7
more than 250 employees	9	2,6	6	2,8	3	3,4	0	0,0
Total	342	100,0	211	100,0	88	100,0	43	100,0
Missing	38		2		12		24	
Total	380		213		100		67	

Source: Authors' calculation.

Graph 2. Size of the business



Source: Authors' calculation.

### Age of the business

#### All

Table 3 and Graph 3 point to the age of the businesses in the entire sample. 16 businesses are less than a year old (4,5%), 14 are between 1 and 2 years old (3,9%), 68 are between 2 and 5 years old (19,1%), 78 are between 5 and 10 years old (21,9%) and 180 businesses are older than 10 years (50,6%).

#### Croatia

Table 3 and Graph 3 point to the age of the businesses in the Croatian sample. 13 businesses are less than a year old (6,1%), 8 are between 1 and 2 years old (3,8%), 33 are between 2 and 5 years old (15,6%), 37 are between 5 and 10 years old (17,5%) and 121 businesses are older than 10 years (57,1%).

#### Poland

Table 3 and Graph 3 point to the age of the businesses in the Poland sample. 3 businesses are less than a year old (3%), 5 are between 1 and 2 years old (5,1%), 25 are between 2 and 5 years old (25,3%), 27 are between 5 and 10 years old (27,3%) and 39 businesses are older than 10 years (39,4%).

#### UK

Table 3 and Graph 3 point to the age of the businesses in the UK sample. No businesses are less than a year old (0%), 1 are between 1 and 2 years old (2,2%), 10 are between 2 and 5 years old (22,2%), 14 are between 5 and 10 years old (31,3%) and 20 businesses are older than 10 years (44,4%).

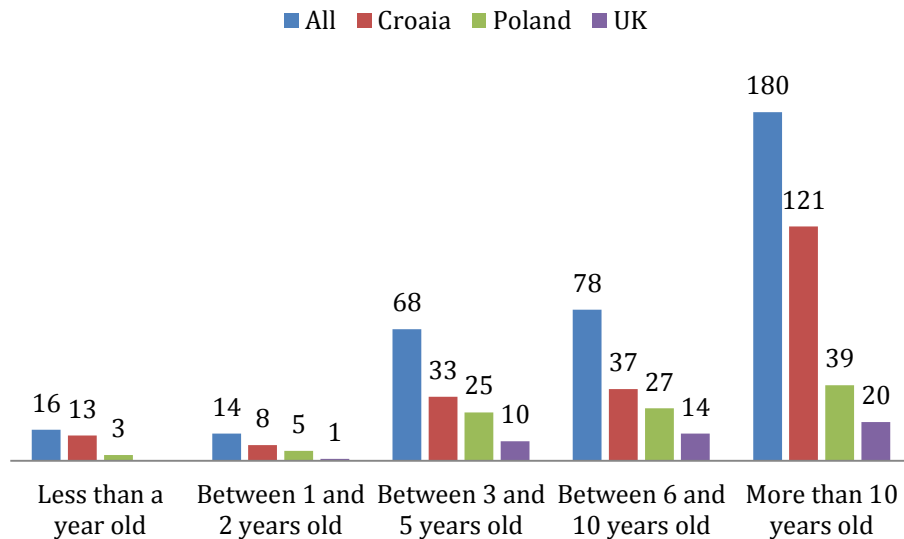
Table 3. Age of the business

Age if the business	All(f)	%	Croatia(f)	%	Poland(f)	%	UK (f)	%
Less than a year old	16	4,5	13	6,1	3	3,0	0	0
Between 1 and 2 years old	14	3,9	8	3,8	5	5,1	1	2,2
Between 3 and 5 years old	68	19,1	33	15,6	25	25,3	10	22,2
Between 6 and 10 years old	78	21,9	37	17,5	27	27,3	14	31,1
More than 10 years old	180	50,6	121	57,1	39	39,4	20	44,4
Total	356	100,0	212	100,0	99	100,0	45	100,0
Missing	24		1		1		22	
Total	380		213		100		67	

Source: Authors' calculation.



Graph 3. Age of the business



Source: Authors' calculation.

### Location of the businesses

#### All

In the entire sample, businesses are mainly located away from science parks, business incubators or designated government areas for business (Table 13 and Graph 13), i.e. 316 businesses (88,8% of the sample). Only 16 businesses in the sample are located in a science park (4,5%), 17 are located in a business incubator (4,8%) and 7 are located in a designated government area for business (2%).

#### Croatia

In the Croatian sample, businesses are mainly not located in science parks, business incubators or designated government areas for business (Table 13 and Graph 13), i.e. 190 businesses (89,6% of the sample). Only 5 businesses in the sample are located in a science park (2,4%), 13 are located in a business incubator (6,1%) and 4 are located in a designated government area for business (1,9%).

#### Poland

In the Poland sample, businesses are mainly not located in science parks, business incubators or designated government areas for business (Table 13 and Graph 13), i.e. 83 businesses (83,8% of the sample). Only 10 businesses in the sample are located in a science park (10,1%), 3 are located in a business incubator (3%) and 3 are located in a designated government area for business (3%).

## UK

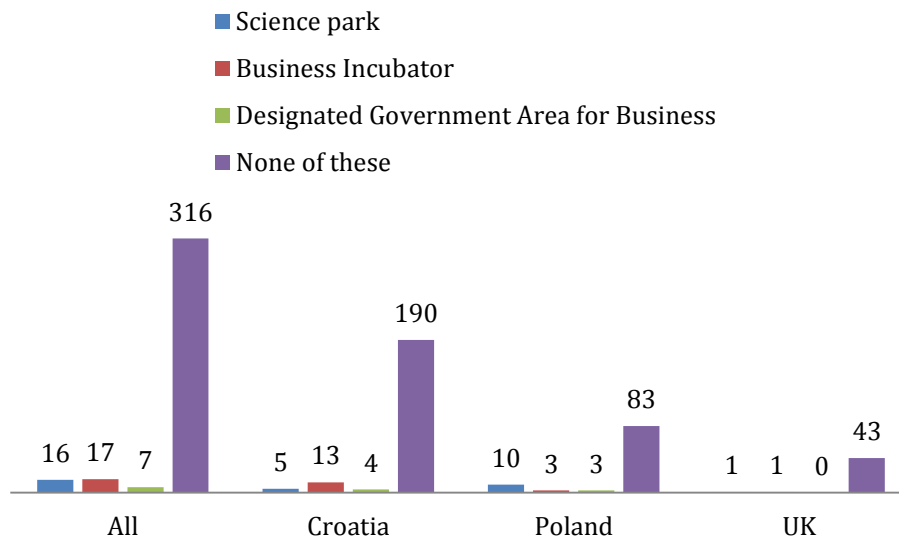
In the UK sample, businesses are mainly not located in science parks, business incubators or designated government areas for business (Table 13 and Graph 13), i.e. 43 businesses (95,6% of the sample). Only 1 businesses in the sample are located in a science park (2,2%), 2 are located in a business incubator (2,2%) and no business are located in a designated government area for business (0%).

Table 4. Location of businesses

Location of businesses	All(f)	%	Croatia(f)	%	Poland(f)	%	UK (f)	%
Science park	16	4,5	5	2,4	10	10,1	1	2,2
Business Incubator	17	4,8	13	6,1	3	3,0	1	2,2
Designated Government Area for Business	7	2,0	4	1,9	3	3,0	0	0,0
None of these	316	88,8	190	89,6	83	83,8	43	95,6
Total	356	100,0	212	100,0	99	100,0	45	100,0
Missing	24		1		1		22	
Total	380		213		100		67	

Source: Authors' calculation.

Graph 4. Location of businesses



Source: Authors' calculation.

### 3. Chapter 3 – Innovation

The respondents were asked whether their business has introduced a new product or service (product innovation), new processes for producing or supplying goods and services (process innovation) and marketing innovations in the past 3 years. The answers were: “Yes”, “No” and “I don’t know” if they were not sure about the answer or the meaning of the question. In order to achieve better clarification of the questions, the definition of each type of innovation was written beside the question. The results are displayed in Table 5.

#### All

276 businesses introduced a new product or service (73%), 194 businesses introduced a new processes (52,7%), 189 businesses introduced a marketing innovation (55,4%). The remaining businesses have not introduced any of the named innovation or do not know the answer to the questions.

#### Croatia

149 businesses introduced a new product or service (70%), 101 businesses introduced a new processes (47,6%) and 113 businesses introduced a marketing innovation (53,3%). The remaining businesses have not introduced any of the named innovation or do not know the answer to the questions.

#### Poland

73 businesses introduced a new product or service (73,7%), 46 businesses introduced a new processes (48,4%), and 52 businesses introduced a marketing innovation (55,9%). The remaining businesses have not introduced any of the named innovation or do not know the answer to the questions.

