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Work Package 2

DIFME COUNTRY REPORT

Germany

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Work Package 2

COUNTRY REPORT: GERMANY

SECTION 1: INTRODUCTION

1. Introduction

1.1 Goal of DIFME

The goal of the DIFME project is to reduce the rate of early stage failure in newly created enterprises by improving the standards of financial literacy in micro-entrepreneurs and increasing their ability to utilise digital skills to internationalise their businesses.

1.2. Main Aims

The DIFME project seeks to deliver a curriculum to meet the real needs of entrepreneurs in the areas of financial literacy and digital skills. Through an in-depth analysis of the needs of entrepreneurs and the entrepreneurship programmes offered by Higher Education Institutions in the EU (and beyond) it will identify the fundamental competencies required in the two disciplines and the gaps in existing provision. The project will then design and test a curriculum to deliver these skills in a combination of methods including an e-learning platform

1.3. Aims of this element

The primary aims of this element of the project are to:

1. Assess the core competencies required in the two disciplines
2. Identify content and method gaps in current provision
3. Make preliminary recommendations for WP3- Development of the Learning Model.

2. COUNTRY FACT SHEET ANALYSIS

2.1. COUNTRY OVERVIEW

Germany has been enjoying strong economic performance in recent years, building on strengthened domestic demand, good social outcomes and export performance. Exports have benefited from a large, productive and innovative manufacturing sector which has reinforced its position in sectors of long-standing comparative advantage, notably cars, chemical products and machine tools. Record-low unemployment, employment growth and real wage gains have underpinned private household demand. Business investment is picking up.¹

The Gross Domestic Product (GDP) in Germany was worth 4040 billion US dollars in 2019, according to official data from the World Bank and projections from Trading Economics. The GDP value of Germany represents 3.33 percent of the world economy.²

Keys sectors in Germany are located in:

Bergbau, Kohle - Mitteldeutschland

Banking (consulting) FFM

Startup Berlin

Insurance Munich, Köln?

Automotive Wob, In, Stuggi, muc

¹ <http://www.oecd.org/economy/germany-economic-snapshot/>

² <https://tradingeconomics.com/germany/gdp>

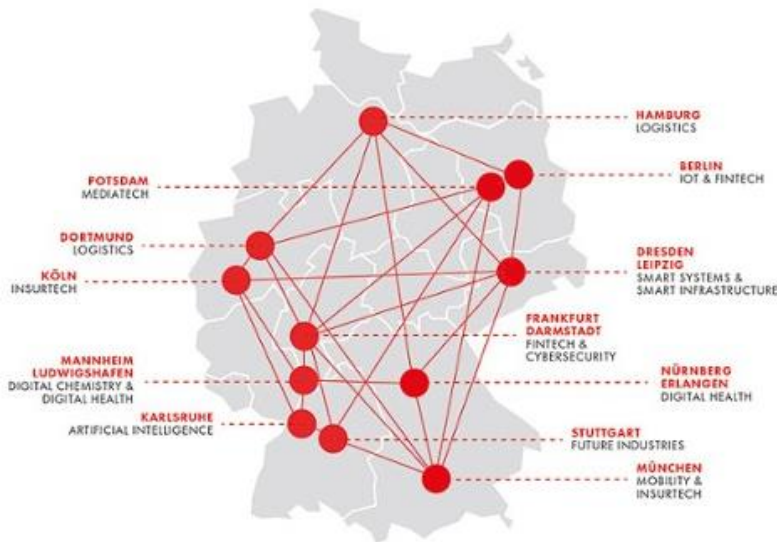


Image 1³

SMEs generate 54.4% of overall value added and 63.7% of overall employment in the German ‘non-financial business economy’, slightly less than the respective EU averages of 56.4% and 66.6%. In 2014-2018, overall SME value added in the ‘non-financial business economy’ in Germany increased by 17.9%, with the greatest rise of 21.1% generated by small firms. Over the same period, SME employment grew by 8.6%. For German SMEs, the outlook is very positive, with predicted value-added growth of 10.2% and employment growth of 5.1% in 2018-2020, although global trade disputes and other risks may dampen this outlook.

