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Status Quo Country Report
Czechia

Version 1
31 August 2020

Content

1. Introduction

According to the Green paper – Unlocking the potential of cultural and creative industries (European Commission, 2010): “Cultural industries are those industries producing and distributing goods or services which at the time they are developed are considered to have a specific attribute, use or purpose which embodies or conveys cultural expressions, irrespective of the commercial value they may have. Besides the traditional arts sectors (performing arts, visual arts, cultural heritage – including the public sector), they include film, DVD and video, television and radio, video games, new media, music, books and press. This concept is defined in relation to cultural expressions in the context of the 2005 UNESCO Convention on the protection and promotion of the diversity of cultural expressions. Creative industries are those industries which use culture as an input and have a cultural dimension, although their outputs are mainly functional. They include architecture and design, which integrate creative elements into wider processes, as well as subsectors such as graphic design, fashion design or advertising.“

„With revenues of €535.9b, the creative and cultural industries (CCIs) contribute to 4.2% of Europe’s GDP. The sector is its third-largest employer, after construction and food and beverage service activities, such as bars and restaurants. More than 7m Europeans are directly or indirectly employed in creative and cultural activities — 3.3% of the EU’s active population. Performing arts (1,234,500), visual arts (1,231,500) and music (1,168,000) employ more than 1m people each, followed by advertising (818,000), books (646,000) and film (641,000).” (EY, 2014)

Ceramic and porcelain sector is part of creative and cultural industries, especially in its designing and small-scale production. In some regions, this sector is part of regional cultural heritage. Thus, we are providing desk research information about both ceramic and design sector in this analysis. Some CerDee project partners (museums) are naturally part of cultural industry.

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“The estimates concerning the participation of the sector of creative industries in the economy are conducted by a lot of organizations. According to calculations of the European Commission the sector of cultural industries and creative industries in countries as, among others, Poland, the Czech Republic, Hungary or Slovakia produces on average 2% GDP altogether.” (PROMAN, 2016)

In 2012, CCI’s contributed to 1,49 % of the Czech Republic’s GDP. (Žáková, Bednář et al., 2015a). In the same year worked in CCI’s about 162 thousand workers. (Žáková, Bednář et al., 2015b). It was 3,19 % of total workforce (economically active population) of the Czech Republic. (ČSÚ, 2012)

Chapter 2 describes the methodology, chapter 3 provides an analysis of the sector based on the secondary data and outputs of our own stakeholder desk research analysis. Chapter 4 uses the primary data from the survey and informs about the results. Chapter 5 summarizes the highlights and defines strengths and weaknesses of the sector in Czechia.

2. Methodology

There were few steps to make project CerDee successful. Firstly, it was necessary to analyze the current situation of the ceramic sector in Czechia, and international situation of the sector as well, to make exact suggestions how to boost entrepreneurial and creative skills to optimize the economic performance, competitiveness and market position of the creative players. Secondly, use existing data such as official statistics, marketing studies, research reports, strategic documents or scientific publications about market and stakeholders in the region or country.

The situational analysis is worked out using the Eurostat statistical data on a country level as the first step. The data shows the sector of "Manufacture of other porcelain and ceramic products" (NACE C234), which consists of manufacturing ceramic for household and ornamental articles (NACE C2341), manufacturing ceramic sanitary fixtures (NACE C2342), manufacturing ceramic insulators and insulating fittings (NACE C2343), manufacturing other technical ceramic products (NACE C2344), and manufacturing other technical ceramic products (NACE C2349). Following part shows the status and development of Design sector in CerDee countries (NACE M741 - Specialized design activities). However, it is necessary to mention that not only the designers for ceramics and porcelain industry are included in following statistics. Therefore, the results have to be considered as an overview of the whole sector of specialized design activities.

This report describes the situation of overall entrepreneurial capacities in Czechia in comparison to other CerDee countries using the following indicators:

- Number of enterprises
- Production value
- Persons employed
- Employees
- Persons employed per enterprise

The second step was to collect primary data from stakeholders of ceramic sector about their expectations and needs. Enterprises representing private sector and students as a part of educational sector are important stakeholders of ceramic industry, but the research also involved public sector, cultural institutions and professional associations. A unique questionnaire was made for each of these groups and the respondents, except the ones from educational sector, were interviewed face-to-face, by telephone, or online by answering the questionnaire on the internet. Students were interviewed mainly online. To research deeply the educational system in ceramic sector, the focus group or qualitative semi-structured interviews with managers, teachers or lecturers could be organized, if needed.

The survey results are used for the analysis of the situation in Czechia. The primary data from interviews of stakeholders in ceramics sector were collected and analyzed. The surveys of enterprises and students as potential entrepreneurs are used for the descriptions of the entrepreneurial capacities. Especially, the perceived situation of ceramic sector, trends, level of cooperation, position and stability, educational needs, or marketing activities are analyzed in this report.

This report shows the answers on several questions describing the entrepreneurial capacities situation in Czechia based on the opinions of enterprises and students as potential future entrepreneurs:

Questions for enterprises were focused on:

- a situation of ceramic sector within the whole creative sector in your country
- general trend in terms of the ceramic sector/market size
- the cooperation between private and public sector and other institutions
- a membership in an association or organization

- the history of their business
- position and stability of their business
- a cooperation with educational institutions
- employee (self) training
- further education and training
- a need of an international portal about history of ceramics
- marketing activities of the overall craft development in the city/region/country.
- financial situation of their business
- subsidies use

Questions for students were focused on:

- their study direction
- what are they intending to do after you finish school/university
- lack in knowledge/skills you might be facing during your work life
- knowledge/skills they gained at school/university
- What would help them with starting their own business / finding an appropriate job

3. Ceramic and design – secondary data overview

The situational analysis is worked out using the Eurostat statistical data on a country level. First, the Manufacture of porcelain and ceramic products is described. Second, design sector in Czechia is introduced. However, it is necessary to mention that not only the designers for ceramics and porcelain industry are included in following statistics.

3.1. Manufacture of porcelain and ceramic products

Table 1 Number of enterprises

GEO/TIME	2010	2011	2012	2013	2014	2015	2016	2017	2018
Austria	153	146	148	156	153	142	137	144	132
Czechia	1 482	1 449	1 392	1 295	1 282	1 257	1 231	1 178	1 180
Germany	780	771	763	760	958	883	723	823	818
European Union	:	13 745	13 400	13 237	13 677	13 142	13 300	13 147	13 764
Italy	2 812	2 696	2 528	2 416	2 284	2 242	2 226	2 198	:
Poland	531	504	476	499	490	513	522	552	697
Slovenia	47	51	50	65	56	58	53	51	53

Source: Eurostat

Table 2 Production value (million EUR)

GEO/TIME	2010	2011	2012	2013	2014	2015	2016	2017	2018
Austria	199.1	195.2	187.1	126.0	210.0	184.6	173.2	185.4	168.5
Czechia	182.9	196.7	201.2	197.6	188.7	198.2	203.4	218.3	227.8
Germany	2 276.7	2 383.5	2 324.0	2 325.4	2 588.9	2 509.5	2 481.6	2 509.2	2 599.3
European Union	:	8 196	8 000	7 694	9 030	8 490	8 609	8 476	8 866
Italy	1 135.5	1 243.1	1 053.4	987.4	1 066.7	901.3	1 029.1	998.9	1 014.8
Poland	612.1	635.8	614.6	626.1	747.9	823.7	904.7	959.7	1 014.7
Slovenia	6.5	7.8	7.9	4.0	1.9	2.0	2.4	3.8	4.4

Source: Eurostat

Table 3 Persons employed

GEO/TIME	2010	2011	2012	2013	2014	2015	2016	2017	2018
Austria	1 480	1 490	1 493	1 215	1 556	1 579	1 496	1 503	1 378
Czechia	5 855	5 660	5 740	5 656	5 630	5 719	5 733	5 647	5 560
Germany	20 874	21 264	21 344	21 333	22 208	21 386	20 803	21 696	21 955
European Union	:	109 144	107 345	105 000	106 763	106 050	105 352	106 785	:
Italy	14 699	14 219	13 471	12 836	11 711	11 166	11 091	10 629	10 671
Poland	12 394	11 669	11 565	11 639	11 762	12 154	12 158	13 285	14 442
Slovenia	296	371	372	175	98	109	92	154	161

Source: Eurostat

Table 4 Employees

GEO/TIME	2010	2011	2012	2013	2014	2015	2016	2017	2018
Austria	1 338	1 355	1 350	1 064	1 407	1 441	1 364	1 364	:
Czechia	4 891	4 705	4 769	4 782	4 737	4 845	4 865	4 771	:
Germany	20 165	20 670	20 600	20 647	21 263	20 536	20 126	20 922	:
European Union	:	98 058	96 506	94 800	95 101	95 155	94 011	95 296	:
Italy	11 087	10 970	10 396	9 874	8 915	8 415	8 368	7 959	:
Poland	11 784	11 169	11 110	11 155	11 313	11 661	11 690	12 786	:
Slovenia	267	339	342	124	53	64	51	115	:

Source: Eurostat

Table 5 Persons employed per enterprise

GEO/TIME	2010	2011	2012	2013	2014	2015	2016	2017	2018
Austria	9.7	10.2	10.1	7.8	10.2	11.1	10.9	10.4	:
Czechia	4.0	3.9	4.1	4.4	4.4	4.5	4.7	4.8	:
Germany	26.8	27.6	28.0	28.1	23.2	24.2	28.8	26.4	:
European Union	:	7.9	:	8.0	7.8	8.1	:	8.1	:
Italy	5.2	5.3	5.3	5.3	5.1	5.0	5.0	4.8	:
Poland	23.3	23.2	24.3	23.3	24.0	23.7	23.3	24.1	:
Slovenia	6.3	7.3	7.4	2.7	1.8	1.9	1.7	3.0	:

Source: Eurostat

There is the second highest number of enterprises in the industry of Manufacturing porcelain and ceramic products in Czechia in comparison with CerDee countries. However, the number of enterprises decreased from 1,482 enterprises (2010) to 1,180 enterprises (2018). In spite of decreasing number of enterprises, the production value raised from 182.9 mil. EUR (2010) up to 227.8 mil. EUR (2018) in Czechia. In comparison with other CerDee countries, the production value is comparable with Austria. However, the production value development from 2010 to 2018 is quite instable in Austria. The average number of persons employed per 1 enterprise is 4.8 in 2017. The development shows slight increase from 3.9 (2011) to 4.8 (2017). The average number of persons employed per 1 enterprise in Czechia is the same as in Italy (4.8). It shows that relatively small enterprises operate in manufacturing ceramics and porcelain in Italy. The average number of persons employed per 1 enterprise is the lowest in Slovenia (3.0), while the highest numbers are registered in Germany (26.4) and Poland (24.1).

3.2. Specialized design activities

Table 6 Number of enterprises

GEO/TIME	2010	2011	2012	2013	2014	2015	2016	2017	2018
European Union	:	143 954	157 342	164 307	176 777	179 757	192 446	207 719	:
Czechia	2 118	2 160	2 256	2 261	2 353	2 399	2 530	2 727	:
Germany	16 732	18 398	20 464	21 530	23 083	26 170	26 307	30 079	:
Italy	27 612	27 481	28 408	27 450	29 065	29 201	30 828	32 277	:
Austria	1 398	1 484	1 507	1 540	1 542	1 558	1 594	1 631	:
Poland	3 641	5 450	6 184	6 899	7 768	8 635	10 005	11 204	:
Slovenia	733	815	869	1 001	1 100	1 249	1 374	1 502	:

Source: Eurostat

Table 7 Production value (million EUR)

GEO/TIME	2010	2011	2012	2013	2014	2015	2016	2017	2018
European Union	:	17 739	19 164	19 816	21 380	23 863	22 959	24 368	:
Czechia	81.0	87.5	86.8	81.0	76.4	91.0	104.9	126.7	:
Germany	1 930.1	2 209.0	2 522.4	2 838.9	2 825.6	3 028.6	3 277.3	3 703.8	:
Italy	3 703.2	3 838.4	3 696.7	3 894.8	4 271.5	4 363.4	3 913.2	3 880.7	:
Austria	109.2	124.4	130.8	133.8	133.9	:	:	:	:
Poland	148.2	279.5	281.8	425.9	390.5	416.5	431.4	441.2	:
Slovenia	29.3	31.6	33.2	34.3	38.9	47.3	53.8	61.3	:

Source: Eurostat

Table 8 Persons employed

GEO/TIME	2010	2011	2012	2013	2014	2015	2016	2017	2018
European Union	:	213 551	234 291	239 533	261 727	269 542	293 800	310 798	332 846
Czechia	:	2 065	2 194	2 191	2 264	2 397	2 537	2 783	3 011
Germany	31 261	33 340	37 151	40 226	43 505	48 842	51 402	58 222	60 712
Italy	44 857	43 682	44 723	44 790	46 526	47 216	49 292	50 273	51 687
Austria	2 183	2 318	2 393	2 460	2 511	:	:	:	2 945
Poland	5 206	8 755	9 450	10 145	11 756	13 990	15 344	17 616	20 410
Slovenia	889	973	1 064	1 182	1 286	1 462	1 590	1 752	1 928

Source: Eurostat

Table 9 Employees

GEO/TIME	2010	2011	2012	2013	2014	2015	2016	2017	2018
European Union	:	103 000	115 190	117 791	131 775	137 727	155 980	162 331	:
Czechia	678	633	676	658	677	736	781	894	:
Germany	13 103	13 336	15 042	16 959	18 566	20 563	22 610	25 738	:
Italy	14 026	12 573	14 734	15 773	16 172	16 806	17 471	17 363	:
Austria	762	815	843	859	921	:	:	:	:
Poland	1 447	2 836	3 075	2 993	3 685	4 764	4 756	5 797	:
Slovenia	325	334	379	361	369	409	430	466	:

Source: Eurostat

Table 10 Persons employed per enterprise

GEO/TIME	2010	2011	2012	2013	2014	2015	2016	2017	2018
European Union	:	1.5	1.5	1.5	1.5	1.5	1.5	1.5	:
Czechia	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	:
Germany	1.9	1.8	1.8	1.9	1.9	1.9	2.0	1.9	:
Italy	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	:
Austria	1.6	1.6	1.6	1.6	1.6	:	:	:	:
Poland	1.4	1.6	1.5	1.5	1.5	1.6	1.5	1.6	:
Slovenia	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	:

Source: Eurostat

The number of enterprises in design sector has been raising constantly since 2010. In 2017, there were 2,727 enterprises on the Czech market. In comparison with other CerDee Countries, the number of enterprises in Czechia is higher than in Austria and Slovenia, but lower than in Italy, Germany and Poland. The production value in design sector reached the peak in 2018 and it has been decreasing since 2014. In 2017, the production value of Czech market in design sector was 126.7 mil. The highest production values are registered in Italy (3,880.7 mil. EUR), the second highest in Germany (3,703.8 mil. EUR). The number of persons employed in design sector has been raising constantly since 2013. In 2018, there were 3,011 persons employed in design sector in Czechia. The highest number of persons employed in design sector is registered in Germany (60,712), the second highest in Italy (51,687). The number of employees in design sector has been raising constantly since 2013. In 2017, there were 894 employees in design sector in Czechia. The highest numbers of employees in design sector are registered in Germany (25,738), the second highest in Italy (17,363). The average number of persons employed per 1 enterprise is 1.0 in 2017. The development shows no changes of this indicator between 2010 and 2017. The average number of persons employed per 1 enterprise is the lowest in Czechia (1.0), which indicates mainly self-employed designers. The highest number is registered in Germany (1.9).

3.3. Basic information about stakeholders in ceramic sector in Czechia - Assesment of the CerDee partners

The Czech Republic has hilly landscape that covers an area of 78,866 km^2. It is a republic divided into 14 regions, altogether with about 10,7 million inhabitants. The regions (kraje) are bound to NUTS 2 regions (see Fig. 1).

Figure 1 Czechia – NUTS 2 and NUTS 3 regions

Source: https://www.fomoso.org/eu-regionalpolitik-in-moso/eu-funds-in-czech-republic-central-moravia-region/, 2020

University of West Bohemia as Czech project partner and its associated partners (Karlovy Vary regional authority, Karlovy Vary region chamber of commerce) focus within CerDee project on the Karlovy Vary region or Western Bohemia in general. This is a traditional porcelain region. However, this focus is not limited, within the realization of the project also other regions and entities in the Czech Republic will be taken into account. A lot of centralized institutions and associations are logically based in Prague.