#### UK

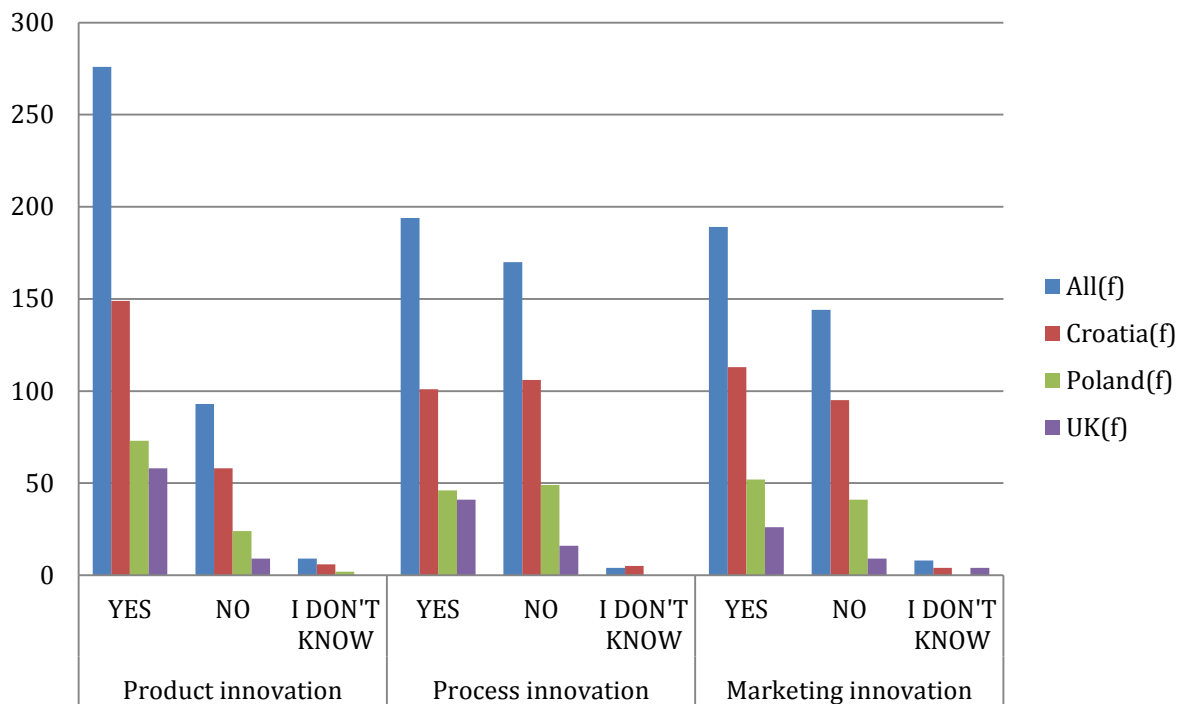
58 businesses introduced a new product or service (86,6%), 41 businesses introduced a new processes (71,9%) and 26 businesses introduced a marketing innovation (66,7%). The remaining businesses have not introduced any of the named innovation or do not know the answer to the questions.

Table 5.

<b>PRODUCT INNOVATION</b>	All(f)	%	Croatia(f)	%	Poland(f)	%	UK(f)	%
YES	276	73,0	149	70,0	73	73,7	58	86,6
NO	93	24,6	58	27,2	24	24,2	9	13,4
I DON'T KNOW	9	2,4	6	2,8	2	2,0	0	0,0
TOTAL	378	100,0	213	100,0	99	100,0	67	100,0
MISSING	2		0	0,0	1		0	
TOTAL	380		213	100,0	100		67	
<b>PROCESS INNOVATION</b>								
YES	194	52,7	101	47,6	46	48,4	41	71,9
NO	170	46,2	106	50,0	49	51,6	16	28,1
I DON'T KNOW	4	1,1	5	2,4	0	0,0	0	0,0
TOTAL	368	100,0	212	100,0	95	100,0	57	100,0
MISSING	12		1		5		10	
TOTAL	380		213		100		67	
<b>MARKETING INNOVATION</b>								
YES	189	55,4	113	53,3	52	55,9	26	66,7
NO	144	42,2	95	44,8	41	44,1	9	23,1
I DON'T KNOW	8	2,3	4	1,9	0	0,0	4	10,3
TOTAL	341	100,0	212	100,0	93	100,0	39	100,0
MISSING	39		1		7		28	
TOTAL	380		213		100		67	

Source: Authors' calculation.

Graph 5. Product, process and marketing innovation



Source: Authors' calculation.

Product innovation new to their business

All

Businesses were asked whether their new product or service was new to their own business (Table 6 and Graph 6). From 276 respondents who said to have had a product innovation, 76% confirmed they have introduced a product or service new to their business.

Croatia

From 149 Croatian respondents who said to have had a product innovation 73,2% confirmed they have introduced a product or service new to their business.

Poland

From 73 Polish respondents who said to have had a product innovation 84,8% confirmed they have introduced a product or service new to their business.

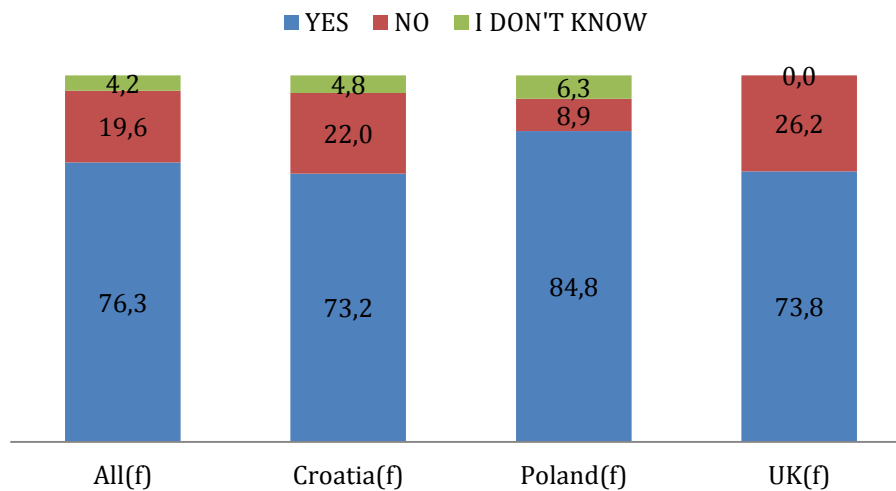
UK

From 149 UK respondents who said to have had a product innovation 73,8% confirmed they have introduced a product or service new to their business.

Table 6. Product innovation new to their business

PINTTB	All(f)	%	Croatia(f)	%	Poland(f)	%	UK(f)	%
YES	238	76,3	123	73,2	67	84,8	48	73,8
NO	61	19,6	37	22,0	7	8,9	17	26,2
I DON'T KNOW	13	4,2	8	4,8	5	6,3	0	0,0

Graph 6. Product innovation new to their business



Source: Authors' calculation.

### Product innovation new to the market

#### All

In the following section respondents were asked whether the product/services were new to the market (Table 7 and Graph 7). 43% of those who did introduce a new product/service said it was new to the market.

#### Croatia

42% of Croatian respondents who said they have introduced a new product/service stated that it was new to the market.

#### Poland

43% of Poland respondents who said they have introduced a new product/service stated that it was new to the market.

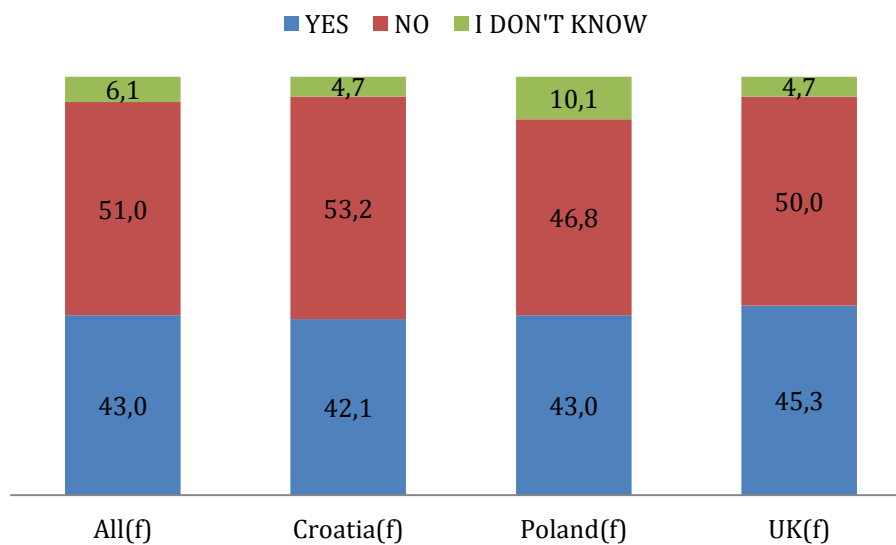
#### UK

48% of UK respondents who said that they have introduced a new product/service stated that it was new to the market.

Graph 7. Product innovation new to the market

PINTTM	All(f)	%	Croatia(f)	%	Poland(f)	%	UK(f)	%
YES	135	43,0	72	42,1	34	43,0	29	45,3
NO	160	51,0	91	53,2	37	46,8	32	50,0
I DON'T KNOW	19	6,1	8	4,7	8	10,1	3	4,7

Graph 7. Product innovation new to the market



Source: Authors' calculation.

### Process innovation

#### All

When asked about the novelty of the process introduced, out of the 194 businesses who introduced a process innovation, 82,4% stated that this process innovation is new to their business. The answers are presented in Table 8 and Graph 8.

#### Croatia

When asked about the novelty of the process introduced, out of the 101 businesses who introduced a process innovation, 83,2% stated that this process innovation is new to their business.

#### Poland

When asked about the novelty of the process introduced, out of the 46 businesses who introduced a process innovation, 86,3% stated that this process innovation is new to their business.