Germany remains strong in skills & innovation and internationalisation, and its score in ‘second chance’ and environment puts it among the top performing EU Member States. For State aid & public procurement and access to finance, the country’s profile has remained in line with the EU average. However, Germany’s performance in single market decreased slightly and is now also in line with the EU average. On entrepreneurship and ‘responsive administration’, Germany has room for improvement as it scores below the EU average.

Although Germany is making continued efforts to reduce the burden on businesses caused by bureaucracy, many other EU Member States have progressed at a faster rate. Rapid progress towards an efficient e-government system is crucial in this respect. Evidence pointing to a gradual decline in SMEs’ R&D activities should lead to a review of the underlying causes. Skill shortages in practically all areas of the economy remain a serious competitiveness threat to many SMEs. In addition, the country

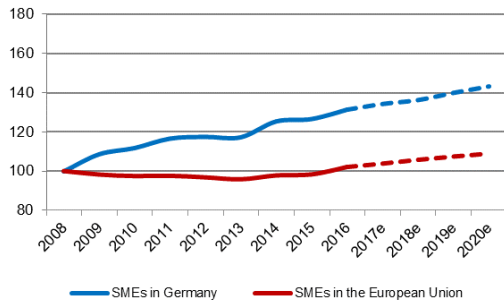
³ <https://www.de.digita/DIGITAL/Redaktion/DE/Dossier/digital-hub-initiative.html>; <https://www.de-hub.de>

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could strengthen the teaching of entrepreneurial activities, particularly in secondary and tertiary education.⁴

Number of persons employed in SMEs

(Index: 2008=100, estimates as from 2017 onwards)



Value added of SMEs

(Index: 2008=100, estimates as from 2017 onwards)

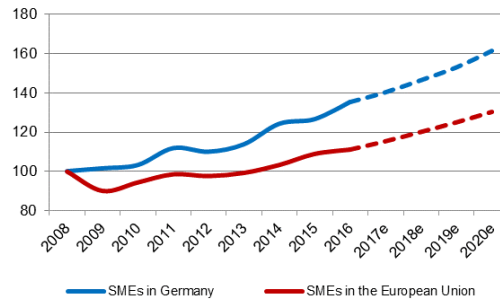


Image 2

Image 3

| Class size | Number of enterprises | | | Number of persons employed | | | Value added | | |
|--------------|-----------------------|---------------|---------------|----------------------------|---------------|---------------|---------------|---------------|---------------|
| | Germany | | EU-28 | Germany | | EU-28 | Germany | | EU-28 |
| | Number | Share | Share | Number | Share | Share | Billion € | Share | Share |
| Micro | 2,079,078 | 82.0% | 93.0% | 5,795,011 | 19.3% | 29.7% | 276.5 | 15.5% | 20.8% |
| Small | 381,739 | 15.1% | 5.9% | 7,208,212 | 24.0% | 20.1% | 334.4 | 18.8% | 17.6% |
| Medium-sized | 62,073 | 2.4% | 0.9% | 6,096,584 | 20.3% | 16.8% | 357.7 | 20.1% | 18.0% |
| SMEs | 2,522,890 | 99.5% | 99.8% | 19,099,807 | 63.7% | 66.6% | 968.7 | 54.4% | 56.4% |
| Large | 11,897 | 0.5% | 0.2% | 10,884,283 | 36.3% | 33.4% | 812.7 | 45.6% | 43.6% |
| Total | 2,534,787 | 100.0% | 100.0% | 29,984,090 | 100.0% | 100.0% | 1781.4 | 100.0% | 100.0% |

These are estimates for 2018 produced by DIW Econ, based on 2008-2016 figures from the Structural Business Statistics Database (Eurostat). The data cover the 'non-financial business economy', which includes industry, construction, trade, and services (NACE Rev. 2 sections B to J, L, M and N), but not enterprises in agriculture, forestry and fisheries and the largely non-market service sectors such as education and health. The following size-class definitions are applied: micro firms (0-9 persons employed), small firms (10-49 persons employed), medium-sized firms (50-249 persons employed), and large firms (250+ persons employed). The advantage of using Eurostat data is that the statistics are harmonised and comparable across countries. The disadvantage is that for some countries the data may be different from those published by national authorities.