Within our desk research, we have developed a stakeholder database to support our project. This database is divided into several stakeholder groups. Further, we provide short insights in to the ceramic sector in the Czech Republic, based on our experience, knowledge and research.

Figure 2 Example of porcelain production in Karlovy Vary region

Source: https://www.kudyznudy.cz/aktivity/prohlidky-porcelanky-thun-nova-role

The ceramic and porcelain sector in the Czech Republic is part of traditional industry. The sector of porcelain production developed later than in Germany. First production place was in Horní Slavkov in Karlovy Vary region (which expired in 2017), from this place the production developed to other places in Northwest Bohemia. That are also places where china clay has been produced. Pottery is wide spread in the country and it is favorite hobby of many people, too. But the main ceramic regions are also mostly spread around clay deposits (area around Bechyně, Rakovník, Beroun, Jevíček, Letovice, Kunštát and South Moravia).

1. **Private sector**

Porcelain production in the Czech Republic is divided into few relatively big producers in Karlovy Region and Dubí (Ústecký region). Those medium to big companies are accompanied with few smaller producer, which usually cover niche markets. Further there is big amount of potters (one other important region is South Bohemia with centre in Bechyně), usually self-employed all over Czech Republic. Some of them are running their workshops not as their main work activity. We can find also quite few design studios regularly working with ceramic/porcelain. Therefore, within the industry we can find a mixture of small and big companies, CCIs and producers. Not so common are co-working spaces etc. There are also some production or decorating workshops for international companies and we can find specialised companies, e.g. profiling themselves in decorating. In general, the sector of bigger producers is in fierce competition with producers in other countries. Of course, we can find also producers of sanitary ceramics/porcelain or a manufacturers of paving, tiling, roofing and other brick products, but those are out of our focus, even though they create quite a lot of production within the entire sector.

Within our desk research, we have indicated: 125 private entities.

2. **Professional associations**

The producers (esp. bigger once) are members of the Asociace sklářského a keramického průmyslu České republiky (Association of glass and ceramic industry in the Czech Republic), the number of members is by 45. There is also an Association of ceramic artists (Sdružení výtvarných umělců – keramiků). General support for businesses and entrepreneurs give regional branches of the Chamber of Commerce of the Czech Republic and other development agencies. There is also few locally or regionally acting fellowships of ceramic artists and producers (e. g. association Keramikum)

Within our desk research, we have indicated: 4 professional associations.

3. **Education sector**

The educational sector is actually comparatively well developed in the Czech Republic. There are 5 university studios directly dealing with ceramic/porcelain and its design and also other focused on design in the Czech Republic. On the secondary level of education we have indicated over 10 school connected to ceramic/porcelain production or design. Well known are secondary schools in Karlovy Vary and Bechyně (South Bohemia). Some of the educational institutions focus more on art and design, other focus on production processes (esp. on secondary level). Ceramic production is popular hobby among the population, so there are courses for children (and other target groups) in almost every bigger town. On the other hand, some secondary schools often face decrease of demand. This fact also applies to universities, the main reason is the low employment of graduates in the field, existing producers only need skilled apprentices.

Within our desk research, we have indicated: 18 educational institutions, which have connection to ceramic/porcelain production or design.

4. **Cultural institutions**

Ceramic or porcelain is part of many exhibitions in museums or galleries. Pottery has been part of the society for very long time, so some fragments of such product we can find in most regional museum exhibitions, esp. in the (former) production places. Most important collections are in the Uměleckoprůmyslové museum (The Museum of Decorative Arts in Prague) – part of its collection is exhibited in Klášterec nad Ohří, in the Museum of West Bohemia, Museum of Karlovy Vary, Gallery of Karlovy Vary and Alšova gallery in Bechyně.

A quality collection is also available at the Regional Museum in Teplice. Some of those collections are of course bound to the educational institutions in the region.

Within our desk research, we have indicated: 20 cultural institutions aiming at least parts of their exhibitions to ceramic/porcelain.

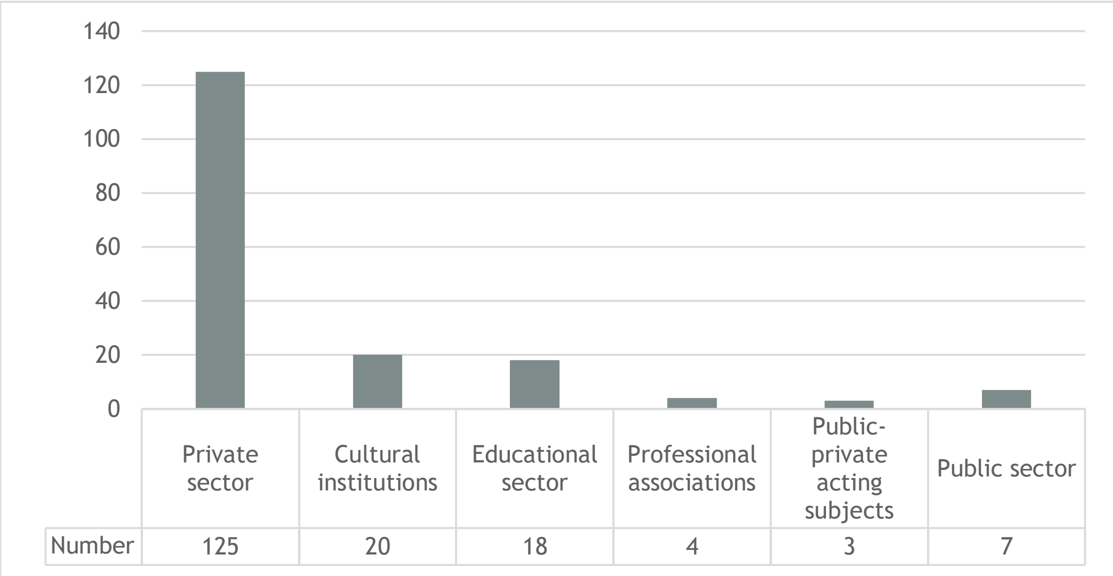
5. Public and public-private sector

On the regional level belongs Karlovy Vary region to the ones, which supports traditional industries – glass and porcelain production, even though that this sector is not anymore as important for the local economy as in the past. Still the regional ecosystem consists of most important stakeholders (education, tourism and spa, producers, events etc.), but its interconnections seems to be weaker. Logically some municipalities (and not only in West Bohemia) try to support the traditional products and their production and they work with the heritage connected to it (e.g. Klášterec nad Ohří, Dubí, Loket).

Karlovy Vary region through its Karlovy Vary Business Development Agency runs a Platform of Traditional Industry, where it tries to cooperate with important business and CCIs in this field (glass, porcelain/ceramics) and it is also about to start a Platform of Creative Industry to even more support CCIs in the region. Hopefully those engagements turn into actual measures.

Within our desk research, we have indicated: 7 public entities, and 3 private-public acting subjects.

Figure 3 Czechia – CerDee Stakeholder Database (03/2020)



Source: Own database, 2020

4. Survey results – primary data overview

The survey results of enterprises in Czechia show the **attitudes and situation of current businesses** as well as **students as potential entrepreneurs** for the future in ceramic sector in the market. However, it is necessary to mention that most of the responses were obtain **before the COVID-19 pandemics**. Therefore, the entrepreneurial capacities based on the entrepreneurs' responses are related to the situation before the pandemics and **we expect dramatical changes** in the sector after this crisis.

4.1. Businesses as existing entrepreneurial capacities

To do a deeper analysis of entrepreneurial potential and to find out their opinions on current situation, financial conditions etc. in Czechia, the database of businesses in ceramic sector has been made. The database is open and will be updated continuously. It contains information about **125 businesses** in Czechia (related to 3/2020).

The sample of Czechia contains **56 respondents** (n). Not all the respondents answered every question; therefore there are fewer responses in several cases of particular question (n ≤ 56).

The legal forms of almost 69 % are self-employed, 18 % consists of Ltd, 9 % answered 'other' and 4 % of the respondents consist of joint-stock companies (Fig. 1). About 74 % of enterprises involved in the survey are in the ceramic sector more than 10 years (47 % more than 20 years, 27 % between 11 – 20 years), 14 % exist from 6 to 10 years, 7 % exist from 3 to 5 years. Only 5 % of respondents are starting their businesses (up to 2 years). (Fig. 2)

The respondents see the **overall situation in ceramic sector more negative than positive**; only 22 % expect a **growth of the sector in next 5 years** (Fig. 3). Just 22 % of the respondents consider the **cooperation in this sector** as a sufficient, 57 % as **insufficient (Fig. 4)**. Just 30 % of the respondents are members of some association or organization in ceramic sector in Czechia, however 23 % would like to be involved in this kind of cooperation (Fig. 5). More than a half (59 %) **cooperates with some educational institution** (Fig. 6).

There is a **need for further education and training** visible among the respondents. Big portion of them (82 %) work actively on employee or self-training (Fig. 7). Interesting and helpful topics for further education and training in craft and design skills are **foreign inspiration**, **modern techniques**, **IT skills (working with professional software)** or **design management** (Fig. 8). From the viewpoint of management, marketing, and business skills, **export to foreign countries**, and **social media marketing** were found as the most helpful and interesting for further education and training, followed by sales skills, presentation skills, marketing through traditional tolls, dealing with investors or clients and online marketing (Fig. 9). About 38 % of the respondents participate in the marketing activities of the overall craft development in the city/region/country, while 47 % do not. The rest is undecided. However, 64 % of **respondents are interested in participating in a marketing campaign** to promote creative sector in the region (Fig. 10). An **international portal about history of ceramics**, including pictures and videos from different regions, would help 64 % of the respondents in their activities in ceramic sector. Only 18 % find this idea as not helpful, the rest is undecided (Fig. 11).

The **financial situation** shows that more than a half (62 %) of the respondents see their situation as in **average**, while 22 % as good or very good; 16 % as bad or very bad. However, 65 % of the respondents do not use any financial indicators to monitor the efficiency of their businesses. Just 21 % of the respondents have already used or required some kind of **subsidy** in last 10 years. (Fig. 12)

4.2. Students as potential entrepreneurial capacities

The survey results of students in Czechia show the **attitudes and situation of students as potential entrepreneurs in ceramic sector**. However, most of the responses were obtain **before the COVIC-19 pandemics**. Therefore, the entrepreneurial capacities based on the students' responses are related to the situation before the pandemics.

The sample contains 70 respondents (n) who are students from Slovenia. Not all of them answered every question; therefore, there are fewer responses in several cases of particular questions (n ≤ 70). These students are mostly from 15 to 18 years old (36 %), lots of them are from 19 to 21 (31 %) and then from 22 to 26 years old (20%), the rest is 27 and more years old (13 %) (Fig. 13). Most of them (96 %) come from Czech Republic, two students come from Slovenia (3%) and ones' country of origin is Russia.

Study direction of respondents is design (68 %), technology (10 %) and some other directions (22 %). (Fig. 14) Most of the respondents consider future studies (49 %), lots of them want to start their own business in combination with employment (16 %) and 16 % would like to start their own business. They plan to settle down in the Czech Republic (67 %). The rest of students would like to live somewhere else. (Fig. 15)

For many students is the dream job after finishing the school to be a freelancer (21 %) or employee in a small studio (17 %). Five years after finishing the school is the respondents want to be freelancers (33 %), designers in private companies (14 %) and partners or co-owners of small studios (14 %). (Fig. 16)

Interviewed students developed in creativity (69 %) during their studies and gained craft skills (76 %), they also got knowledge about history and tradition (40 %) (Fig. 17). Students as potential entrepreneurs feel **lack of knowledge** for future work mostly in **entrepreneurial skills** (46 %), **languages** (37 %), as well as in **managerial skills** (39 %) and **law** (41 %) (Fig. 18).

For starting own business or finding an appropriate job, they would appreciate some **help with co-working space with technical and space background** (49 %), some kind of **subsidy** (54 %), and help in marketing support (31 %) or help with **mentoring or acceleration program for starting business** (40 %). The respondents could choose more than one answer. (Fig. 19)

The students consider themselves mostly as designers (81 %), artists (84 %) and technologist (43 %). This fact does not exclude the possibility to start own business in these fields. 34 % think about their future careers as a freelancer, 31 % as a businessman and 39 % of them want to be employed. The respondents could choose more than one answer. (Fig. 20)

4.3. Expectations and needs of stakeholders

Expectations and needs are aspects which make up important part of the research. Expectations of entrepreneurs give the way how the sector and industry may develop in few years horizon. The essential step to give exact recommendation is to find what the needs of the stakeholders are. These two aspects are closely explained in this part of the report.

The respondents were asked to rate the **current situation of ceramic sector** in Czechia at the beginning of the questionnaire. On the scale where 1 point means worst and 10 points mean best, 25 % of the respondents rated this statement with 6 and more points, on the other hand 75 % rated between 1 and 5 points (Fig. 21). Only 22 % of the entrepreneurs think that the **sector will grow in next 5 years**; in contrast 53 % expect the **sector will experience decrease** and the rest of the respondents think that the condition of the ceramic **sector will not change** (Fig. 21).

In next part of the questionnaire were respondents asked to rate intensity, importance of cooperation with each sector and also rate the influence of each sector on the scale between 1 and 10 points based on same principle again. Answers of each stakeholders sector are compared to the mean of stakeholders sector form all CerDee countries.

Intensity of current cooperation with Czechian **professional institutions** and **public sector** was evaluated **lower** than is the CerDee mean. In comparison, the **intensity of cooperation** with **cultural institutions**, **educational institutions**, **private sector** and **public-private acting sector** was rated **higher** (Fig. 22). **Importance of cooperation** with **educational sector**, **private sector**, **professional institutions** and **and public-private acting sector** was rated **lower**, but with Czech **cultural institutions** and **public sector** the **importance of cooperation** is seen **more important** than in the other CerDee countries (**Fig. 23**). **Influence level** of **almost all stakeholder sectors** except **educational institutions** and **private sector** is seen **smaller** than is the average from all countries (**Fig. 24**).

Big problem for ceramic sector in Czechia seems to be **small demand** after their **products** due to import of cheap ceramic products from abroad. Entrepreneurs think that **national institutions do not help them**, especially with financing new businesses or starting a project in their sector. (**Fig. 25**).

As just 22 % of the respondents consider the **cooperation in the ceramic sector as a sufficient** (**Fig. 26**) many of them would appreciate to **participate in** some **project** and the cooperation between their businesses and public sector to be closer. Especially**, connection with national or regional institutions** like ministries, professional associations, tourist information centers, television and other mass media.

For 63 % of the respondents is the most important **benefit from the cooperation** is **joint marketing**, for 55 % it is a **help with accessing new markets** and 52 % see it like an opportunity to get some kind of **subsidy**. Almost 34 % of the respondents would appreciate **help with accessing new markets** (**Fig. 27**). **Subsidy** is one of the main goals for entrepreneurs when taking part in cooperation, but only 21 % of the respondents feel that they **have enough information** about how to get it, 50 % disagree and the rest is undecided (**Fig. 28**). On the statement '**I am going to apply for a subsidy in the future**', 36 % reacted positively and 36 % negatively (**Fig. 28**). **External capital**, as an instrument of financing a business, was used by only 20 % of the respondents in last 10 years and 23 % plan to use it in the future (**Fig. 29**).

Next part of the report is focused on expectations and needs of each sector of the respondents. Description of each sector is based on their answers on the scale from 1 to 10, where 1 is lowest and 10 the highest, on questions 'Intensity of current cooperation', 'Importance of cooperation' and 'Influence level' towards other sectors. But it is necessary to keep in mind the structure of respondents' sample. The structure is following: 7 cultural institutions, 12 educational institutions, and 56 respondents from private and 3 respondents from public sector. The results of the research would be more accurate with bigger sample of the respondents.

4.3.1. Expectations and needs of cultural institutions

The respondents from **cultural institutions** see the **current cooperation** with other **cultural institutions** (7.00) quite **intensive**. Intensity of cooperation with **educational institutions** (6.17) and **public sector** (6.17) was rated as an **average** and cooperation with **private sector**, **professional institutions** and with **public sector** is seen as **extensive** in their opinion (3.20, 3.75 and 4.25).