UK

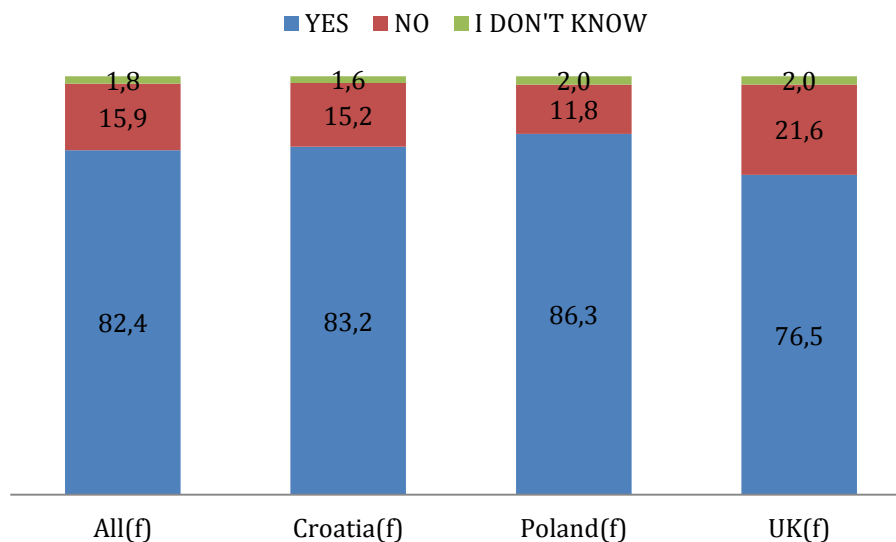
When asked about the novelty of the process introduced, out of the 41 businesses who introduced a process innovation, 76,5% stated that this process innovation is new to their business.

Table 8. Process innovation new to the business

PRINTTB	All(f)	%	Croatia(f)	%	Poland(f)	%	UK(f)	%
YES	187	82,4	104	83,2	44	86,3	39	76,5
NO	36	15,9	19	15,2	6	11,8	11	21,6
I DON'T KNOW	4	1,8	2	1,6	1	2,0	1	2,0

Source: Authors' calculation.

Graph 8. Process innovation new to the business



Source: Authors' calculation.

Process innovation new to the market

All

However, only 29,8% who introduced a process innovation said that their process innovation is new to the market. The answers are presented in Table 9 and Graph 9.

Croatia

In the case of Croatia 32,8% respondents who introduced a process innovation said that their process innovation is new to the market.



Poland

In the case of Poland 26,9% respondents who have introduced a process innovation said it was new to the market.

UK

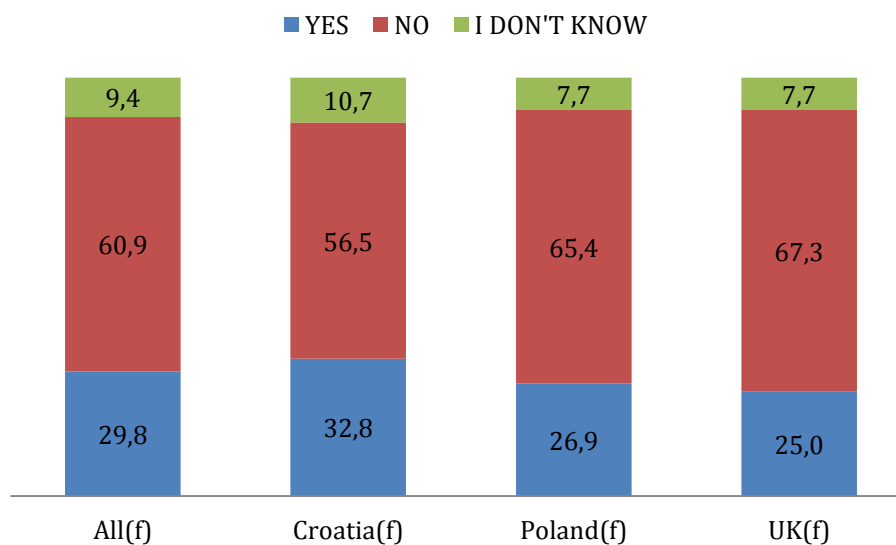
In the case of UK 25% respondents who introduced a process innovation said that their process innovation is new to the market.

Table 9. Process innovation new to the market

	All(f)	%	Croatia(f)	%	Poland(f)	%	UK(f)	%
YES	70	29,8	43	32,8	14	26,9	13	25,0
NO	143	60,9	74	56,5	34	65,4	35	67,3
I DON'T KNOW	22	9,4	14	10,7	4	7,7	4	7,7

Source: Authors' calculation.

Graph 9. Process innovation new to the market



Source: Authors' calculation.

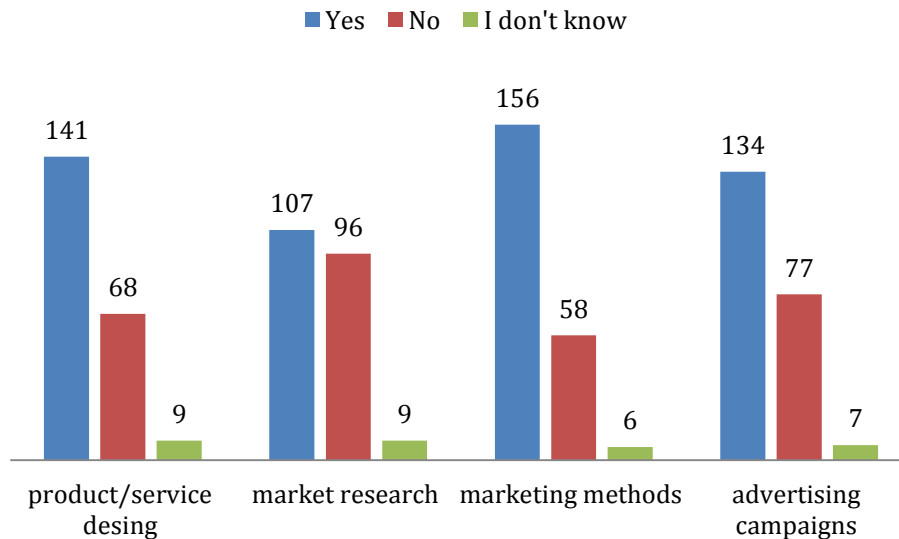
Marketing Innovation

All

When asked about marketing innovation most of the respondents did introduce some innovation in marketing. Moreover, most marketing innovations were observed in the following areas, in the following order (Graph 10):

1. change in marketing methods (156 respondents)
2. change in product/service desing (141 respondents)
3. new advertising campaigns (134 respondents)
4. market research (107 respondents)

Graph 10. Areas of marketing innovation



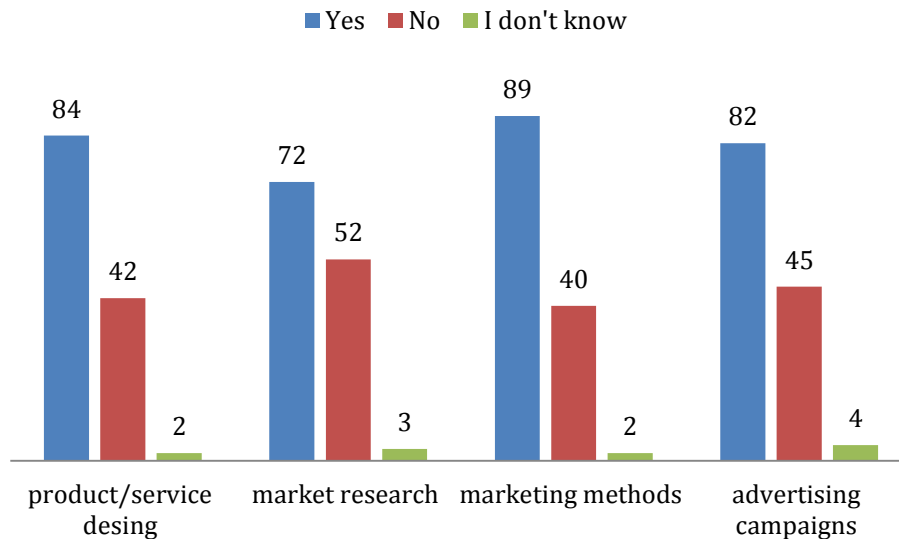
Source: Authors' calculation.

Croatia

When asked about marketing innovation most of the respondents did introduce some innovation in marketing. Moreover, most marketing innovations were observed in the following areas in the following order (Graph 11):

1. change in marketing methods (89 respondents)
2. change in product/service desing (84 respondents)
3. new advertising campaigns (82 respondents)
4. market research (72 respondents)

Graph 11. Areas of marketing innovation



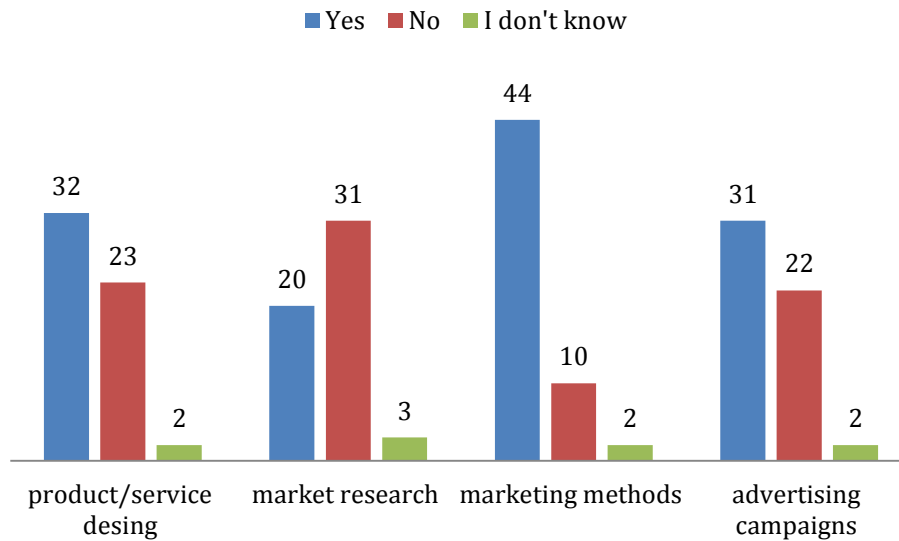
Source: Authors' calculation.