Table 1

⁴ SBA Fact Sheet

2.2 SKILLS AND INTERNATIONALISATION (3.7.)

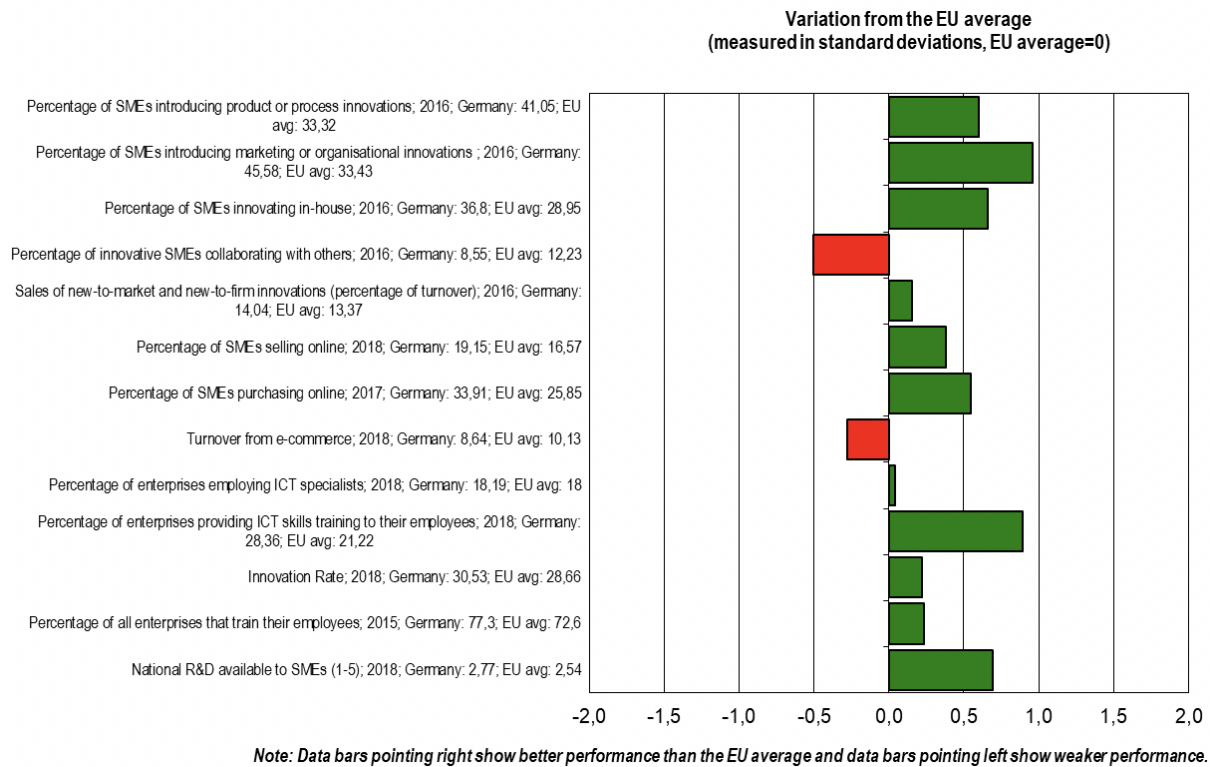


Image 4

% of SMEs selling online: the percentage of SMEs that sell their products online fell from 23.5% in 2017 to 19.2% in 2018, and now remains within the EU average.

% of SMEs purchasing online: SMEs purchasing online remained at 33.9% for 2017.

Turnover from e-commerce: turnover from e-commerce sank from 2017's record high of 11.4% to 8.7%.

% of persons employed that have ICT specialist skills: has also increased compared to last year, from 17.1% to 18.2%, which may be a direct result of the increase in ICT training since last year.