In comparison, the **importance of cooperation** with **all stakeholder sectors** was rated **high** (> 7.50).

The respondents from **cultural institutions** consider **influence level** of **each stakeholder sector** as **high** (> 7.50).

4.3.2. Expectations and needs of educational institutions

The respondents from **educational institutions** see the **current cooperation** with **cultural institutions** (6.70) other **educational institutions** (7.50) quite **intensive**. Intensity of cooperation with **private sector** (5.67), **professional institutions** (5.50), **public sector** (5.91) and **public-private acting sector** (4.70) was rated as an **average**.

In comparison, the **importance of cooperation** with **almost all stakeholder sectors** was rated **high** (> 6.50), except cooperation with **public-private acting sector**, which is thought to be **average important** (5.80).

The respondents from **educational institutions** consider **influence level** of other **educational institutions** (6.58) and **private sector** (7.58) as **high. Cultural institutions** (6.33), **professional institutions** (5.20), **public sector** (6.45) and **public-private acting sector** have an **average influence** in their opinion.

4.3.3. Expectations and needs of private sector

The respondents from **private sector** see the **current cooperation** with **educational institutions** (4.80) and **private sector** (5.41) as an **average** and cooperation with **cultural institutions** (4.33), **professional institutions** (3.71), **public sector** (3.04) and **public-private acting sector** (3.25) is seen as **extensive** in their opinion.

The cooperation with **educational institutions** (4.73), **private sector** (4.77) **professional institutions** (4.64) was evaluated as **average important** and cooperation with **cultural institutions** (4.46), **public sector** (4.48) and **public-private acting sector** (4.22) is thought to be **not important**.

The respondents from **private sector** consider **influence level** of **almost all stakeholder sectors** as **low**, except **private sector** (5.43), whose influence was rated as an **average**.

4.3.4. Expectations and needs of public sector

The respondents from **public sector** see the **current cooperation** with **cultural institutions** (9.00), **educational institutions** (8.00), **private sector** (7.00) and **public-private acting sector** (7.67) quite **intensive**. Intensity of cooperation with **professional institutions** (4.00) and **public-private acting sector** (3.67) was rated as **low**.

In comparison, the **importance of cooperation** with **all stakeholder sectors** was rated **high** (> 7.50).

The respondents from **public sector** consider **influence level** of **each stakeholder sector** as **high** (> 8.00).

4.4. Marketing activities

Marketing is one of the most important processes in company. Its aim is to get the knowledge, influencing and satisfying customer's needs and wishes and also achieving goals of the organization in an effective way. That is why all companies choose their marketing activities properly.

Nowadays, in the ceramic and porcelain sector in the Czech Republic, is mostly used marketing through the **own website** (77 %), social media such as **Facebook** (68 %), **Instagram** (41 %) or **YouTube** (5 %) are also common. There are some other ways used for marketing in companies such as online **advertising and advertising in traditional media** (press). (Fig. 30)

Companies plan more of marketing through the **own website** (29 %) and **point-of-sale promotions** (18 %). It also planned greater use of social media; the plan for the future marketing activities includes the use of **YouTube** (15 %), **Instagram** (9 %) and **Facebook** (5 %). **Advertising in TV** (4 %) and **press** (8 %) is also planned (Fig. 31).

Own forces of the company (82 %) are mostly responsible for the marketing activities. Only 9 % interviewed entrepreneurs in Czechia use **specialists or specialized agencies.** (Fig. 32). Respondents mostly **do not participate in the marketing activities** of the overall craft development (46 %) and only few of them do (38 %). Lots of respondents is interested in **participating in a marketing campaign** to promote creative sector (68 %). (Fig. 33)

Marketing activities on social networks are mostly a **promotion of the product** (66 %) or a **promotion of the company** (48 %). Very common is **offering trend information** (14 %), **technical information** (21 %), **exclusive promotions** (18 %) and **post-sales information** (13 %). (Fig. 34) Through the social media companies improve their **reputation and brand image** (52 %), they **get new customers** (55 %), **get feedback from clients and general public** (43 %) and also **collect information about their customers** (5 %). Some of the companies have **closed sales operations through the social media** (27 %). (Fig. 35)

Markets and **fairs** (52 %) are the most common distribution channels. Around 20 % of companies use **own brick-and-mortar store**. Online distribution channels such as **own online store** (25 %) and **multi-brand online platform** (14 %) are also used by companies from this sector in the Czech Republic (Fig. 36).

Greater use of **own online stores** (30 %) and **markets and fairs** (27 %) **is planned for the future**. Other channels planned for the distribution are **own brick-and-mortal stores** (21 %) and **retail** (14 %). (Fig. 37)

5. Strengths and weaknesses

Strengths

One of the strengths of porcelain and ceramics sector in Czechia is a **big portion of respondents working actively on employee or self-training** (82%). Although Czechia is a small country the amount of improving workers is higher than in Italy and Austria. The percentage is similar to Slovenia and Germany.

Students plan to **settle down at the same place they come from** (67 %) and become a co-owner of a small studio in Czechia. This percentage is higher than in almost the same as in Slovenia and Italy.

The **intensity of cooperation** with **cultural institutions**, **educational institutions**, **private sector** and **public-private acting sector** was rated **higher**. The **importance of cooperation** with Czechian **cultural institutions** and **public sector** is seen **more important** than in the other CerDee countries.

The **educational sector** is actually comparatively **well developed in the Czech Republic**. There are 5 **university studios** directly dealing with ceramic/porcelain and its design and also other focused on design in the Czech Republic. On the **secondary level of education**, we have indicated over 10 school connected to ceramic/porcelain production or design. The number of educational institutions is **the highest in Czechia** in comparison to the other CerDee countries.

In this current modern world is good the fact that companies plan to do more of **marketing activities on their own websites** in the future. Using of social media is important; the plan for the future marketing activities includes the use of **YouTube, Instagram** and **Facebook**. Greater use of **own online stores** and **multi-brand online platforms** is also planned for the future. This helps the entrepreneurs to promote their products and also the company, to offer technical and trend information. They can also get new customers and feedback from the current customers.

For the marketing activities are mostly responsible **own forces of the company** which means lower costs for the entrepreneurs.

The number of **subjects in private sector** is the second highest in the Czech Republic (after Germany), that is remarkable because this state is quite small. Porcelain production in the Czech Republic is divided into few relatively **big producers** in Karlovy Region and Dubí. There are also few **smaller producers** which usually cover niche markets. Further there is many of potters usually **self-employed** all over the Czech Republic.

The amount of subjects **in public sector** is also one of the highest in the Czech Republic in comparison to the other CerDee countries. Karlovy Vary region supports traditional industries – glass and porcelain production. The regional ecosystem consists of most important stakeholders (education, tourism and spa, producers, events etc.), but its interconnections seems to be weaker. There is a Karlovy Vary Business Development Agency runs a **Platform of Traditional Industry**, where it tries to cooperate with important business. Some municipalities in the country try to support the traditional products and their production and they work with the heritage connected to it.

Weaknesses

The respondents see the **overall situation in ceramic sector more negative than positive**; only 22 % expect a **growth of the sector in next 5 years**. Just 22 % of the respondents consider the **cooperation in this sector** as a sufficient, 57 % as **insufficient**. The situation seems to be worst only in Austria.

Weakness of porcelain and ceramic sector in Czechia is that 65 % of the respondents **do not use any financial indicators** to monitor the efficiency of their businesses.

Big problem for ceramic sector in Czechia seems to be **small demand after** their **products** due to import of cheap ceramic products from abroad. Entrepreneurs think that **national institutions do not help them**, especially with financing new businesses or starting a project in their sector..

Intensity of current cooperation with Czechian **professional institutions** and **public sector** was evaluated **lower** than is the CerDee mean and also the **Importance of cooperation** with **educational sector**, **private sector**, **professional institutions** and **and public-private acting sector** was rated **lower. Influence level** of **almost all stakeholder sectors** except **educational institutions** and **private sector** is seen **smaller** than is the average from all countries.

As **crucial barriers** of the sector (Question 14) were mentioned many different aspects. Respondents see the problem in an **insufficient support from Czech government**. That means not enough of money in the field. Another problem is that a tradition of the market should be **more appreciate**, almost no one knows about the price of traditional white jewel called porcelain. Customers buy **cheaper products imported** from abroad. According to Czechian entrepreneurs is another barrier **expensive** kiln and another **equipment**.

5.1. Summary

The situational analysis using the Eurostat statistical data shows that there is **high potential of enterprises in Czechia**. In this country is visible the **highest increase** of the number of enterprises. The total number of enterprises in **ceramic and porcelain sector** is 3 907 (manufacturing and design) in Czechia.

The number of enterprises in **ceramic manufacturing** is the highest in Czechia in comparison to the other CerDee countries. The production value is lower than in Germany, Italy and Poland.

If we should quantify the potential of the ceramic sector in **Czechia**, the total number of enterprises **manufacturing ceramic and porcelain** products was 1 180 (in 2018). If we take also the **design sector** in account, the total number of enterprises in Czechia was 3 907. The number of enterprises in specialized design activities in Czechia is slightly rising during the years, the total amount of enterprises in ceramic manufacturing fluctuates around 1 200 enterprises.

Based on the survey, we found out that About 74 % of enterprises involved in the survey are in the ceramic sector more than 10 years (47 % more than 20 years, 27 % between 11 – 20 years), 14 % exist from 6 to 10 years, 7 % exist from 3 to 5 years. Only 5 % of respondents are starting their businesses (up to 2 years). The respondents see the **overall situation in ceramic sector more negative than positive**; only 22 % expect a **growth of the sector in next 5 years**. The **financial situation** shows that more than a half (62 %) of the respondents see their situation as in **average**, while 22 % as good or very good; 16 % as bad or very bad. However, it is necessary to mention here that most of the responses were obtain **before the COVID-19 pandemics**.

Therefore, the entrepreneurial capacities based on the entrepreneurs' responses are related to the situation before the pandemics and **we expect dramatical changes** in the sector after this crisis. The future development is hardly predictable in the moment and the forecasts will require more secondary, as well as primary data analysis in the future.

The **education** plays, and probably will play, an important role in this sector. Big portion of respondents (82 %) work actively on employee or self-training. But there is a **need for further education and training** visible among the respondents., especially in **foreign inspiration**, **modern techniques**, **IT skills (working with professional software)** or **design management**, as well as in **export to foreign countries**, and **social media marketing**, followed by sales skills, presentation skills, marketing through traditional tolls, dealing with investors or clients and online marketing.

The **potential entrepreneurs** in ceramic sector are represented by students of different types of schools. The responses on the future career direction show that 32 % **think about starting their own business** (fully; or partially in combination of to be also an employee in some other company at the same time). However, for starting own business or finding an appropriate job, **they require some help with co-working space with technical and space background**, some kind of **subsidy**, in marketing support or help with **mentoring or acceleration program for starting business**.

The respondents consider themselves mostly as **designers, artists** and **technologist**. This fact does not exclude the possibility to start own business in these fields, especially as self-employed. 39 % of them think about their future careers as an employee, while 34 % as a freelancer, and 31 % as a businessman. The respondents (except those who want to be employed) mean a **big potential for business sector**, such as artists and designers as **self-employed** persons, **freelancers** and **businessmen** in the ceramic and porcelain sector.