Poland

When asked about marketing innovation most of the respondents did introduce some innovation in marketing. Moreover, most marketing innovations were observed in the following order (Graph 12):

1. change in marketing methods (44 respondents)
2. change in product/service design (32 respondents)
3. new advertising campaigns (31 respondents)
4. market research (20 respondents)

Graph 12. Areas of marketing innovation



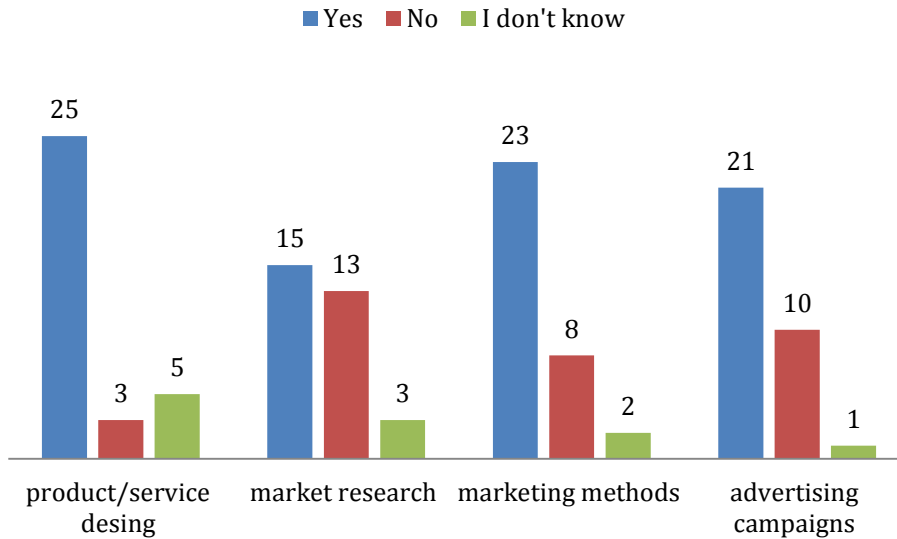
Source: Authors' calculation.

### UK

When asked about marketing innovation most of the respondents did introduce some innovation in marketing. Moreover, most marketing innovations were observed in the following areas in the following order (Graph 13):

1. change in product/service desing (25 respondents)
2. change in marketing methods (23 respondents)
3. new advertising campaigns (21 respondents)
4. market research (15 respondents)

Graph 13. Areas of marketing innovation



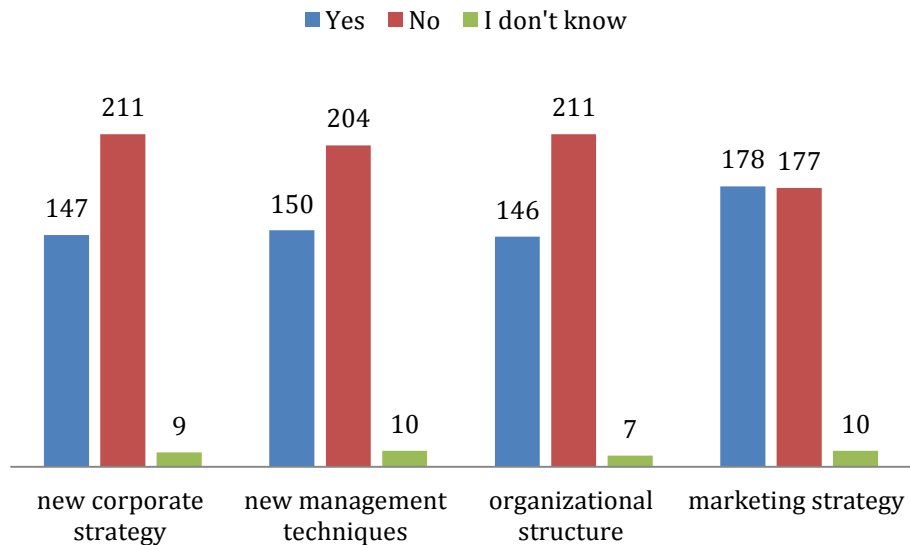
Source: Authors' calculation.

Organizational Innovation

All

Different distribution is evident in the statements on organizational innovation. The respondents were asked whether they implemented a new, or have significantly changed, corporate strategy, implemented new management techniques, implemented a major change to the organizational structure or implemented changes to marketing strategy. The results are given in Graph 14.

Graph 14. Areas of organizational innovation



Source: Authors' calculation.

The majority of answers relating to organizational innovation were negative. However, the highest positive values were observed in the following order:

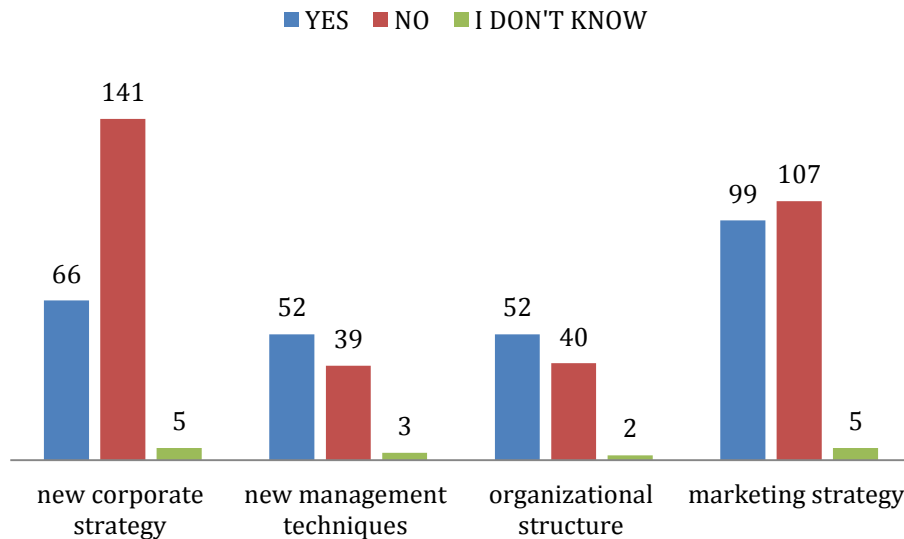
1. implementing changes to marketing strategy (178 respondents)
2. implementing new management techniques (150 respondents)
3. new corporate strategy (147 respondents)
4. organizational structure (146 respondents).

The lowest activity in organizational innovation was observed in the following order:

- implementation of major change to the organizational structure (211 respondents) and corporate strategy (211 respondents)
- implementation of new management techniques (204 respondents)
- implementing changes to marketing strategy (177).

Croatia

Graph 15. Areas of organizational innovation



Source: Authors' calculation.

Some of answers relating to organizational innovation were negative. However, the highest positive values were observed in the following order:

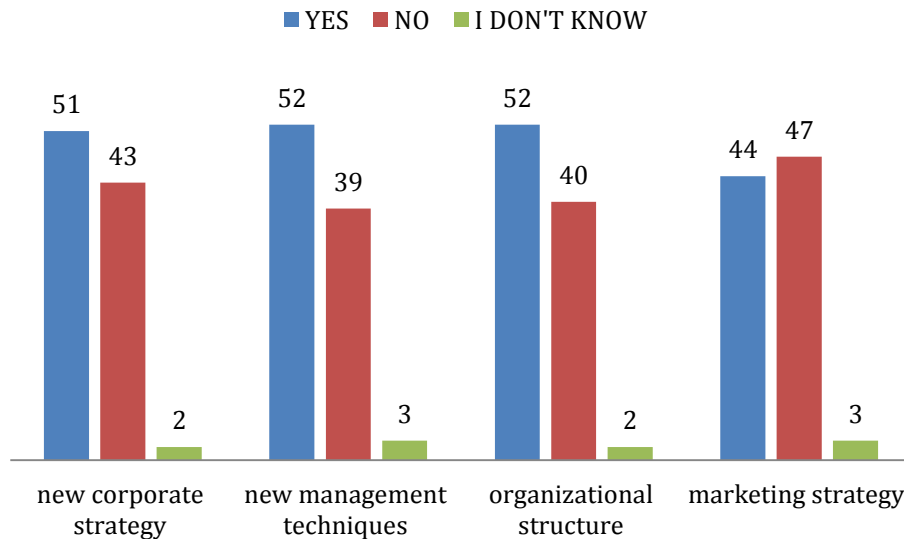
1. implementing changes to marketing strategy (99 respondents)
2. new corporate strategy (66 respondents)
3. implementing new management techniques (52 respondents)
4. organizational structure (52 respondents).