% of enterprises providing ICT skills training to their employees: increase since last year

% of all enterprises that train their employees:



Once again, Germany's performance in the principle of skills & innovation was above the EU average, and it remains one of Germany's strong points. However, since 2008 the country's performance in this area has been experiencing the strongest downward trend among all SBA principles. The short-term developments since last year have been more ambiguous. On the one hand, the percentage of German national R&D available to SMEs increased slightly from 2.6 to 2.77 in the current reference period and has surpassed the EU average. The percentage of enterprises employing information and communications technology (ICT) specialists has also increased compared to last year, from 17.1% to 18.2%, which may be a direct result of the increase in ICT training since last year. On the other hand, the percentage of SMEs that sell their products online fell from 23.5% in 2017 to 19.2% in 2018, and now remains within the EU average. Moreover, turnover from e-commerce sank from 2017's record high of 11.4% to 8.7%, and SMEs purchasing online remained at 33.9% for 2017. Overall, it is not completely clear whether some of the very recent positive developments are a mere temporary uptick or evidence of a change in trend. Some long-running structural challenges, such as the increased concentration of R&D activities in large firms and worsening skilled labour shortages, which has become one of the main obstacles to firms' innovation in Germany²⁰, suggest the former rather than the latter.

Germany's policy efforts in skills & innovation since 2008 have been considerable. In 2011, the 'Qualified Professionals Initiative' supported the increase of labour supply to the German economy and reduced the impact of a reduction of skilled labour on SMEs. In addition, the 'Act for Improving the Recognition of Foreign Professional Qualifications' implemented in 2012 also affected this need positively. In general, most SBA recommendations have been met for this SBA principle.

During the reference period, Germany continued to build on its record, with the implementation and formal announcement of the following measures:

The Federal Ministry for Economic Affairs and Energy expanded its competence centres in the 'Mittelstand 4.0' initiative. Mittelstand 4.0 supports the digitalisation of SMEs by providing information, knowledge and examples of best practice via its competence centres, which form a nationwide network and provide more than 130 contact points for SMEs. In the reference period, three new competence centres were established, and seven existing centres had their operations extended by 2 years.



- In January 2019, the budget of the federal economy ministry's 'IT Security in Commerce' (IT-Sicherheit in der Wirtschaft) initiative was increased significantly, from €2 million to €5 million. The initiative aims to support SMEs in the field of IT security by (i) strengthening SMEs' competitiveness and innovation by ensuring safe implementation of digital processes and business models and by increasing SMEs' IT security standards; and (ii) helping SMEs take competent decisions on IT security issues.

- In September 2018, the BMI and the Bundesverband der Deutschen Industrie BDI launched the 'Cyberalliance with the economy' initiative. Cyber incidents are viewed as one of the most frequent obstacles for successful business operations, particularly in an increasingly digitalised economy. The objective of this joint initiative is to ensure cybersecurity for a safer economy in Germany and for companies to have more efficient business models. The initiative will also ensure closer cooperation between the government and the private sector to promote cybersecurity initiatives for the German economy.

- In January 2019, the BA and BMAS adopted the support for employment training programmes (§ 82 SGB III Förderung beschäftigter Arbeitnehmerinnen und Arbeitnehmer im Rahmen der Arbeitsförderung). The objective of this measure is to help employers adapt to the structural changes caused by the increasing use of

technology in the workplace and the digitalisation of labour. It provides full or partial financial support for professional training taken by employers.

- The Federal Ministry of Labour and Social Affairs (BMAS) formally announced in March 2019 the establishment of its 'Hubs for tomorrow' project (Zukunftszentren). The objective of this programme is to help regions of eastern Germany successfully deal with digital and demographic change. The programme focuses on developing and testing innovative in-house training for employees in SMEs to help them acquire the appropriate skills and enable them to tap the full potential of the digital transformation. In each of the regions of eastern Germany, a 'Hub for tomorrow' will be established to analyse and evaluate regional needs and develop and test innovative training concepts for SME employees. A supra-regional 'Centre for Digital Work' will support the hubs by providing research findings on the effects of digital and demographic change on the employment market consequences. In addition, the 'Haus der Selbstständigen' ('a planned communication exchange for all groups of self-employed') will be established to strengthen the competences, working conditions and social security of individual self-employed people and platform workers in the digital age. The projects will start work from Q4- 2019 and end in June 2022.

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- In October 2018, the Federal Government (with the Federal Ministry for Economic Affairs and Energy as the lead ministry) formally announced a ‘coherent strategy to attract skilled workers from abroad’ (Kohärente Strategie zur Gewinnung von Fachkräften aus dem Ausland). The aim is to make it easier for international skilled workers to access the German employment market and at the same time to mitigate the skilled labour shortages, which is a particular burden for SMEs.