6. Annexes

6.1. Businesses as existing entrepreneurial capacities – graphical overview

Figure 1 Sample – Legal form of respondents

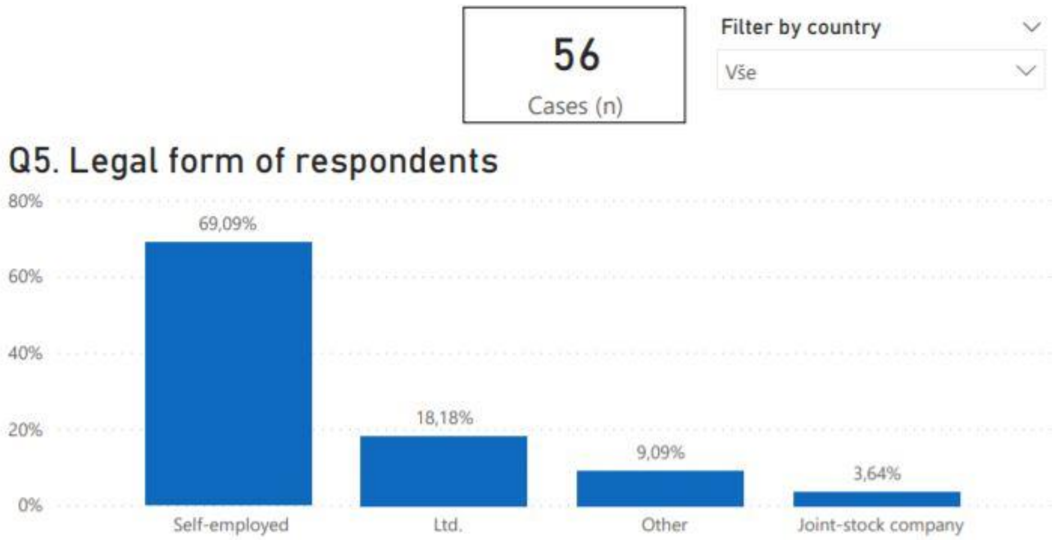


Figure 2 Sample – Length of managing business

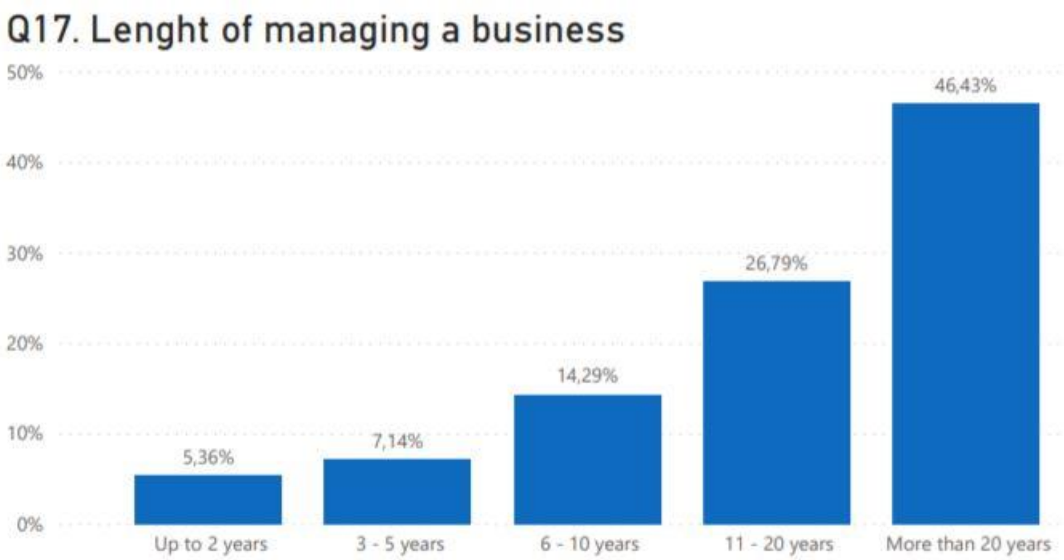


Figure 3 Situation in ceramic sector

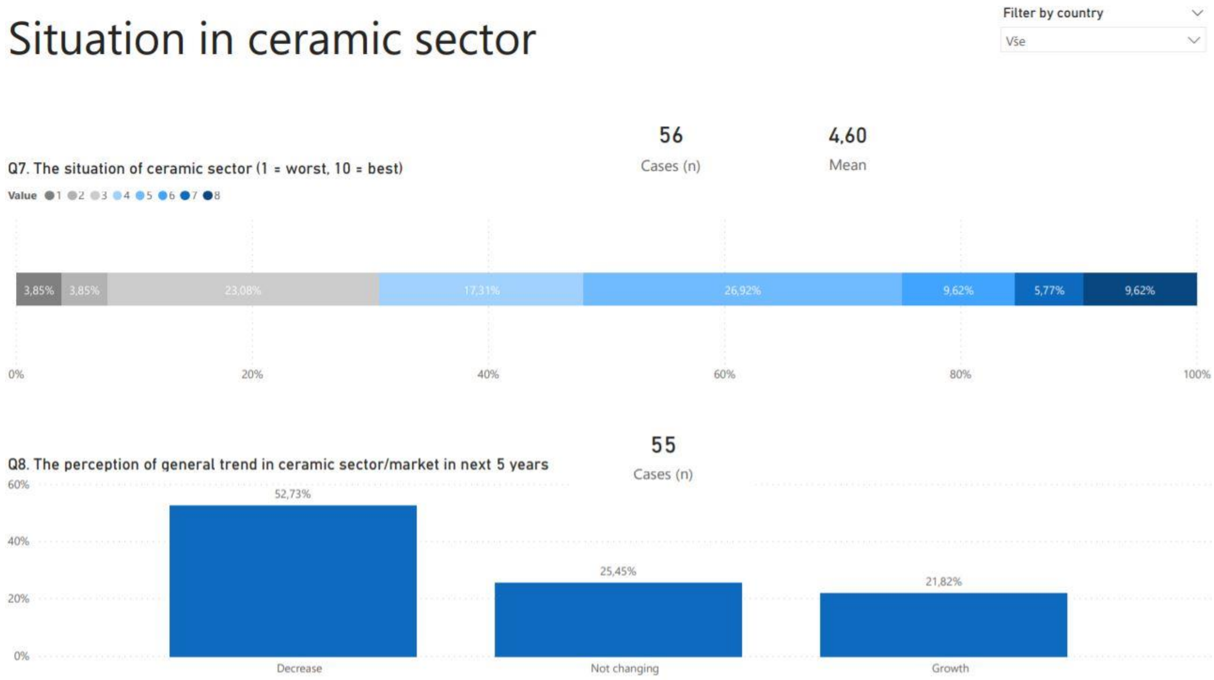


Figure 4 Level of cooperation

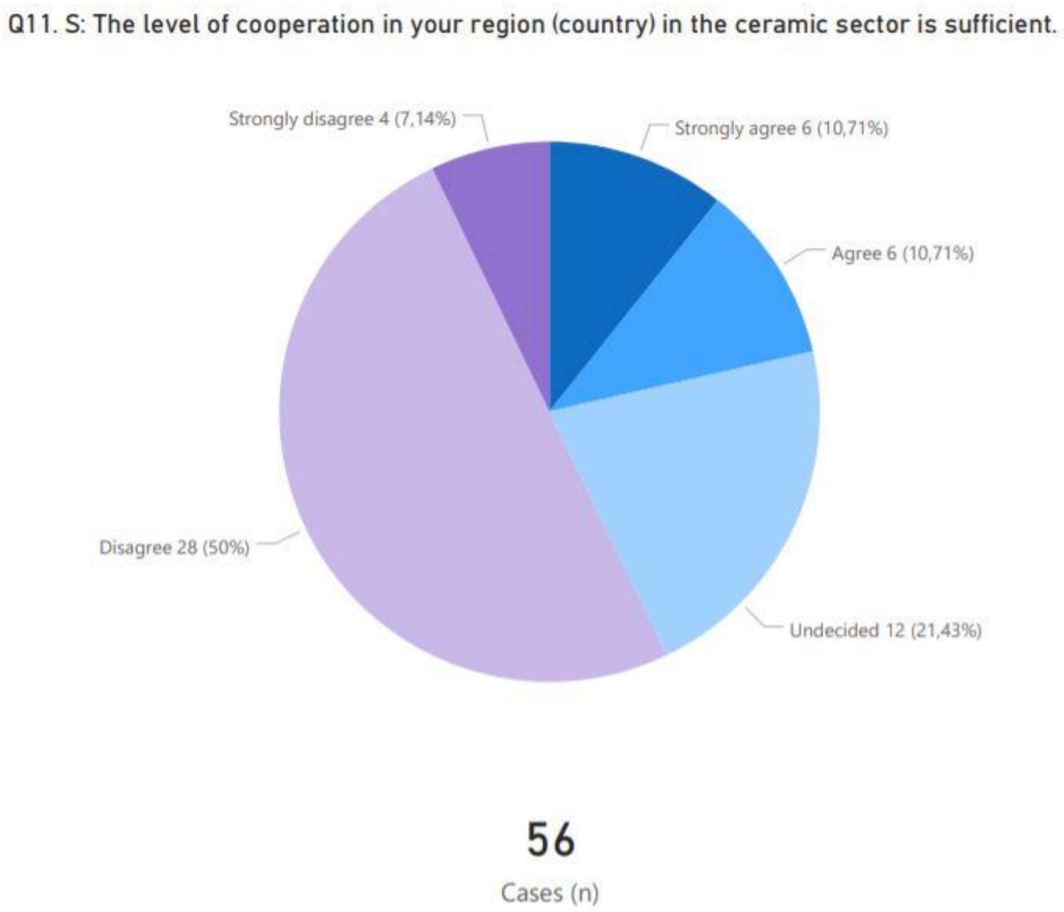


Figure 5 Membership in an association

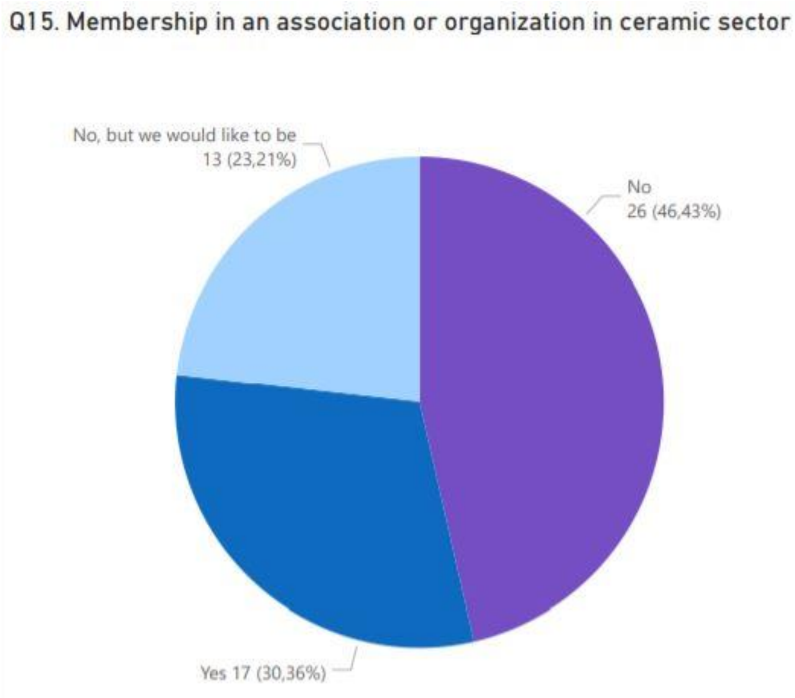


Figure 6 Membership in an association

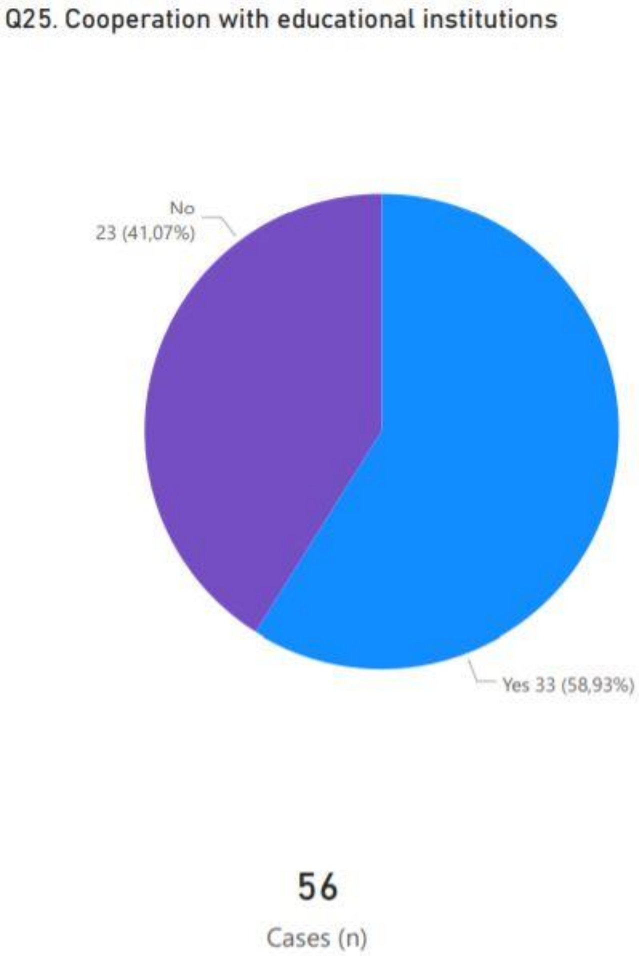


Figure 7 Employee and self-training

Figure 8 Further education and training topics (craft and design skills)

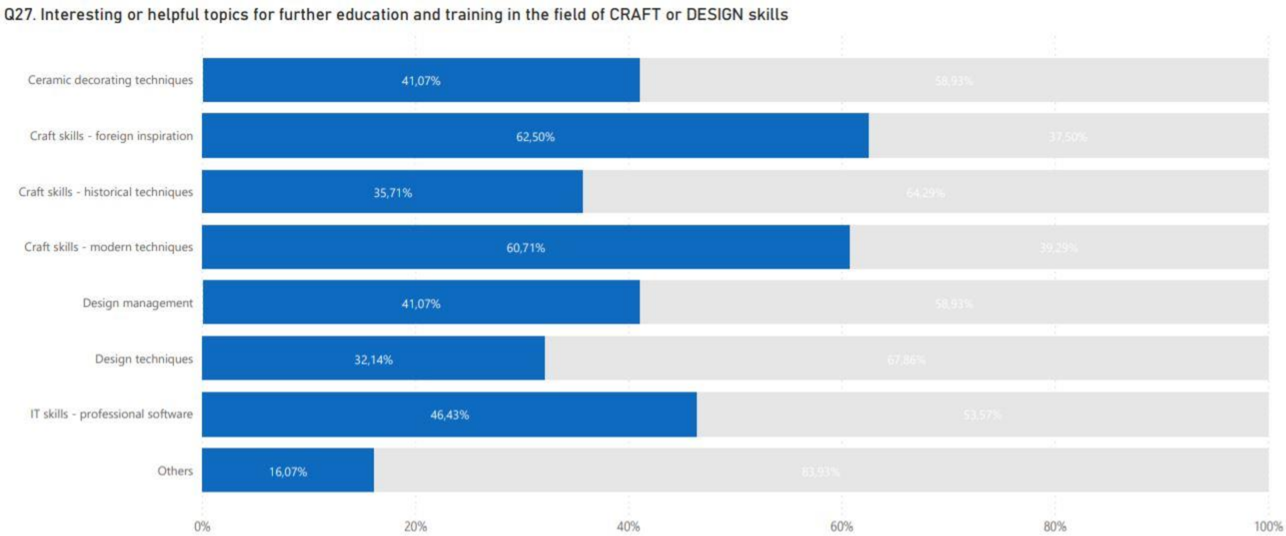


Figure 9 Further education and training topics (management, marketing, and business skills)

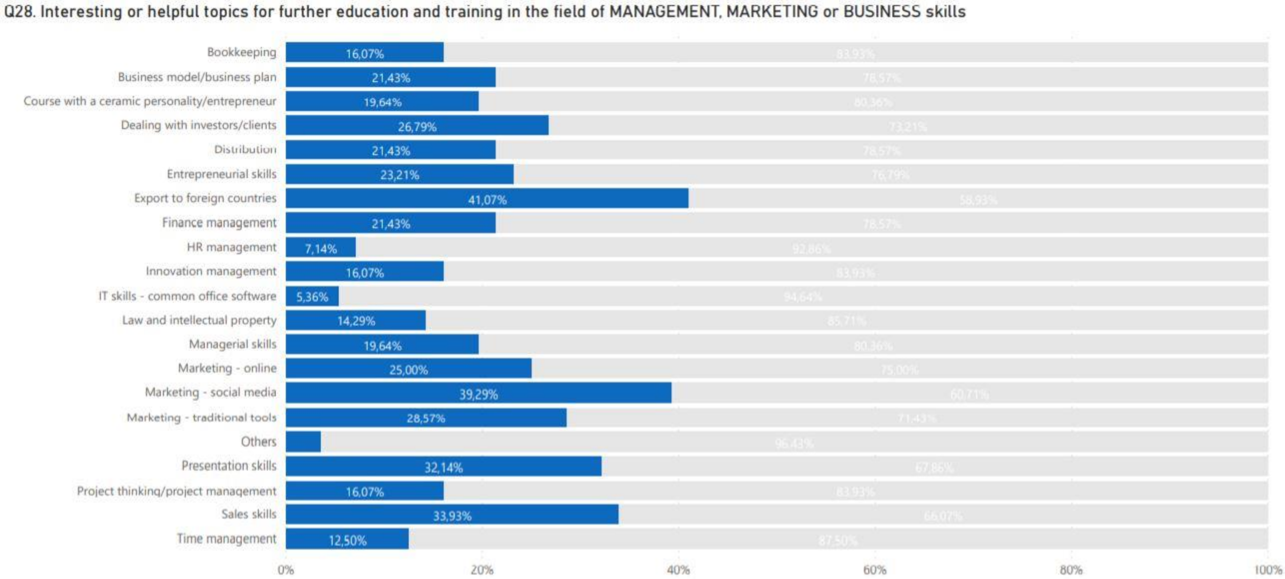
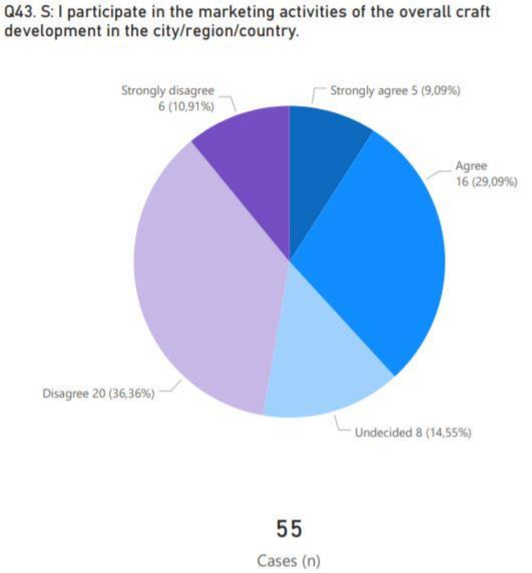