The lowest activity in organizational innovation was observed in the following order:

- implementing new corporate strategy (141 respondents)
- Implementing changes to marketing strategy (107)
- major change to the organizational structure (40 respondents) and
- implementation of new management techniques (39 respondents)

Poland

Graph 16. Areas of organizational innovation



Source: Authors' calculation.

The majority of answers relating to organizational innovation are positive. By their frequency values are observed in the following order:

1. implementing new management techniques (52 respondents) and organizational structure (52 respondents)
2. new corporate strategy (51 respondents)
3. implementing changes to marketing strategy (44 respondents).

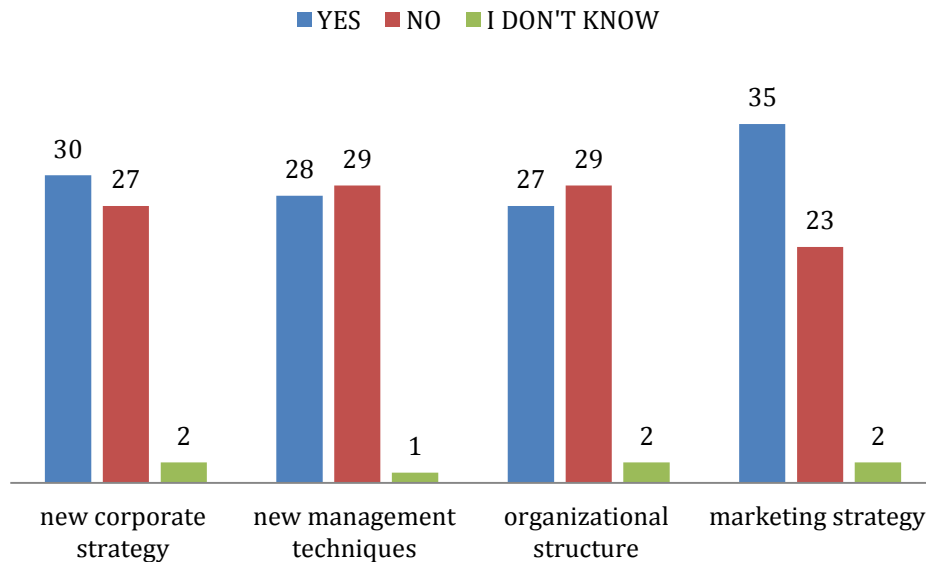
The lowest activity in organizational innovation was observed in the following order:

- implementing changes to marketing strategy (47)
- corporate strategy (43 respondents)
- implementation of major change to the organizational structure (40 respondents) and
- implementation of new management techniques (39 respondents).



UK

Graph 17. Areas of organizational innovation



Source: Authors' calculation.

Some of the answers relating to organizational innovation were negative. However, the highest positive values were observed in the following order:

5. implementing changes to marketing strategy (35 respondents)
6. new corporate strategy (30 respondents)
7. implementing new management techniques (28 respondents)
8. organizational structure (27 respondents).

The lowest activity in organizational innovation was observed in the following order:

- implementation of major change to the organizational structure (29 respondents) and new management techniques (29 respondents)
- corporate strategy (27 respondents)
- implementing changes to marketing strategy (23).

## 4. Research and Development

### All

All businesses were asked about the frequency of their R&D engagement during the last 3 years. The results displayed in Table 10 and Graph 18 show that 30% of the businesses in the sample is continuously engaged in R&D activities, 10% occasionally and 29% not at all.

### Croatia

Croatian respondents were asked on the frequency of their R&D engagement during the last 3 years. The results displayed in Table 10 and Graph 18 show that 33,8% of the businesses in the sample is continuously engaged in R&D activities, 45,1% occasionally and 21,1% not at all.

### Poland

Polish respondents were asked on the frequency of their R&D engagement during the last 3 years. The results displayed in Table 10 and Graph 18 show that 28,1% of the businesses in the sample is continuously engaged in R&D activities, 28,1% occasionally and 43,8% not at all.

### UK

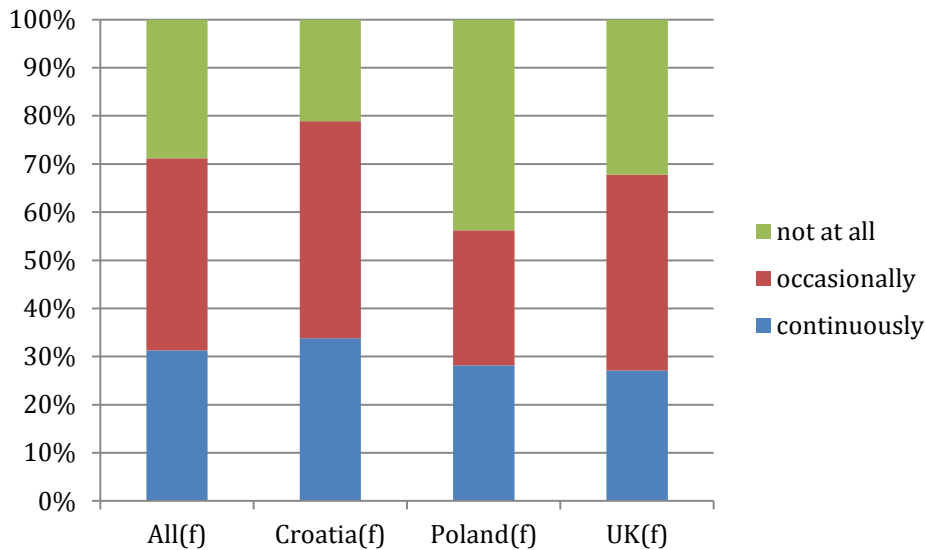
UK respondents were asked on the frequency of their R&D engagement during the last 3 years. The results displayed in Table 10 and Graph 18 show that 27,1% of the businesses in the sample is continuously engaged in R&D activities, 40,7% occasionally and 32,2% not at all.

Table 10. R&D engagement during the last 3 years

R&D	All(f)	%	Croatia(f)	%	Poland(f)	%	UK(f)	%
continuously	115	31,3	72	33,8	27	28,1	16	27,1
occasionally	147	39,9	96	45,1	27	28,1	24	40,7
not at all	106	28,8	45	21,1	42	43,8	19	32,2

Source: Authors' calculation.

Graph 18. R&D engagement during the last 3 years



Source: Authors' calculation.

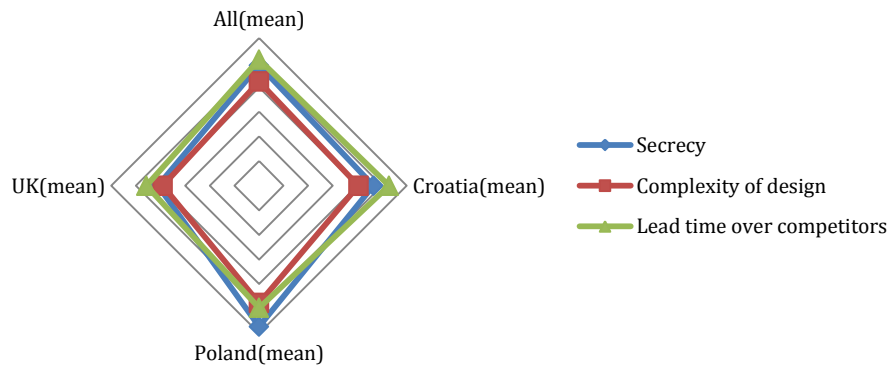
### Protecting Ideas

The businesses explained that overall they perceive the lead-time over competitors to be very important, followed by secrecy (Table 11 and Graph 19). Lead-time over competitors is generally considered as most important informal way of protecting ideas, while complexity of design as least important.

Table 11. Importance of informal ways of protecting ideas

	N	All(mean)	Std	Croatia(mean)	Std	Poland(mean)	Std	UK(mean)	Std
Secrecy	347	4,89	1,926	4,66	1,981	5,73	1,462	4,10	1,984
Complexity of design	340	4,23	1,908	4,05	1,922	4,77	1,727	3,91	2,049
Lead time over competitors	347	5,12	1,806	5,29	1,828	4,97	1,524	4,58	2,213

Graph 19. Importance of informal ways of protecting ideas



Source: Authors' calculation.

### All

Moreover, when the businesses were asked on formal actions they have taken to protect innovation in the past 3 years, there was total of 230 protective measures for the entire sample (Table 12 and Graph 20). 39 (17%) businesses applied for a patent, 81(35,2%) businesses registered a trademark, 31(13,5%) businesses registered a copyright, 30(13%) businesses registered industrial design and 49(21,3%) businesses own a database rights.

### Croatia

Moreover, when the businesses were asked on formal actions they have taken to protect innovation in the past 3 years there was total of 153 protective measures in Croatian sample (Table 12 and Graph 20). 18 (11,8) businesses applied for a patent, 59(38,6%) businesses registered a trademark, 21(13,7%) businesses registered a copyright, 23(15%) businesses registered industrial design and 32(20,9%) businesses own a database rights.

### Poland

Moreover, when the businesses were asked on formal actions they have taken to protect innovation in the past 3 years there was total of 61 protective measures in Polish sample (Table 12 and Graph 20). 19(31,1%) businesses applied for a patent, 13(21,3%) businesses registered a trademark, 8(13,1%) businesses registered a copyright, 6(9,8%) businesses registered industrial design and 15(24,6%) businesses own a database rights.