(3.6.)

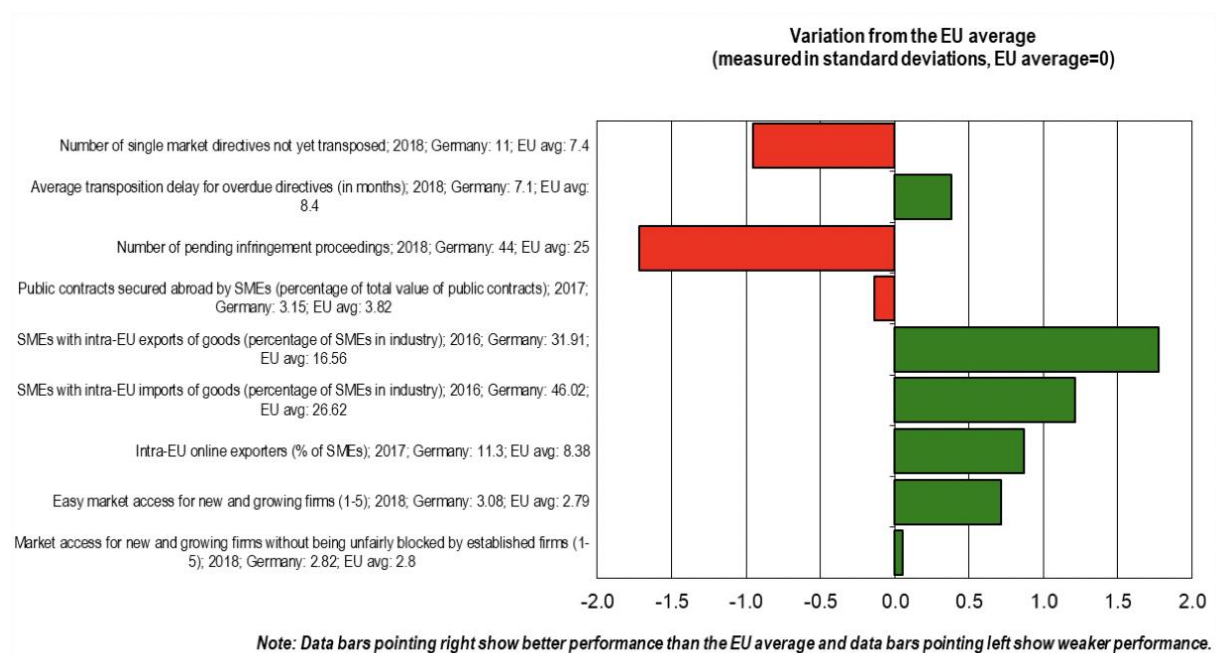


Image 5

% of public contracts secured abroad by SMEs:

SMEs with intra-EU exports of goods (% of SMEs in industry):

SMEs with intra-EU imports of goods (% of SMEs in industry):

Intra-EU online exporters (% of SMEs):

In the reference period, Germany’s performance is in line with the EU average rather than above it, which was the case last year. Since 2008, Germany’s performance has been impressive, and the single market is its strongest growing SBA principle. Germany has one of the highest number of single market

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directives transposed. Still, it trails the EU average of 7.4. However, the number of pending infringement proceedings fell well below the EU average. In fact, Germany is the third worst performing country for this indicator, although it has slightly reduced the number of pending infringement proceedings from 46 to 44 compared to 2017. On the other hand, the country has improved its average transposition delay from 8.8 months to 7.1 months, keeping it line with the EU average. In addition, German SMEs' intra-EU exports and imports of goods are both among the highest performing in the EU, while intra-EU online exports are also above the EU average.

Many measures addressing SMEs' involvement in the single market were already in place before 2008. This is particularly the case for advisory services supporting SMEs on the single market (one-stop shops, SOLVIT centres and federal information system), but also applies to the use of standards, patents and trademarks.

In general, Germany's government policies provide good support for SMEs in the single market. Nevertheless, the visibility of the infrastructure for SMEs (e.g. one-stop shops, SOLVIT centres, information systems) could be greater.

During the reference period, no significant policy measures were implemented or formally announced.