Figure 10 Participating in marketing activities in the city/region/country



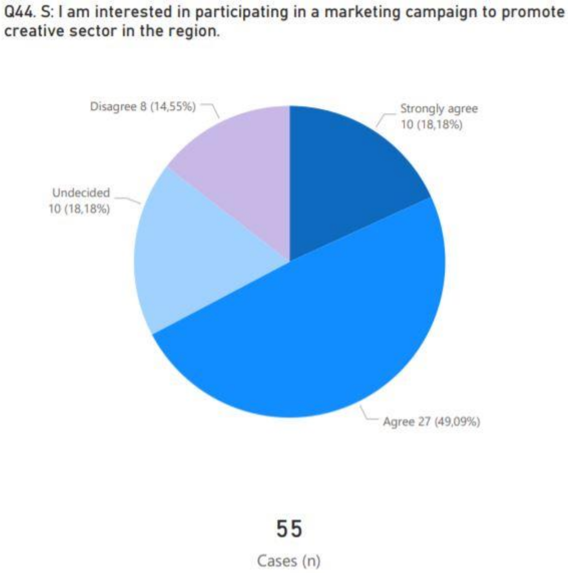


Figure 11 A need of international portal about ceramics

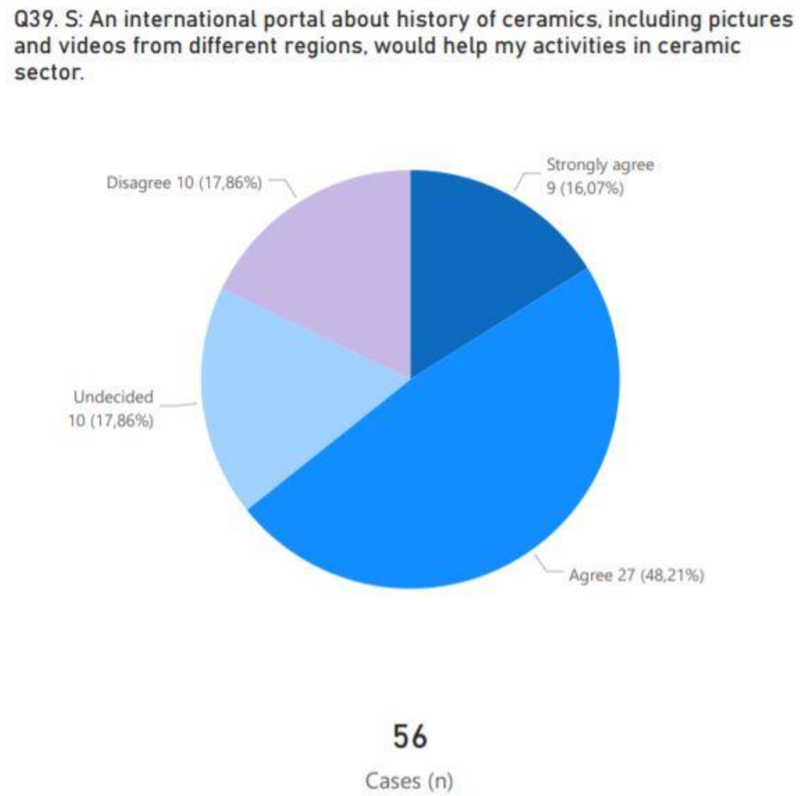
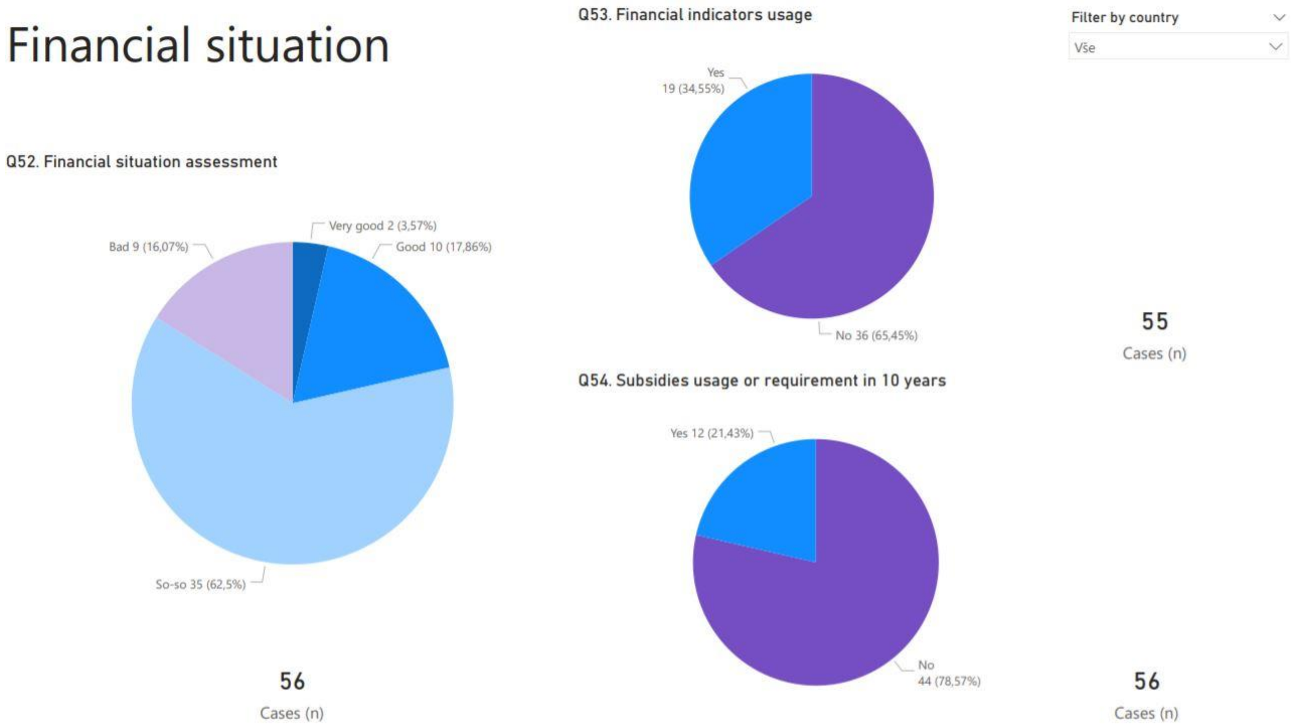


Figure 12 Financial situation



6.2. Students as potential entrepreneurial capacities - graphical overview

Figure 13 Sample - students

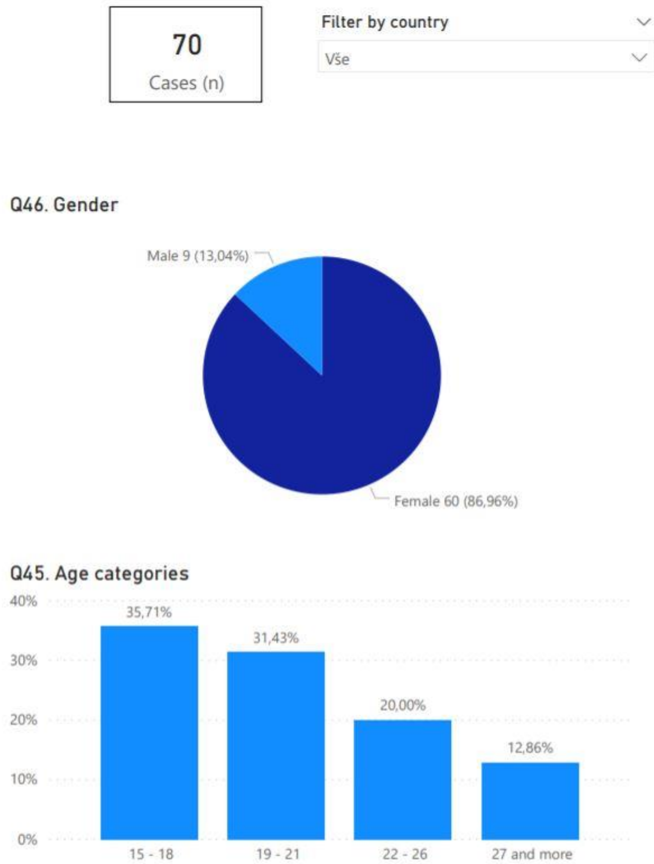


Figure 14 Study direction of students

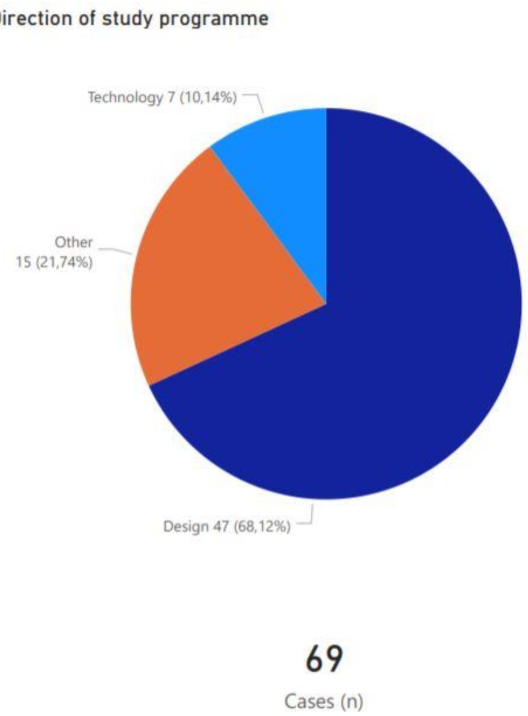
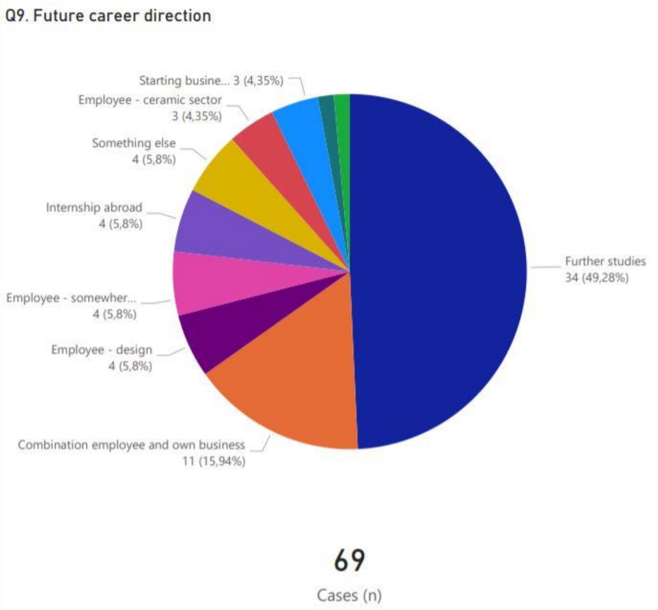


Figure 15 Future direction of students



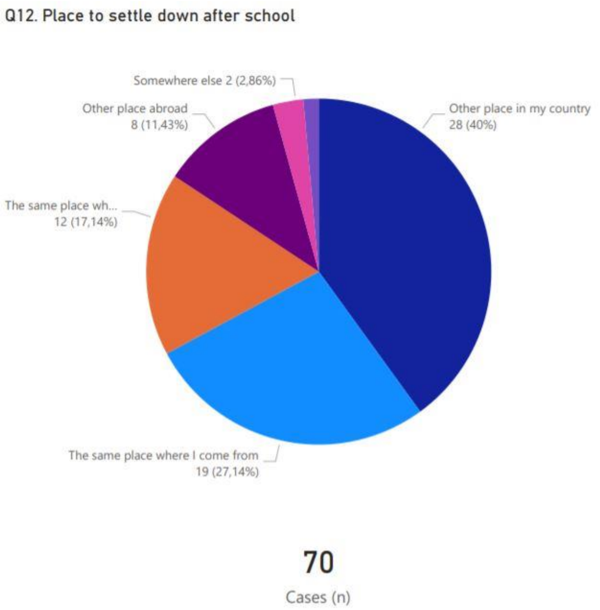
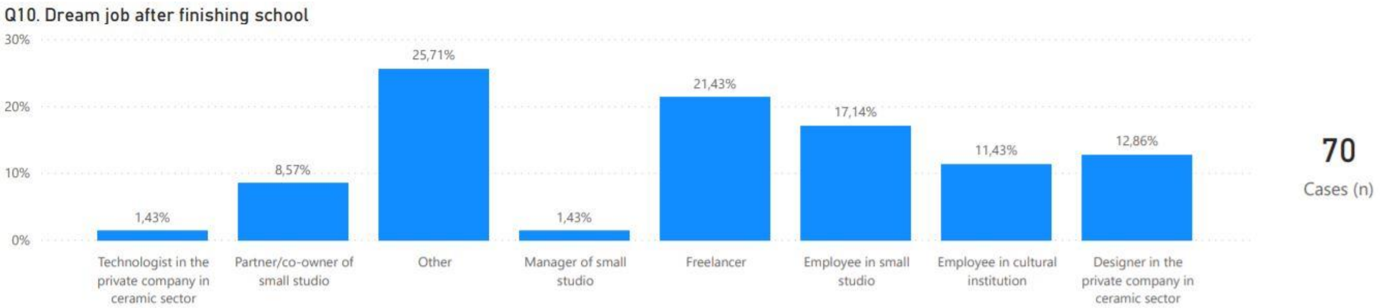