### UK

Moreover, when the businesses were asked on formal actions they have taken to protect innovation in the past 3 years there was total of 153 protective measures in UK sample (Table

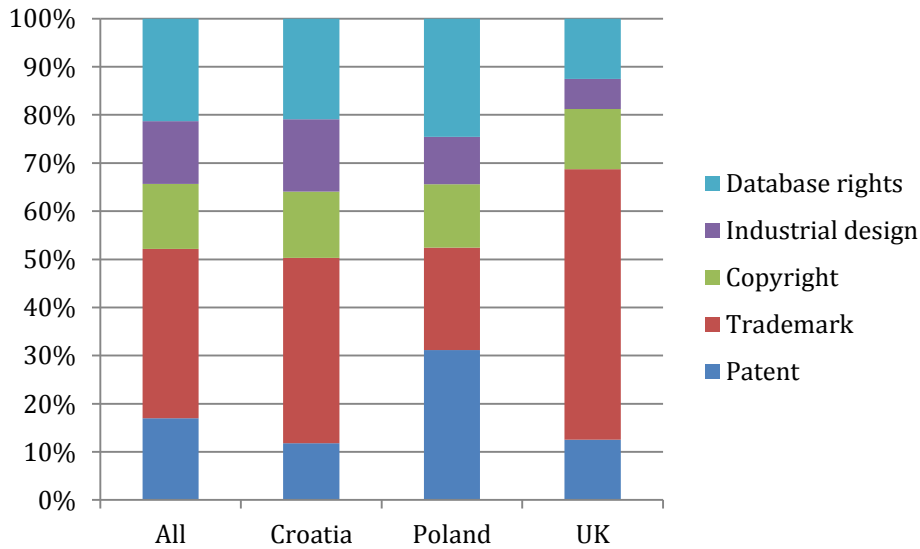
12 and Graph 20). 2(12,5%) businesses applied for a patent, 9(56,3%) businesses registered a trademark, 2(12,5%) businesses registered a copyright, 1(6,3%) businesses registered industrial design and 2(12,5%) businesses own a database rights.

Table 12. Actions taken to formally protecting ideas

	All		Percent of Cases	Croatia		Percent of Cases	Poland		Percent of Cases	UK		Percent of Cases
	N	Percent		N	Percent		N	Percent		N	Percent	
Patent	39	17,0%	24,2%	18	11,8%	16,7%	1	31,1%	46,3%	2	12,5%	16,7%
Trademark	81	35,2%	50,3%	59	38,6%	54,6%	1	21,3%	31,7%	9	56,3%	75,0%
Copyright	31	13,5%	19,3%	21	13,7%	19,4%	8	13,1%	19,5%	2	12,5%	16,7%
Industrial design	30	13,0%	18,6%	23	15,0%	21,3%	6	9,8%	14,6%	1	6,3%	8,3%
Database rights	49	21,3%	30,4%	32	20,9%	29,6%	1	24,6%	36,6%	2	12,5%	16,7%
Total	230	100,0%	142,9%	153	100,0%	141,7%	61	100,0%	148,8%	16	100,0%	133,3%

Source: Authors' calculation.

Graph 20. Actions taken to formally protecting ideas



Source: Authors' calculation.

## 5. Education and Training

In order to identify the appropriate ways to approach business education, respondents were asked which of learning approaches would best suit your employees (Table 13).

### All

The following learning approaches are considered by all respondents as the most beneficial:

1. learning on the job
2. learning based on case studies
3. face to face learning

The lowest overall mark was given to self-study, simulations and e-learning.

### Croatia

The following learning approaches are considered by all respondents as the most beneficial:

1. learning on the job
2. learning based on case studies
3. face to face learning

The lowest overall mark was given to self-study, simulations and e-learning.

### Poland

The following learning approaches are considered by all respondents as the most beneficial:

1. face to face learning
2. learning on the job
3. e-learning

The lowest overall mark was given to learning based on simulations, case studies and self-study.

### UK

The following learning approaches are considered by all respondents as the most beneficial:

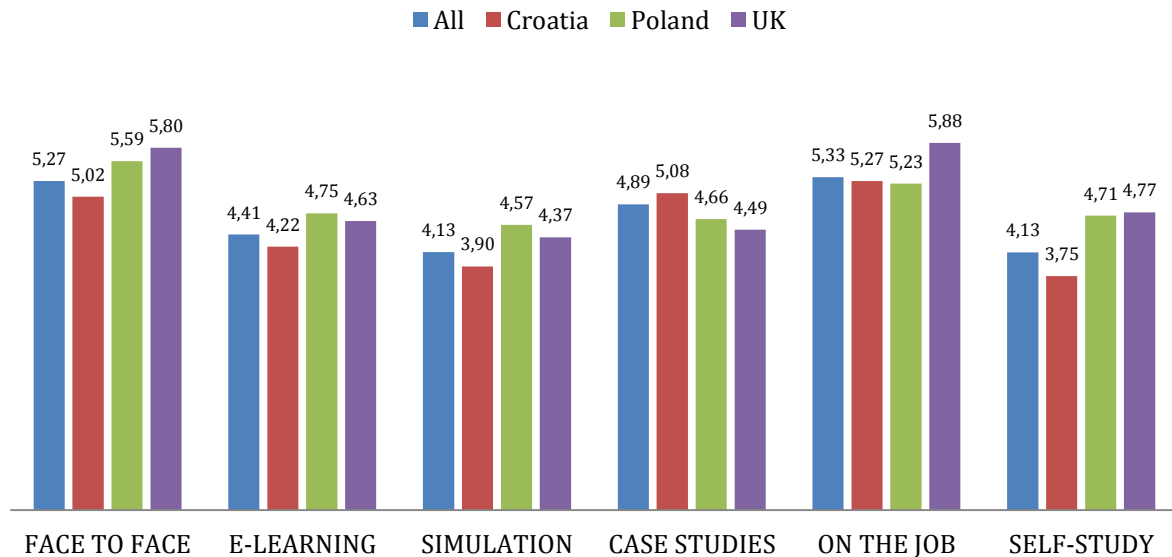
1. learning on the job
2. face to face learning
3. self-study

The lowest overall mark was given to simulations, learning based on case studies and e-learning.

Table 13. Learning approaches

LA	All	$\mu$	Std	LA	Croatia	$\mu$	Std	LA	Poland	$\mu$	Std	LA	UK	$\mu$	Std
ON THE JOB	346	5,33	1,572	ON THE JOB	212	5,27	1,605	FACE TO FACE	92	5,59	1,431	ON THE JOB	42	5,88	1,435
FACE TO FACE	349	5,27	1,691	CASE STUDIES	212	5,08	1,864	ON THE JOB	92	5,23	1,52	FACE TO FACE	45	5,8	1,44
CASE STUDIES	347	4,89	1,854	FACE TO FACE	212	5,02	1,798	E-LEARNING	93	4,75	1,822	SELF-STUDY	43	4,77	1,586
E-LEARNING	348	4,41	1,964	E-LEARNING	212	4,22	2,019	SELF-STUDY	91	4,71	1,864	E-LEARNING	43	4,63	1,903
SIMULATION	345	4,13	1,975	SIMULATION	212	3,9	2,064	CASE STUDIES	94	4,66	1,864	CASE STUDIES	41	4,49	1,69
SELF-STUDY	346	4,13	1,940	SELF-STUDY	212	3,75	1,947	SIMULATION	92	4,57	1,775	SIMULATION	41	4,37	1,771
N	340			N	212			N	88			N	40		

Graph 21. Learning approaches



Source: Authors' calculation.

The question was asked on the importance of training in particular areas identified in the literature in helping businesses to bring ideas to market. The results are given in Table 14 and Graph 22.

All

They show that the most important areas perceived by respondents incorporate:

1. Use of technology
2. In-house communication
3. Leadership, creativity and innovation
4. Marketing
5. Evaluating opportunity

The lowest overall mark is given to the National Innovation System (NIS).

Croatia

They show that the most important areas perceived by respondents incorporate:

1. In-house communication
2. Use of technology
3. Leadership, creativity and innovation
4. Evaluating opportunity
5. Marketing

The lowest overall mark is given to the National Innovation System (NIS).



Poland

They show that the most important areas perceived by respondents incorporate:

1. Leadership, creativity and innovation
2. Use of technology
3. Marketing
4. Evaluating opportunity
5. Cooperating with business or scientific partners
6. The lowest overall mark is given to the National Innovation System (NIS).

UK

They show that the most important areas perceived by respondents incorporate:

1. Marketing
2. Evaluating opportunity
3. In-house communication
4. Use of technology
5. Leadership, creativity and innovation

The lowest overall mark is given to the National Innovation System (NIS).