(3.9.)

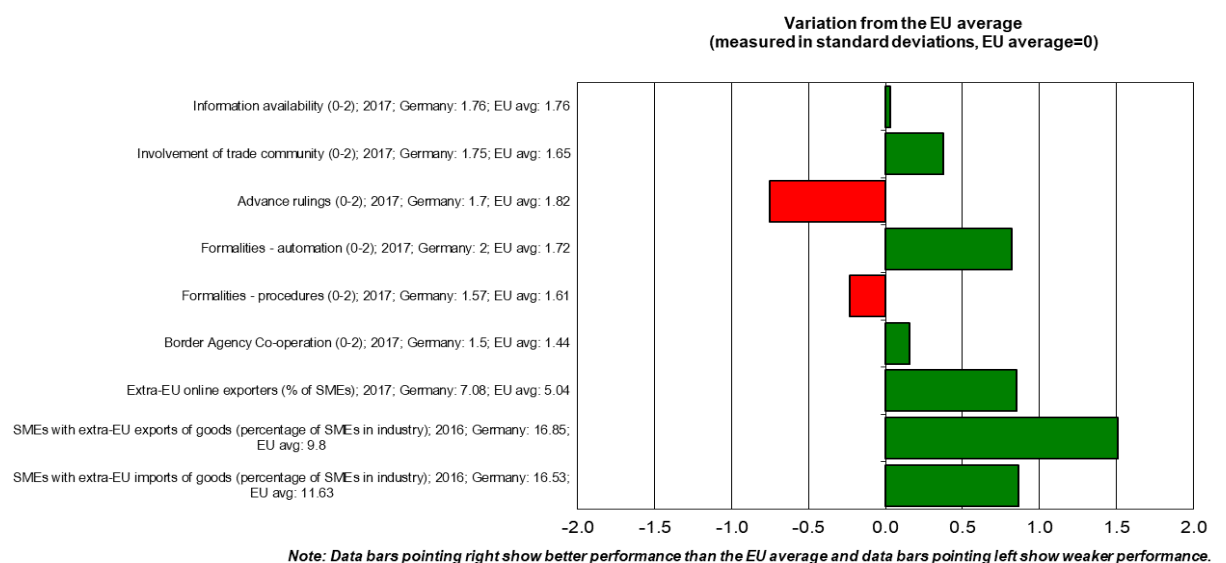


Image 6

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Extra-EU online exporters SMEs with Extra-EU exports of goods (% of SMEs in industry):

SMEs with extra-EU imports of goods (% of SMEs in industry):

Has your country implemented any initiatives to promote internationalisation? Please provide an overview of these initiatives.

Germany's performance on internationalisation has been above the EU average, and this is its third-best performing SBA principle. It is among the top performing EU Member States in two indicators. Firstly, Germany is one of the highest-ranking Member States in the automation of formalities. Secondly, the percentage of German SMEs with extra-EU exports of goods was 16.9% in 2016, compared to the EU average of 9.8%, putting Germany in second place in the ranking. Most of the indicators have remained the same as the previous year or have not changed.

This SBA principle has experienced only a moderate amount of policy progress since 2008. The market entry programme has played a central role in Germany's policy stance; it was implemented in 2012 and recently expanded in the current reference period (see below). The programme's objective is to support SMEs' export activities. Another important policy measure, first adopted in 2002, is the 'Energy Export Initiative', which promotes the market potential of German energy technologies outside of Germany. Both programmes aim to increase the efficiency of internationalisation processes that provide additional help for significant future areas such as the health economy, civil security technologies and environmental and energy technologies.

In the reference period, the following policy measures were implemented to complement existing efforts:

- In March 2018, the Federal Ministry for Economic Affairs and Energy implemented the New German Accelerator in Singapore (GASEA). The objective of GASEA is to empower German start-ups to scale up in ASEAN and southeast Asia. GASEA offers customised mentoring and extensive networking opportunities and provides strategic advice and free office space and tactical support for 20 start-ups each year.

- In July 2018 and February 2019, the Federal Interministerial Committee on Export Credit Guarantees improved the conditions for the granting of export credit guarantees (Exportkreditgarantien — 'Hermes cover'). The new digital products can be accessed via digital portals, which offer special new

products for SMEs' supplier credits and for banks' small tickets. The objective is to offer a quick and easy decision for greater planning security.