Figure 16 Dream job



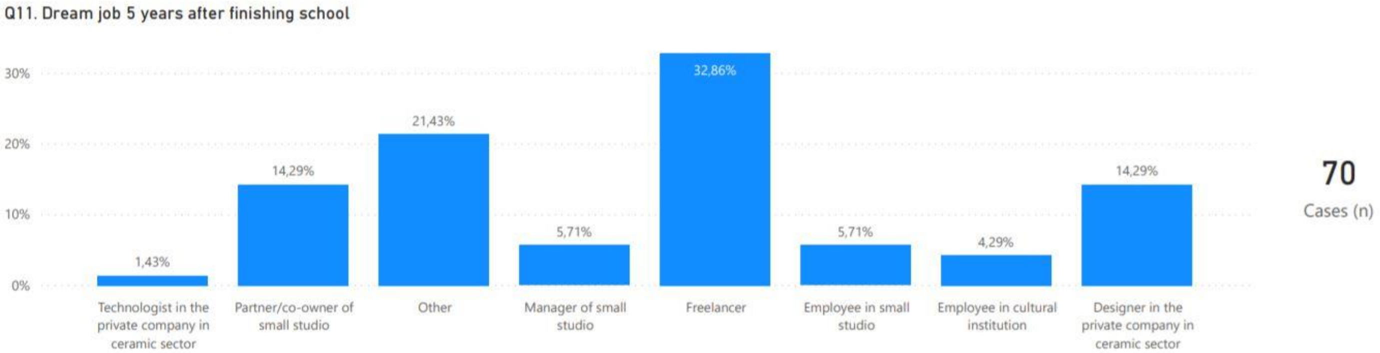


Figure 17 Important students' knowledge/skills gained

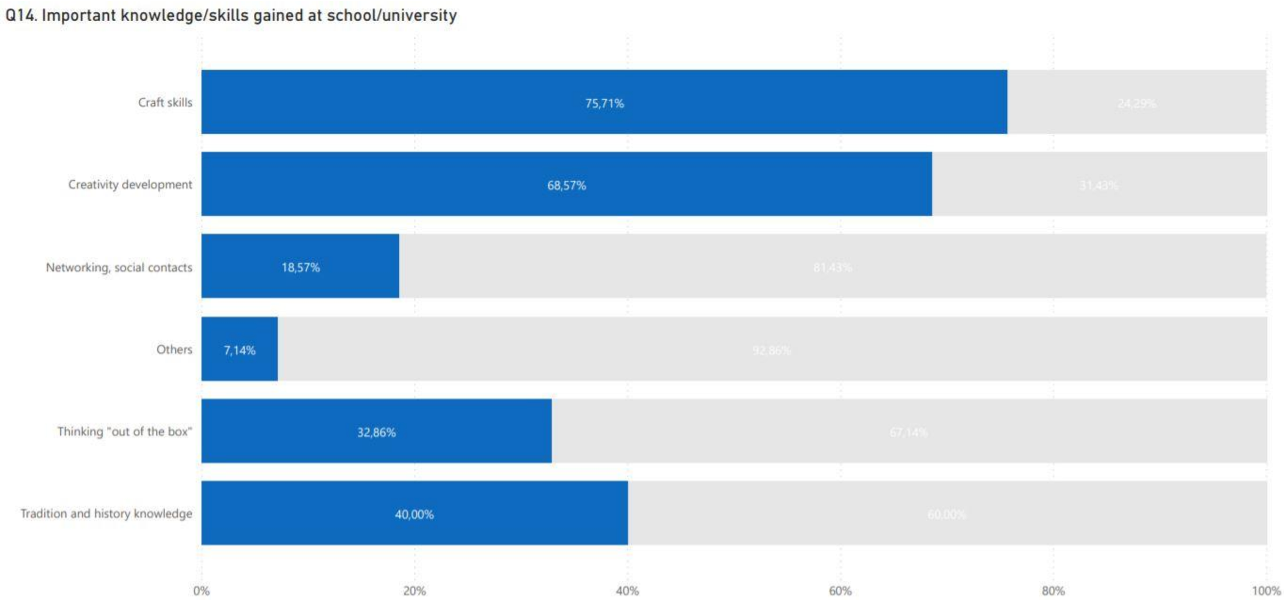


Figure 18 Lack in students' knowledge

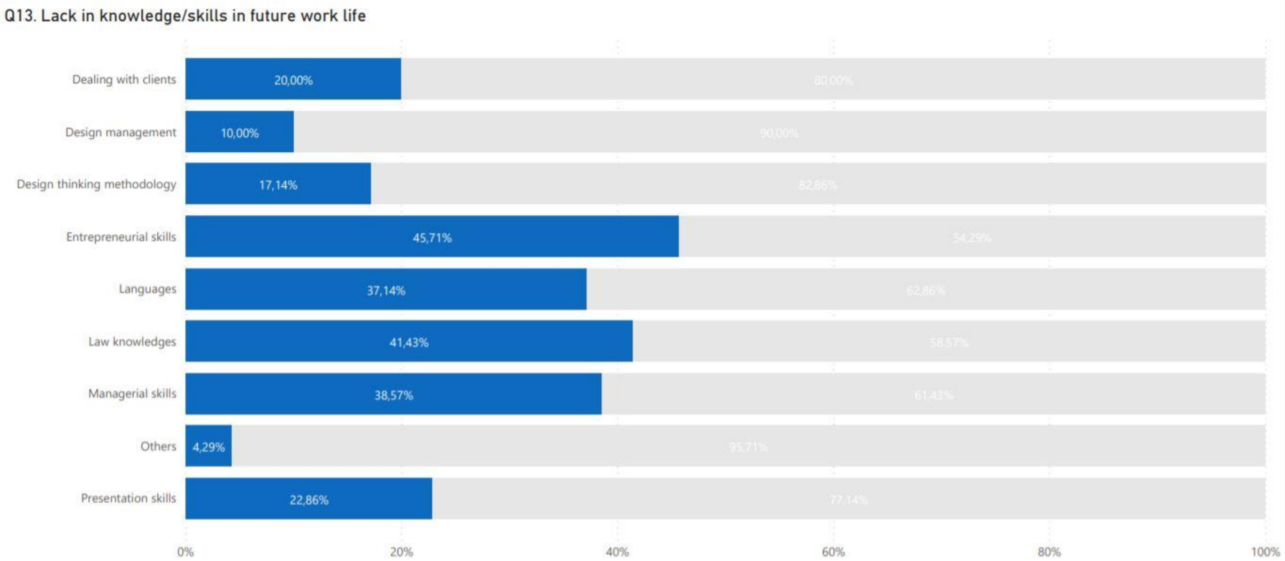


Figure 19 Help with starting own business of finding a job

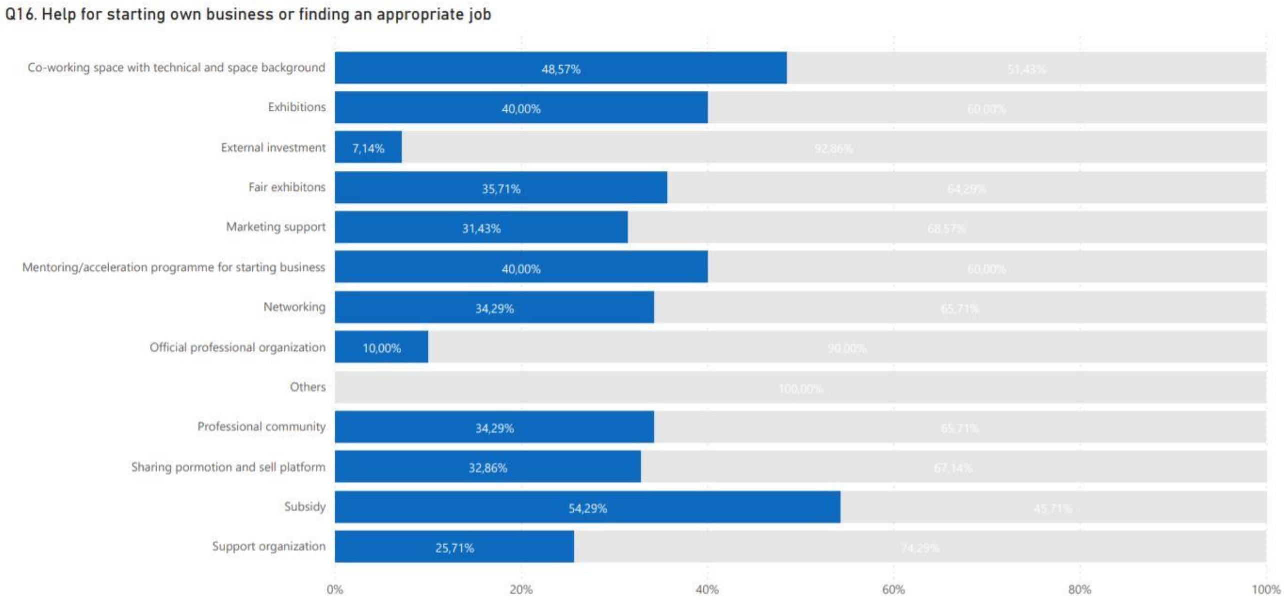
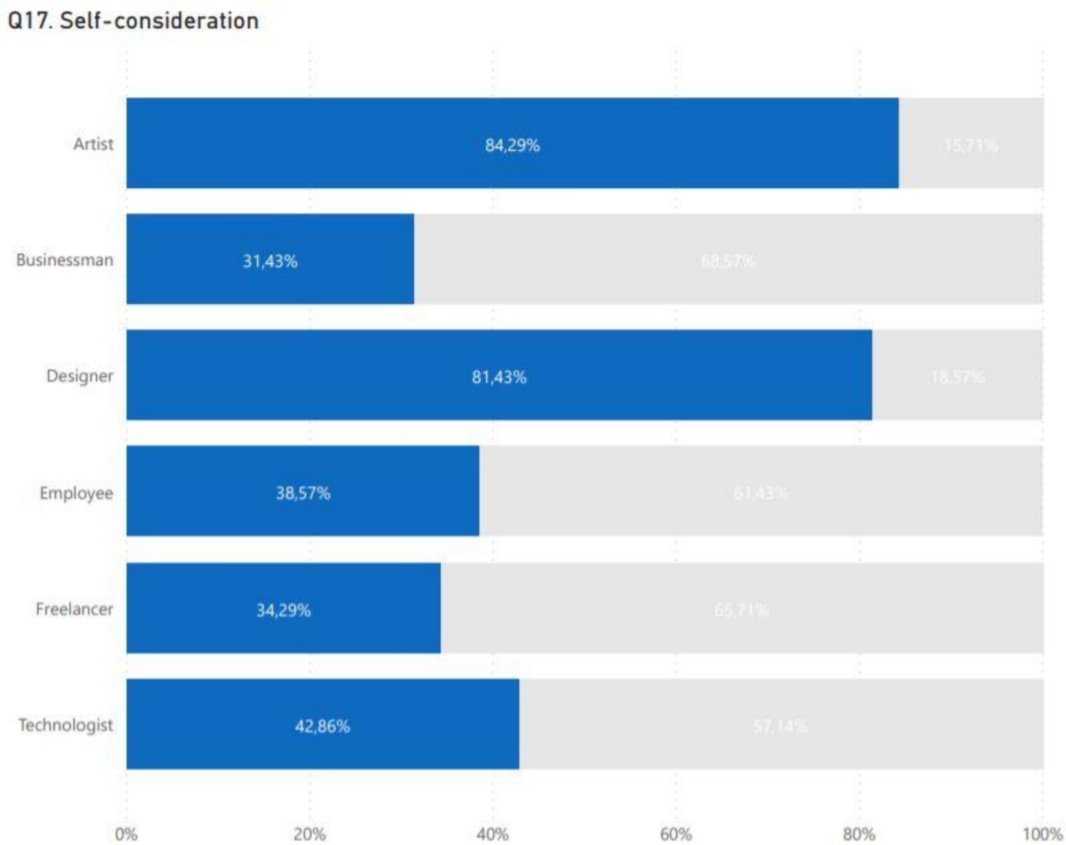