Table 14. Coding of training/education

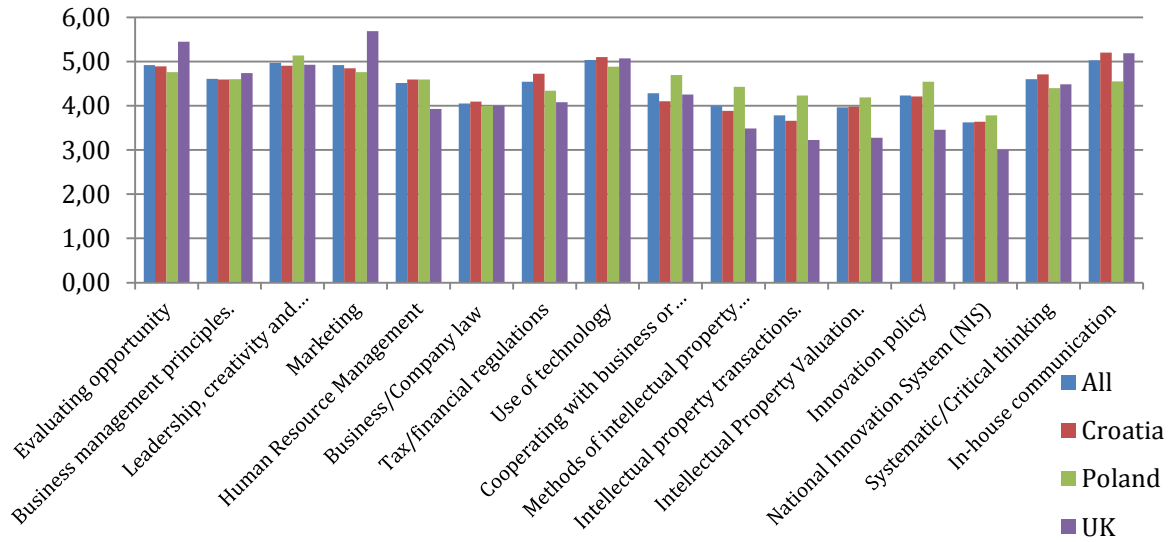
<b>01</b>	Evaluating opportunity	<b>09</b>	Cooperating with business or scientific partners
<b>02</b>	Business management principles.	<b>010</b>	Methods of intellectual property protection
<b>03</b>	Leadership, creativity and innovation	<b>011</b>	Intellectual property transactions.
<b>04</b>	Marketing	<b>012</b>	Intellectual Property Valuation.
<b>05</b>	Human Resource Management	<b>013</b>	Innovation policy
<b>06</b>	Business/Company law	<b>014</b>	National Innovation System (NIS)
<b>07</b>	Tax/financial regulations	<b>015</b>	Systematic/Critical thinking
<b>08</b>	Use of technology	<b>016</b>	In-house communication

Table 14. Importance of training/education in bringing ideas to market

All	N	Mean	Std	Croatia	N	Mean	Std	Poland	N	Mean	Std	UK	N	Mean	Std
08	350	5,04	1,720	016	212	5,20	1,865	03	97	5,13	1,693	04	41	5,68	1,524
016	340	5,03	1,838	08	212	5,10	1,778	08	96	4,89	1,621	01	38	5,45	1,899
03	347	4,97	1,734	03	211	4,90	1,708	04	96	4,76	1,608	016	37	5,19	1,913
04	349	4,92	1,683	01	212	4,89	1,835	01	95	4,76	1,687	08	42	5,07	1,659
01	345	4,92	1,808	04	212	4,84	1,714	09	94	4,69	1,784	03	39	4,92	1,979
02	346	4,61	1,679	07	212	4,72	1,783	02	97	4,60	1,669	02	38	4,74	1,899
015	338	4,60	1,769	015	212	4,71	1,798	05	94	4,60	1,498	015	33	4,48	1,922
07	349	4,54	1,793	02	211	4,59	1,649	016	91	4,55	1,668	09	36	4,25	1,610
05	346	4,51	1,728	05	212	4,59	1,746	013	94	4,54	1,657	07	40	4,08	1,966
09	342	4,28	1,789	013	211	4,21	1,908	010	94	4,43	1,669	06	40	4,00	1,935
013	338	4,23	1,831	09	212	4,10	1,797	015	93	4,40	1,643	05	40	3,93	2,043
06	347	4,05	1,743	06	211	4,09	1,753	07	97	4,34	1,701	010	33	3,48	1,679
010	339	3,99	1,841	012	212	3,98	1,904	011	94	4,23	1,694	013	33	3,45	1,583
012	337	3,96	1,886	010	212	3,88	1,908	012	92	4,18	1,827	012	33	3,27	1,825
011	337	3,78	1,851	011	212	3,66	1,907	06	96	3,99	1,651	011	31	3,23	1,687
014	333	3,62	1,809	014	211	3,64	1,930	014	92	3,78	1,616	014	30	3,00	1,339
N	312			N	208			N	79			N	25		

Source: Authors' calculation.

Table 22. Importance of training/education in bringing ideas to market



The final question wanted to draw the attention to the existing level of education, i.e. training or support which businesses conduct in the areas identified in the literature as beneficial and important. Hence the question was asked whether during the last 3 years their business has received training or support in any of the identified areas.

Table 15. Training/education conducted in bringing ideas to market during the last 3 years (coding is given in table 14)

All	Yes	All	YM	All	No	Croatia	Yes	Croatia	YM	Croatia	No	Poland	Yes	Poland	YM	Poland	No	UK	Yes	UK	YM	UK	No
08	78	03	139	014	288	08	67	016	94	014	166	02	27	03	36	014	80	02	4	04	15	011	42
07	72	08	128	011	276	016	50	03	93	011	163	04	26	08	34	015	76	03	4	03	10	014	42
016	60	016	124	012	267	07	48	02	91	012	154	06	21	09	26	012	73	04	4	02	9	013	41
02	59	04	123	013	245	02	28	04	90	013	136	07	20	016	22	011	71	06	4	08	9	010	40
04	57	02	118	010	240	04	27	08	85	09	135	05	18	07	21	01	68	07	4	016	8	012	40
06	50	01	105	09	233	015	26	01	80	010	133	010	12	01	20	013	68	01	3	07	7	015	38
05	40	07	102	015	223	06	25	015	77	06	125	01	8	013	20	010	67	05	3	05	6	09	36
03	36	05	98	01	216	03	24	05	74	05	118	03	8	02	18	016	66	08	3	09	6	01	35
015	33	015	94	06	216	01	19	07	74	01	113	08	8	04	18	09	62	016	3	01	5	05	35
010	32	09	92	05	211	05	19	06	62	015	109	016	7	05	18	05	58	09	2	06	5	06	35
01	30	06	82	03	175	010	18	010	61	03	95	09	5	011	17	06	56	010	2	015	3	07	33
09	24	013	79	02	173	013	18	09	60	04	95	011	5	06	15	04	51	015	2	010	2	016	33
013	24	010	76	07	173	09	17	013	58	02	93	013	5	012	14	03	50	011	1	012	2	02	31
012	18	012	61	04	171	012	13	012	45	07	90	014	5	015	14	07	50	012	1	013	1	08	31
011	17	011	55	016	167	011	11	011	38	016	68	015	5	010	13	08	50	013	1	011	0	03	30
014	14	014	48	08	141	014	8	014	38	08	60	012	4	014	10	02	49	014	1	014	0	04	25

All

The highest amount of training and education was received in:

1. Use of technology (78 respondents)
2. Tax/financial regulations (72 respondents)
3. In-house communication (60 respondents)
4. Business management principles (59 respondents)
5. Marketing (57 respondents)

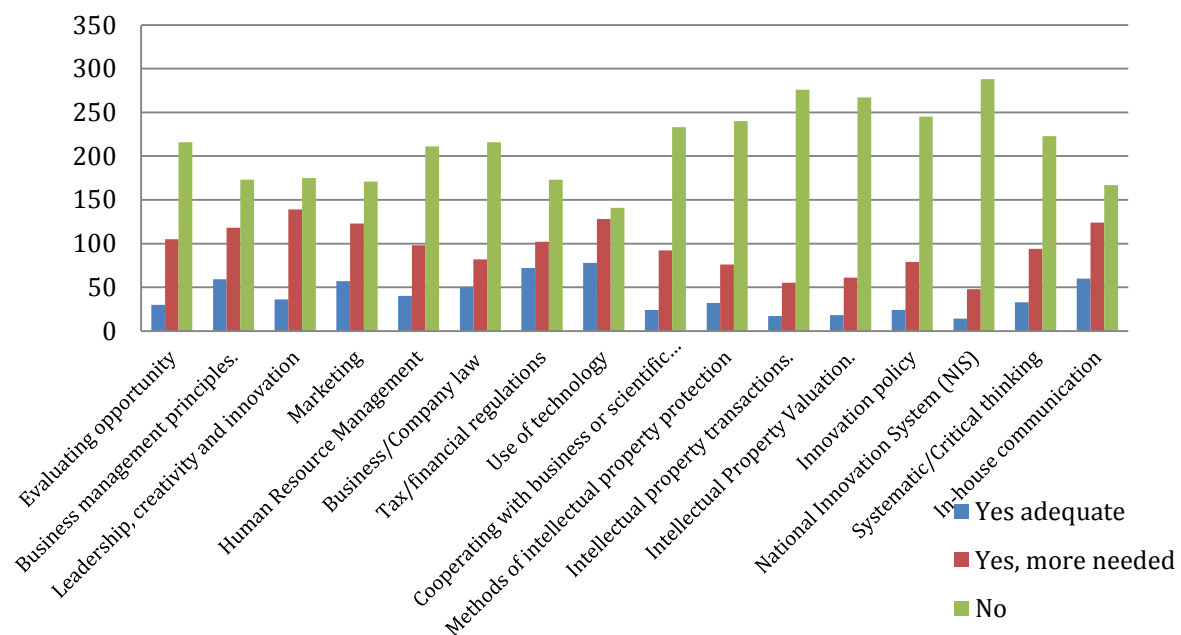
The respondents identified that some training was received but more is needed in the following areas:

1. Leadership, creativity and innovation (139 respondents)
2. Use of technology (128 respondents)
3. In-house communication (124 respondents)
4. Marketing (124 respondents)
5. Business management principles (118 respondents)

The results have shown that the least training was received in:

1. National Innovation System (NIS) (288 respondents)
2. Intellectual property transactions (276 respondents)
3. Intellectual Property Valuation (267 respondents)
4. Innovation policy (245 respondents)
5. Methods of intellectual property protection (240 respondents)

Graph 23. Training/education conducted in bringing ideas to market during the last 3 years (All)



Source: Authors' calculation.