Figure 20 Students' self-consideration



6.3. Expectations and needs of stakeholders

Figure 21 Situation in ceramic sector

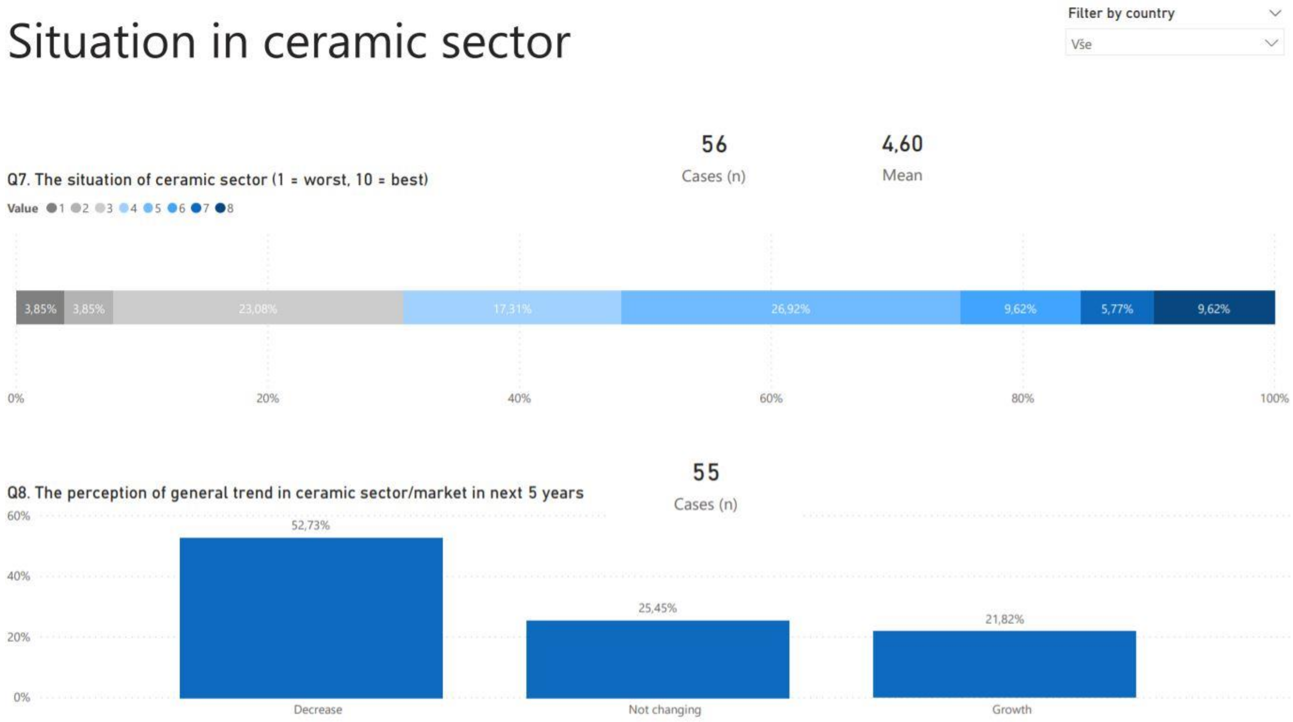


Figure 22 Intensity of current cooperation

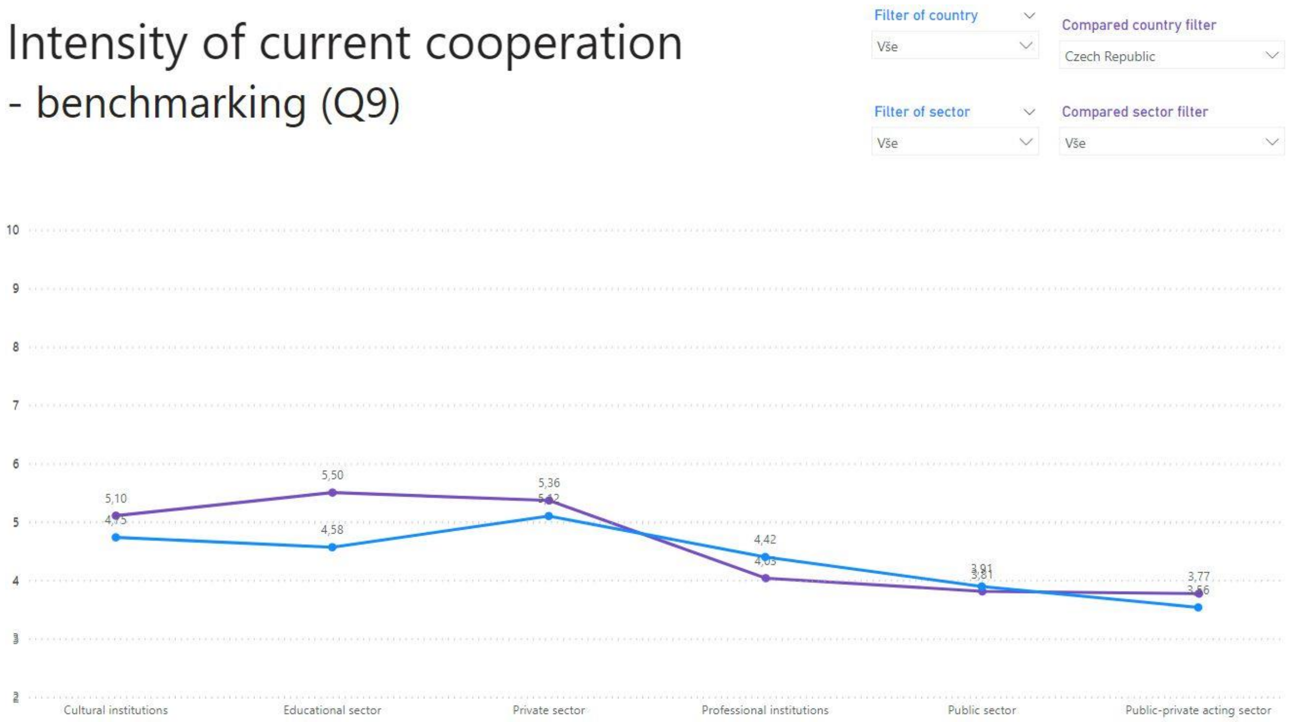


Figure 23 Importance of cooperation

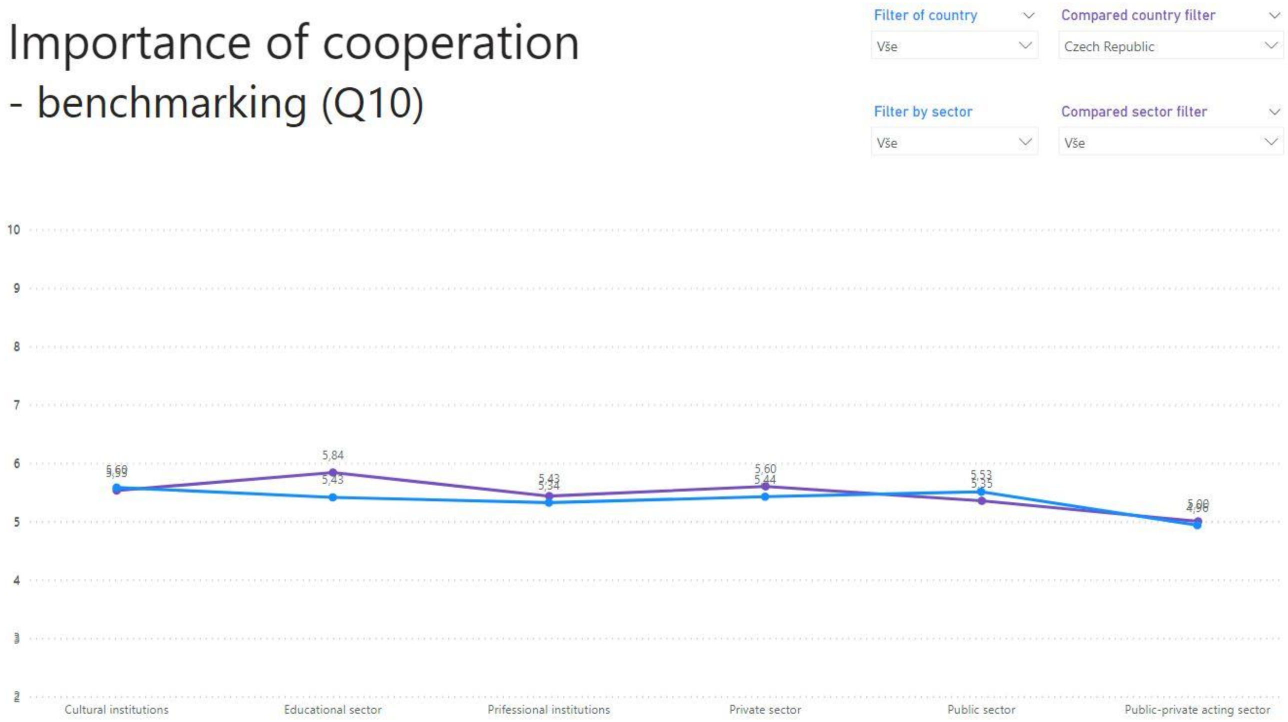


Figure 24 Influence level

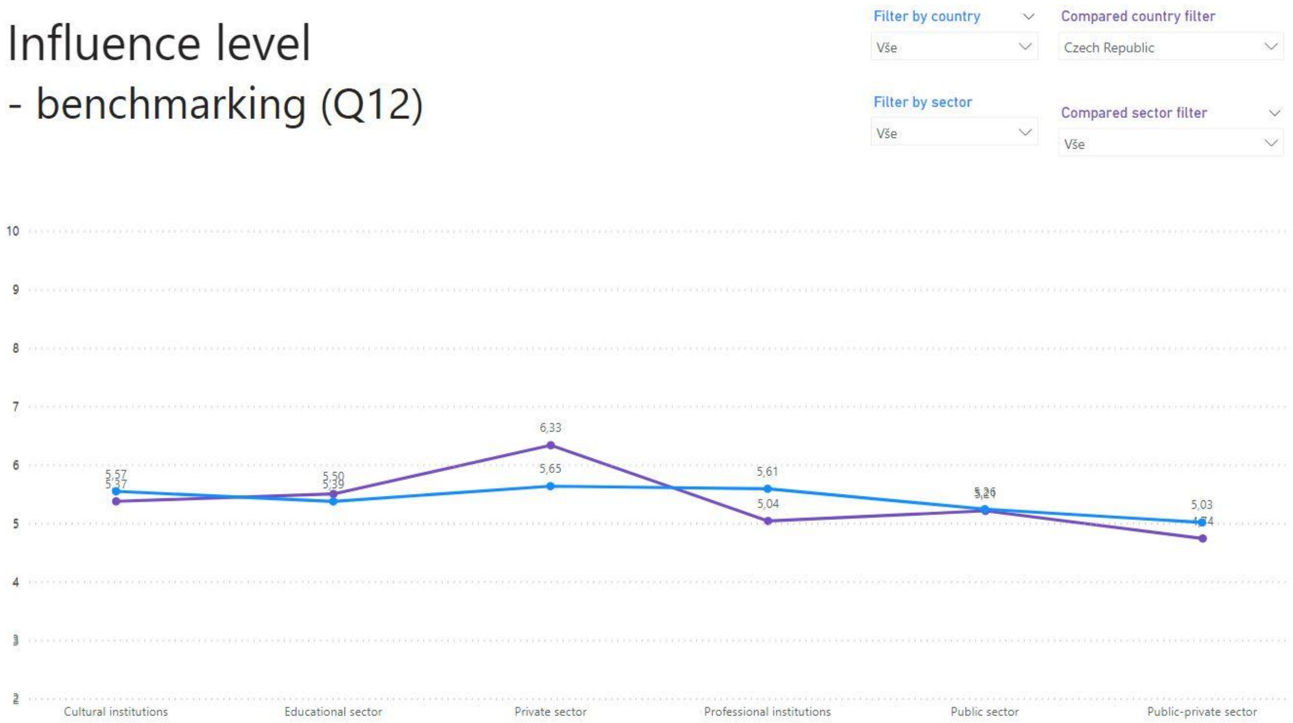
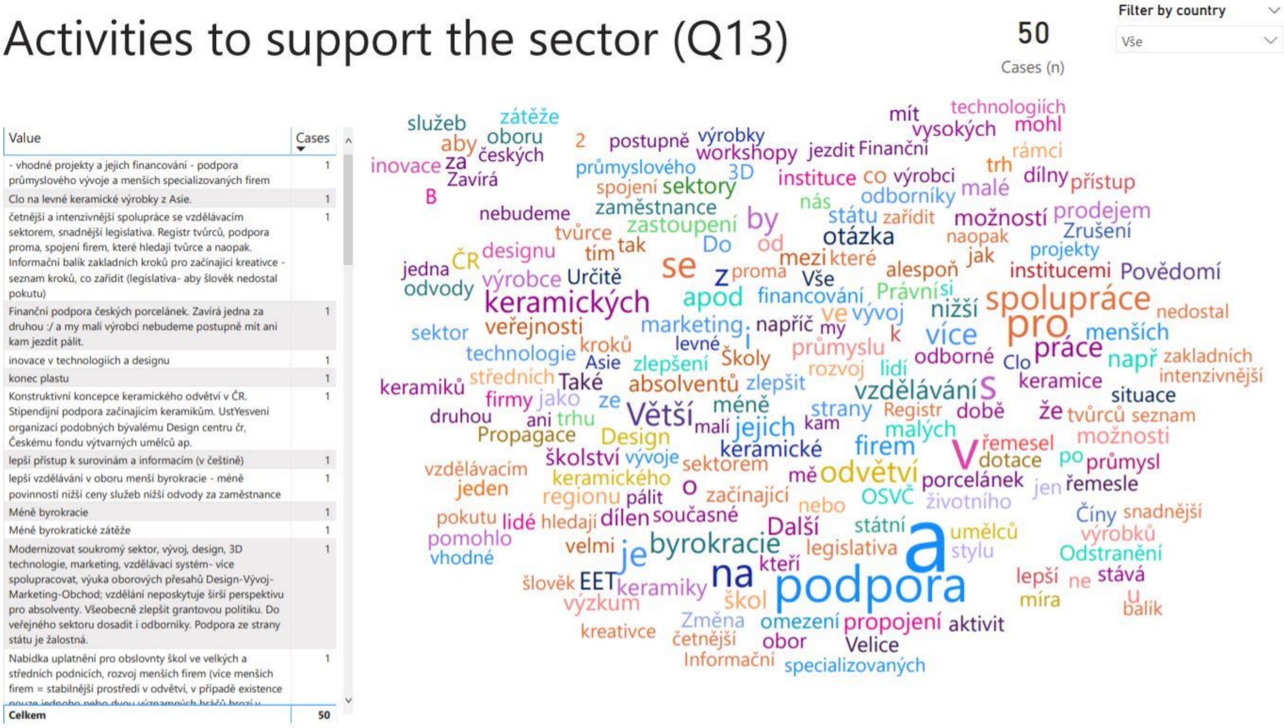


Figure 25 Activities to support the sector



Value	Cases
- vhodné projekty a jejich financování - podpora průmyslového vývoje a menších specializovaných firem	1
Clo na levné keramické výrobky z Asie.	1
četnější a intenzivnější spolupráce se vzdělávacím sektorem, snadnější legislativa. Registr tvůrců, podpora proma, spojení firem, které hledají tvůrce a naopak. Informační balík zakladních kroků pro začínající kreativce - seznam kroků, co zařídit (legislativa- aby šlověk nedostal pokutu)	1
Finanční podpora českých porcelánek. Zavírá jedna za druhou :/ a my malí výrobci nebudeme postupně mít ani kam jezdit pálit.	1
inovace v technologiích a designu	1
konec plastu	1
Konstruktivní koncepce keramického odvětví v ČR. Stipendijní podpora začínajícím keramikům. UstYesvení organizací podobných bývalému Design centru čr, Českému fondu výtvarných umělců ap.	1
lepší přístup k surovinám a informacím (v češtině)	1
lepší vzdělávání v oboru menší byrokracie - méně povinnosti nižší ceny služeb nižší odvody za zaměstnance	1
Méně byrokracie	1
Méně byrokratické zátěže	1
Modernizovat soukromý sektor, vývoj, design, 3D technologie, marketing, vzdělávací systém- více spolupracovat, výuka oborových přesahů Design-Vývoj-Marketing-Obchod; vzdělání neposkytuje širší perspektivu pro absolventy. Všeobecně zlepšit grantovou politiku. Do veřejného sektoru dosadit i odborníky. Podpora ze strany státu je žalostná.	1
Nabídka uplatnění pro obslovnty škol ve velkých a středních podnicích, rozvoj menších firem (více menších firem = stabilnější prostředí v odvětví, v případě existence	1
Celkem	50

Figure 26 Level of cooperation

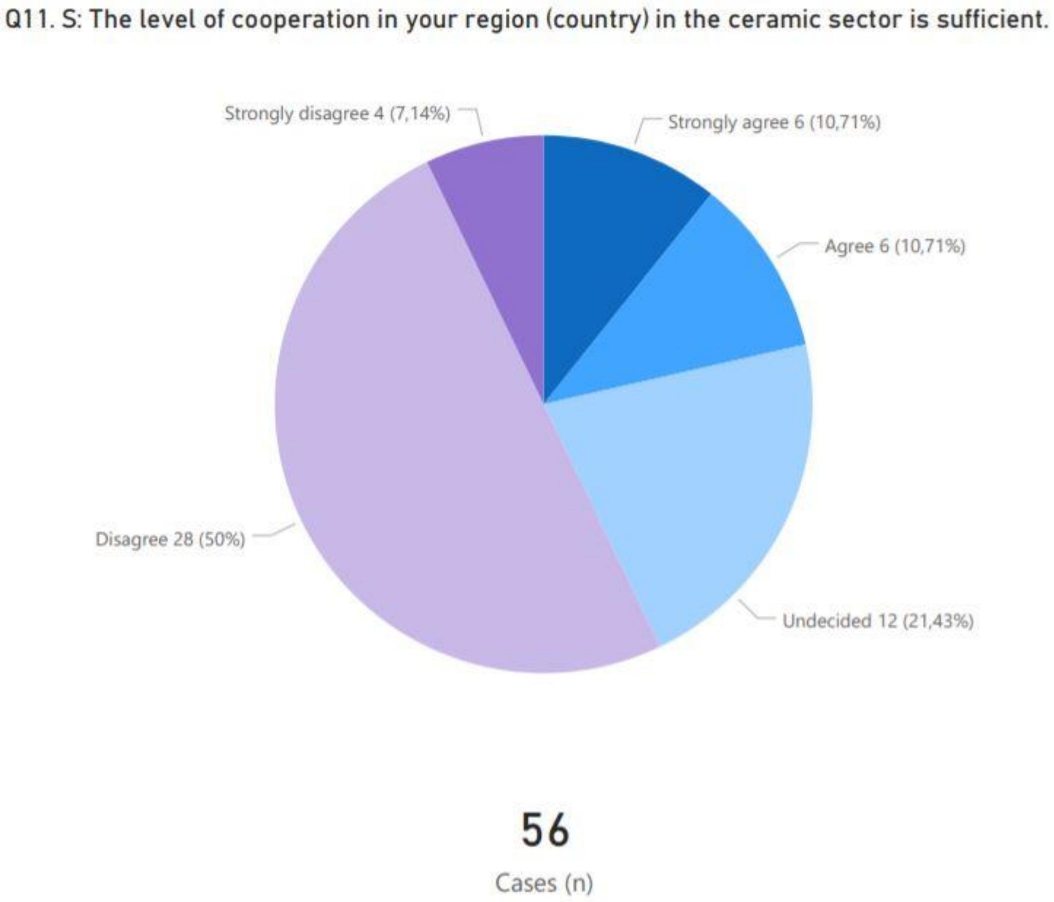


Figure 27 Support or cooperation

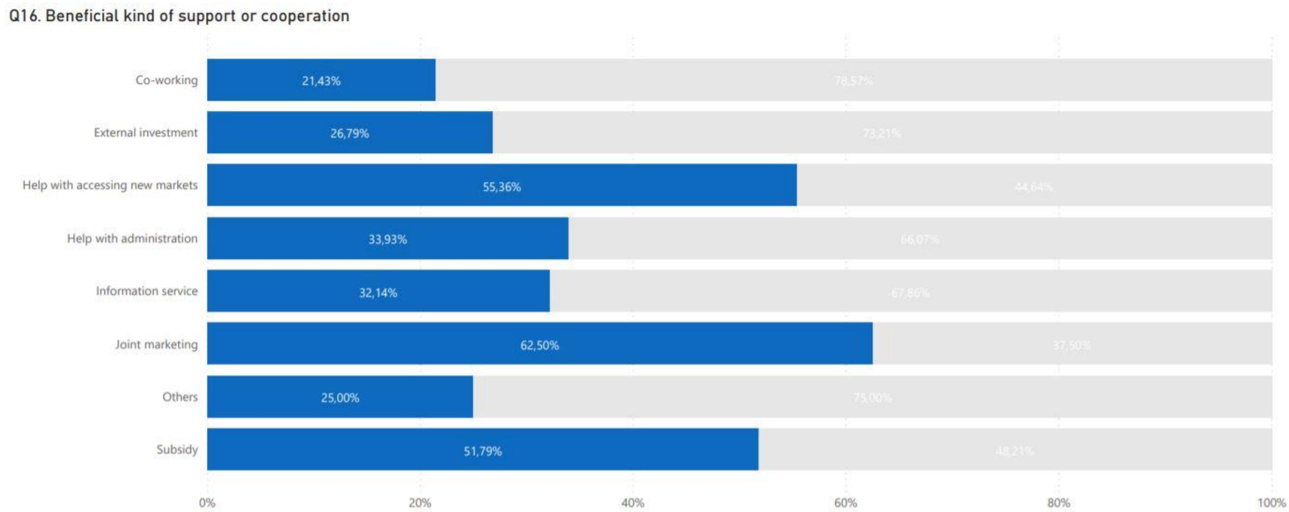


Figure 28 Attitude towards a statement

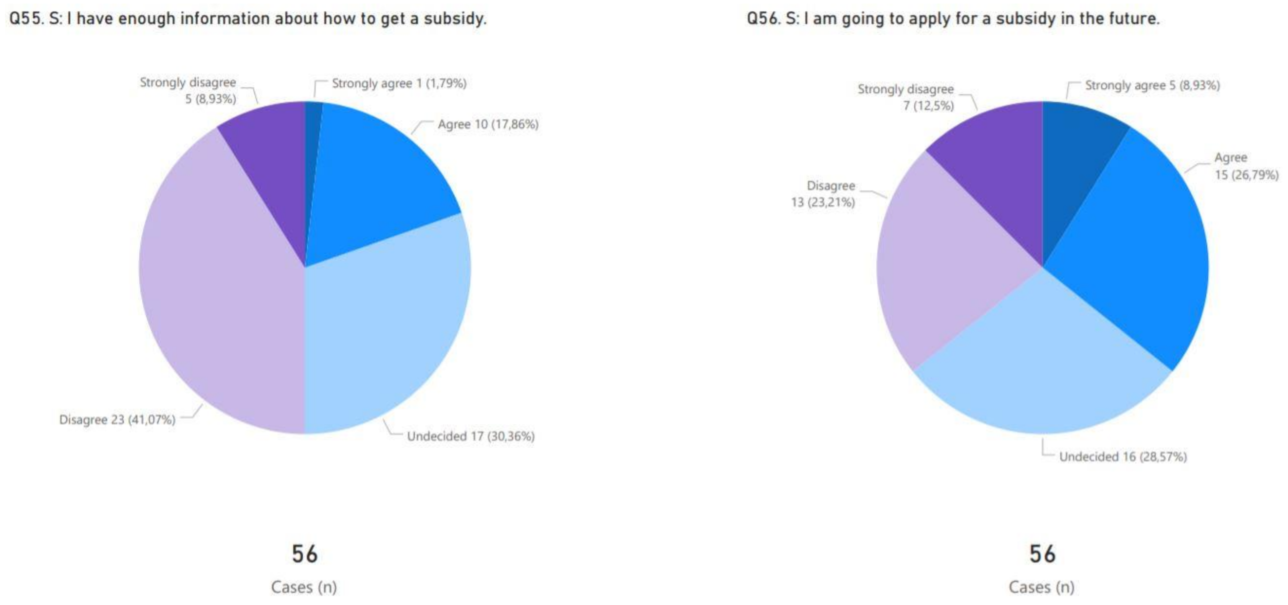
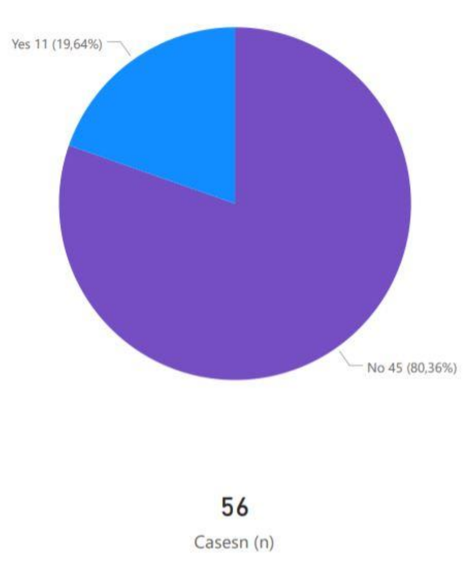
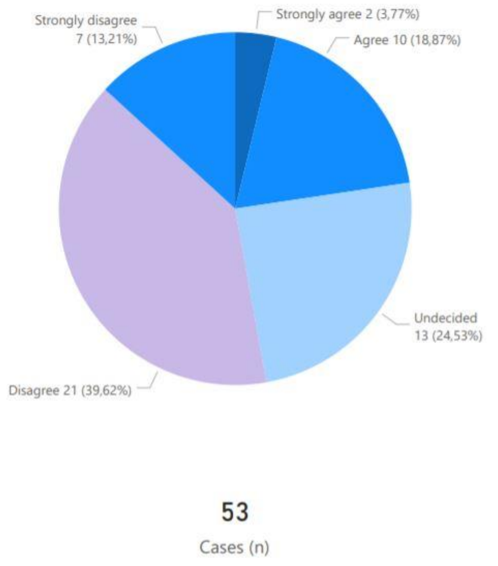


Figure 29 Financial situation, attitude towards a statement

Q57. External capital in last 10 years



Q58. S: I would like to get an external capital in the future.