### Croatia

The highest amount of training and education was received in:

1. Use of technology (67 respondents)
2. In-house communication (50 respondents)
3. Tax/financial regulations (48 respondents)
4. Business management principles (28 respondents)
5. Marketing (27 respondents)

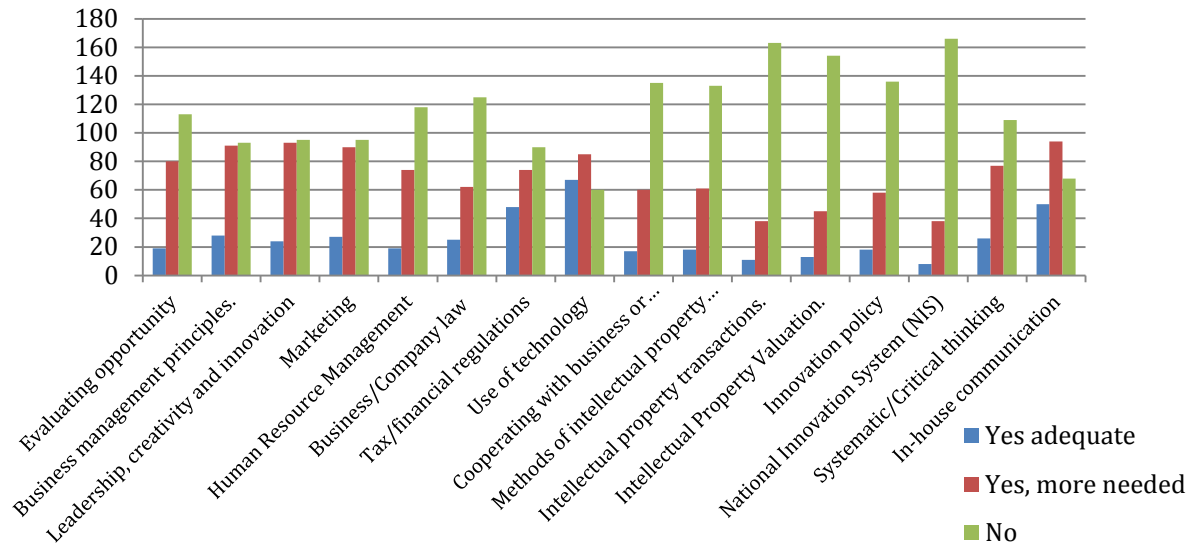
The respondents identified that some training was received but more is needed in the following areas:

1. In-house communication (94 respondents)
2. Leadership, creativity and innovation (93 respondents)
3. Business management principles (91 respondents)
4. Marketing (90 respondents)
5. Use of technology (85 respondents)

The results have shown that the least training was received in:

1. National Innovation System (NIS) (166 respondents)
2. Intellectual property transactions (163 respondents)
3. Intellectual Property Valuation (154 respondents)
4. Innovation policy (136 respondents)
5. Cooperating with business or scientific partners (135 respondents)

Graph 24. Training/education conducted in bringing ideas to market during the last 3 years (Croatia)



Source: Authors' calculation.

### Poland

The highest amount of training and education was received in:

1. Business management principles. (27 respondents)
2. Marketing (26 respondents)
3. Business/Company law (21 respondents)
4. Tax/financial regulations (20 respondents)
5. Human Resource Management (18 respondents)

The respondents identified that some training was received but more is needed in the following areas:

1. Leadership, creativity and innovation (36 respondents)
2. Use of technology (34 respondents)
3. Cooperating with business or scientific partners (26 respondents)
4. In-house communication (22 respondents)
5. Tax/financial regulations (21 respondents)

The results have shown that the least training was received in:

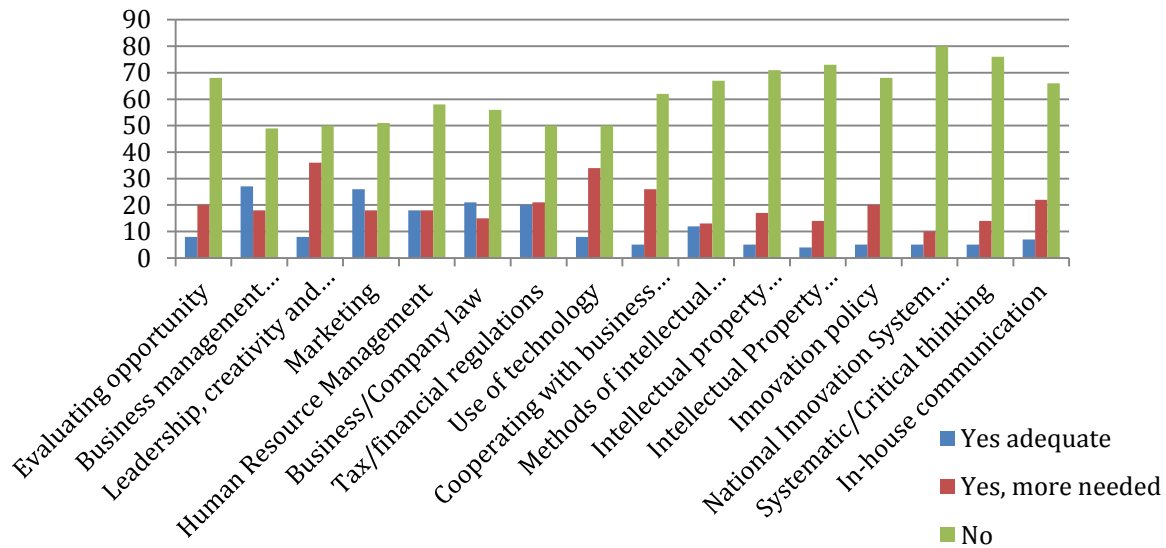
1. National Innovation System (NIS) (80 respondents)
2. Systematic/Critical thinking (76 respondents)
3. Intellectual Property Valuation (73 respondents)
4. Intellectual property transactions (71 respondents)

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5. Evaluating opportunity (68 respondents)

Graph 25. Training/education conducted in bringing ideas to market during the last 3 years (Poland)



Source: Authors' calculation.



UK

The highest amount of training and education was received in:

1. Business management principles (4 respondents)
2. Leadership, creativity and innovation (4 respondents)
3. Marketing (4 respondents)
4. Business/Company law (4 respondents)
5. Tax/financial regulations (4 respondents)

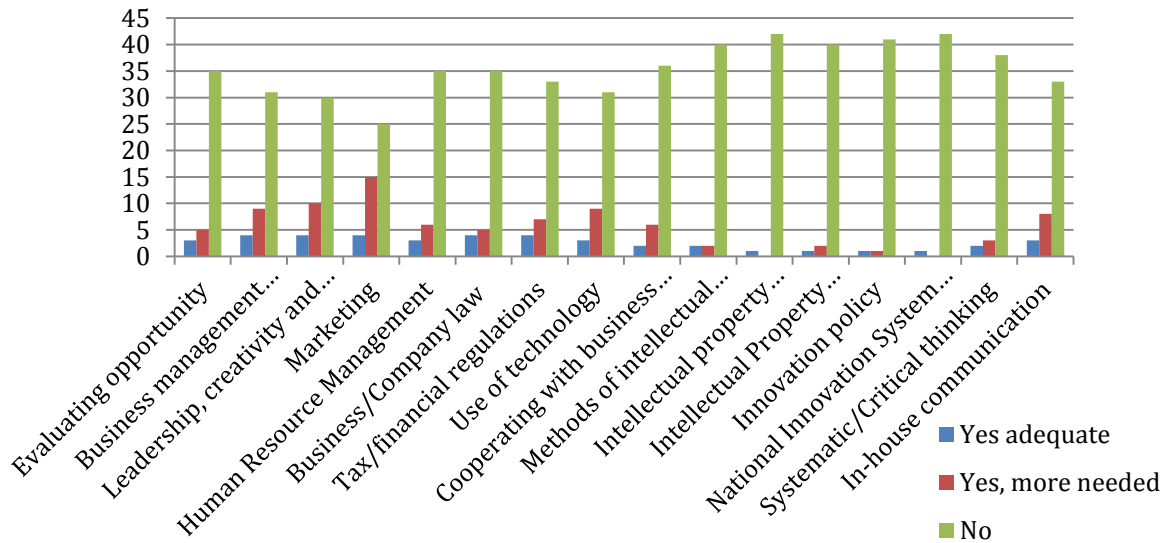
The respondents identified that some training was received but more is needed in the following areas:

1. Marketing (15 respondents)
2. Leadership, creativity and innovation (10 respondents)
3. Business management principles (9 respondents)
4. Use of technology (9 respondents)
5. In-house communication (8 respondents)

The results have shown that the least training was received in:

1. Intellectual property transactions (42 respondents)
2. National Innovation System (NIS) (42 respondents)
3. Innovation policy (41 respondents)
4. Methods of intellectual property protection (40 respondents)
5. Intellectual Property Valuation (40 respondents)

Graph 26. Training/education conducted in bringing ideas to market during the last 3 years (UK)



Source: Authors' calculation.