6.4. Marketing activities

Figure 30 Currently used marketing activities

Q40. Specification of currently used marketing activities

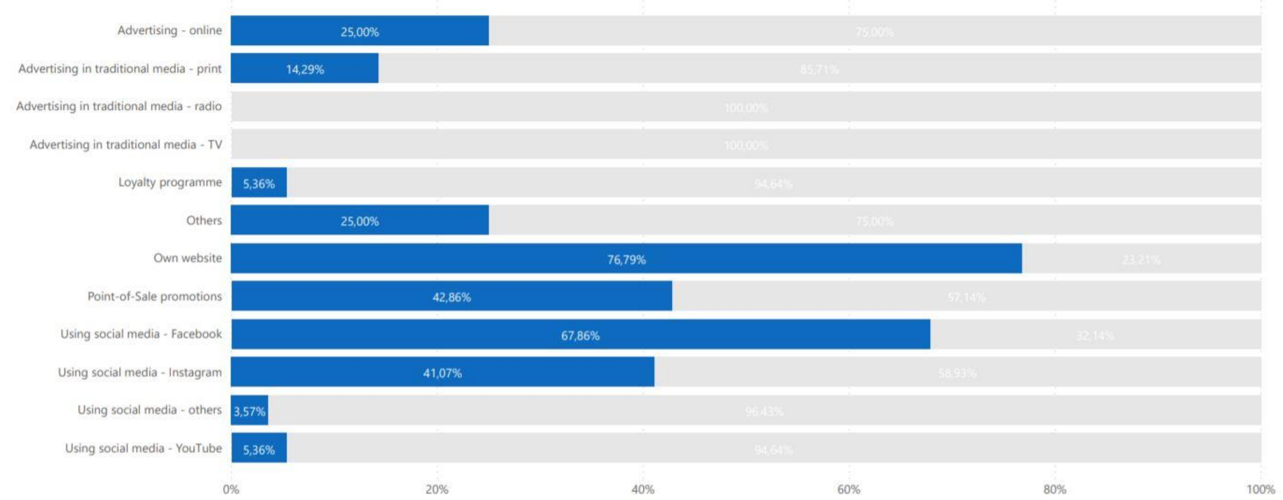


Figure 31 Marketing activities planned for the future

Q41. Specification of planned marketing activities

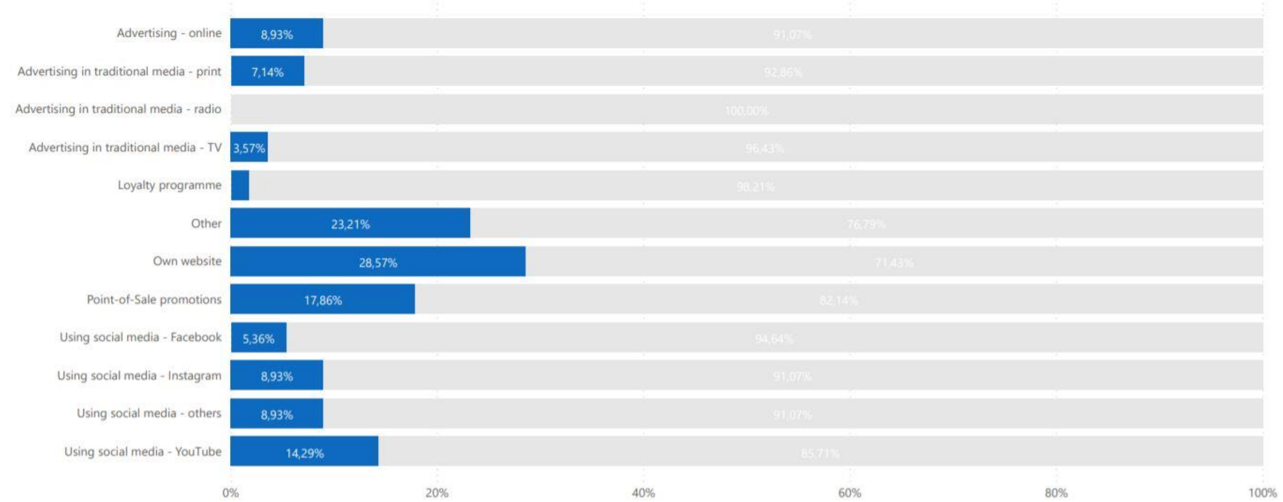


Figure 32 Responsibility for marketing activities

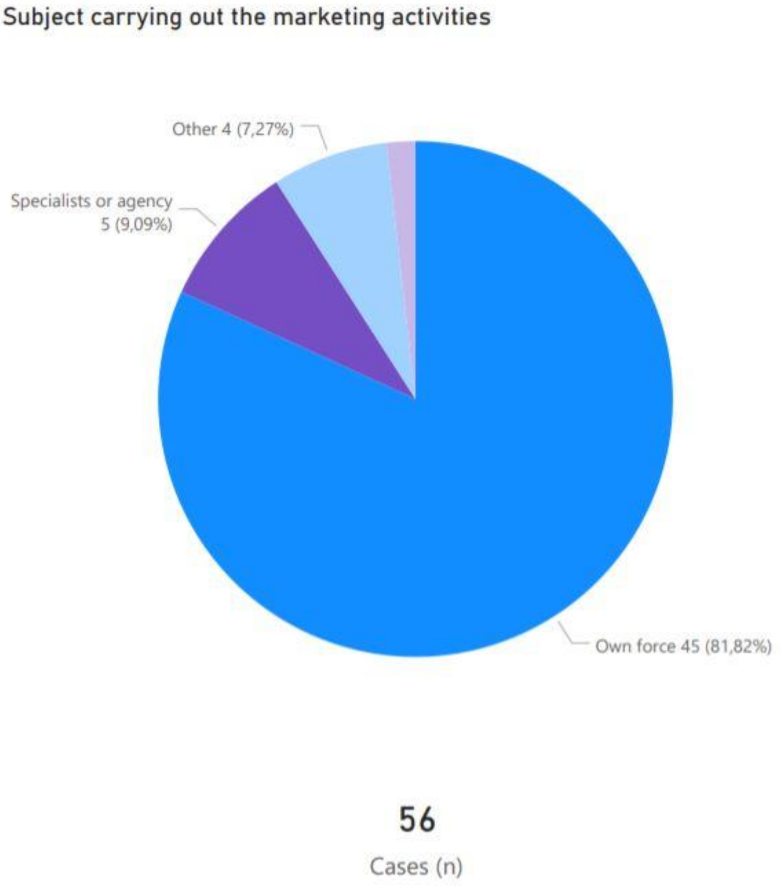
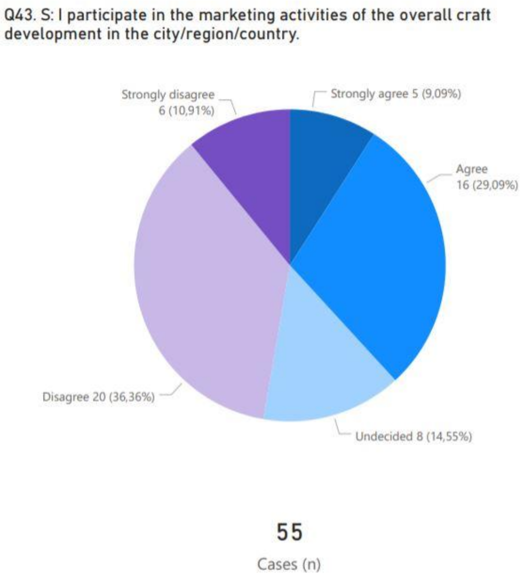


Figure 33 Participating in the marketing activities



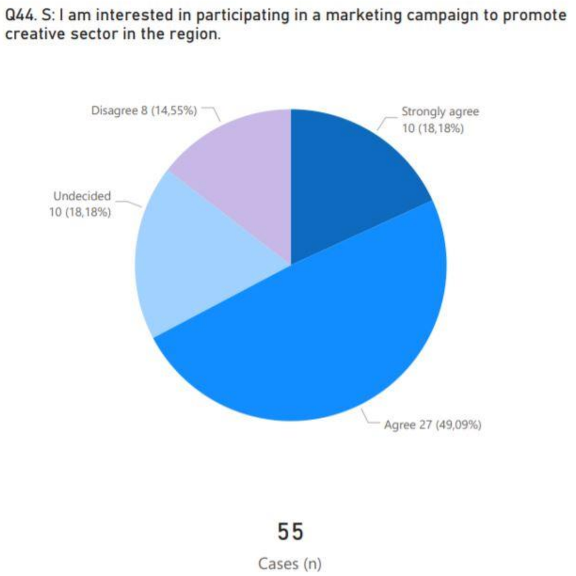


Figure 34 Marketing activities on social networks

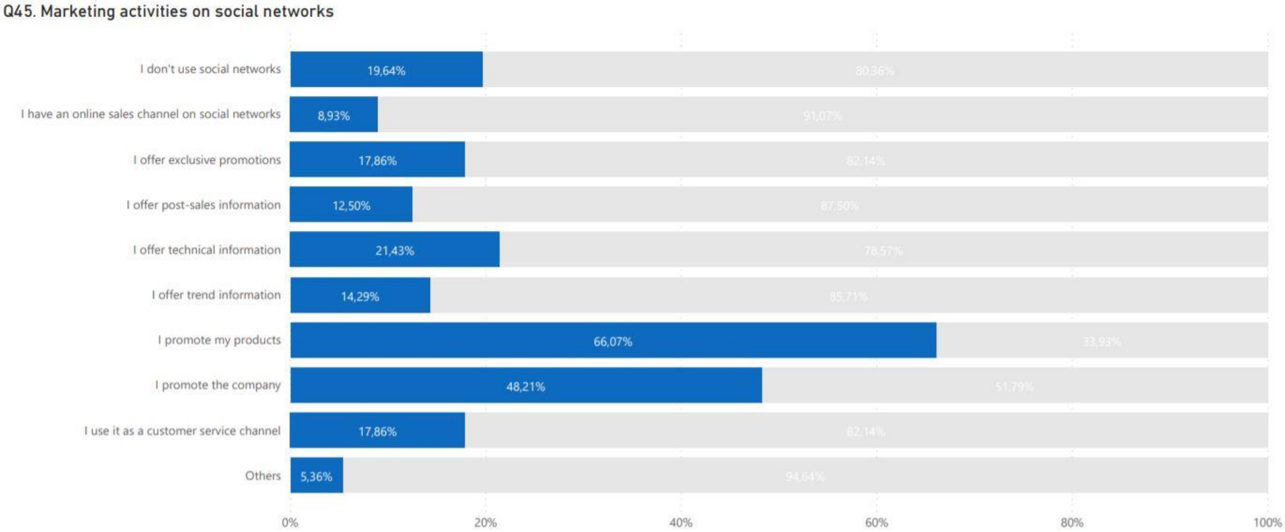


Figure 35 Feedback on social media

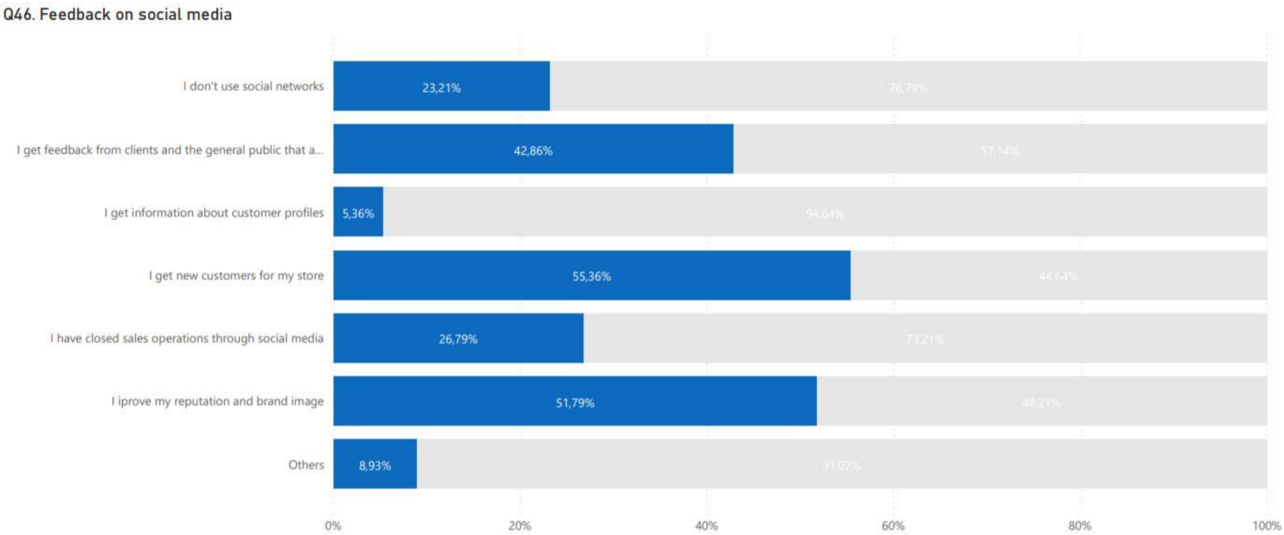


Figure 36 Currently used distribution channels

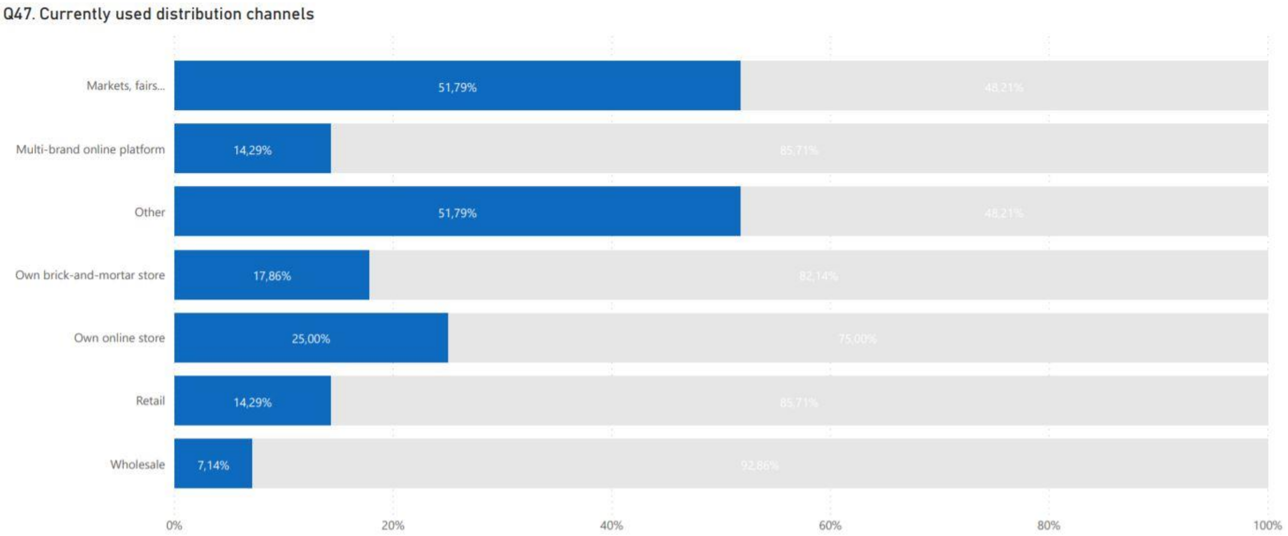


Figure 37 Planned distribution channels