- The Federal Ministry for Economic Affairs and Energy also greatly expanded the market entry programme (Markterschließungsprogramm) in 2019. This programme was first adopted in 2012, but from 2019 its financial resources have been substantially increased, from €5 million to €10 million, and new service offers are planned. It supports small and medium-sized companies entering or positioning themselves in new foreign markets. The objective of this programme is to enable companies interested in exporting goods to enter new foreign markets.

2.3 SME POLICY PRIORITIES AND ENTREPRENEURSHIP

- Has the business environment for SMEs has improved in (your country)?

xxx

- Are there any policy-related problems which still impact SMEs?

xxx

- Has your country introduced any new policy measures in the entrepreneurship area?

xxx

- What developments have taken place in local scale-up activities, initiatives and policies?

xxx

- Are there any areas for improvement?

xxx

3. Course Analysis

3.1 Overview

In Germany various public and private educational institutions and Cooperations Under Public Law offer a wide range of classes, further training and vocational educational training that focuses on, or consists of topics related to entrepreneurship. A summary of course specifications is provided in Table 3.1 below, while further information about university courses is provided under 3.3.

Just like many of its' European neighbours, Germany has a complex educational infrastructure. Germany counts with a total of 396 Institutions of Higher Education, of which 121 are Universities, 218 are Universities of Applied Sciences and 57 are Colleges for Art and Music. 240 of those are public universities, 156 are Officially Recognized Private Universities (117 private, 39 religious). Out of all the universities, there are 128 professorships in Entrepreneurship across Germany.⁵ In addition to the regular classes, enrolled students, depending on their specific institution and the federal state, in which the institution is located, can find additional free resources and certified classes in programs like the "Virtual University of Bavaria" or related resources. On top of that some universities offer consulting services for students who want to put their entrepreneurial mindset to work. A leading example would be the Start-up Centre from the OTH Regensburg where students get all the necessary assistance to start their own company.

Furthermore, alongside training programs by independent consulting or teaching companies, the so called "Cooperations under public law", of which the "Chambers of Commerce and Industry" are most known in Germany, also provide a broad program of certified courses and classes designed to support individuals and small companies to improve their technical knowledge in business, management and finance amongst many other topics.

Just like mentioned in the Dutch DIFME-Country Report, it would be a mission impossible to investigate which courses or classes offered by which institution or company pays attention to specific topics of entrepreneurship. Therefore, this chapter of the German report will focus on providing an

⁵ <https://www.fgf-ev.de/wp-content/uploads/2015/03/E-Professuren-17-03-2015.pdf>

overview of the different opportunities and institutions that offer educational content related to entrepreneurship.

3.2 Different Institutions

The following table provides an overview of the most common and most important kinds of institutions for information seeking entrepreneurs:

| Kind of platform | Information |
|--------------------------------|-------------------------------------|
| University | |
| Bachelor (undergraduate) | 3 years (6 semesters) |
| Masters (postgraduate) | 1 – 2 years (2 – 4 semesters) |
| University of Applied Sciences | |
| Bachelor (undergraduate) | 3,5 years (6 academic, 1 practical) |
| Masters (postgraduate) | 1 – 2 years (2 – 4 semesters) |
| Virtuelle Hochschule Bayern | 30% (14 out of 47) |
| Cooperation under public law | |
| IHK | VET and courses up to 180 hours |
| Chamber of Crafts | VET and courses up to 180 hours |
| Volkshochschule | Courses between 2 and 180 hours |

For Microentrepreneurs there are many different possibilities to educate themselves online and in courses with physical attendance. Although entrepreneurship specific studies in universities are not yet present in every university of Germany, they are gaining significantly more popularity. Signing up for a Bachelors or Masters for Micro-Entrepreneurs will mean they will get a high amount of work and knowledge on top of handling their day to day business. However, because of the very low student fees in Germany's public universities and the high-quality knowledge to be possibly internalised, going



to university is a good idea especially for younger entrepreneurs. Another benefit of participating in a course at a university is the contact with other like-minded people. Even if the university nearby the Microentrepreneur's home does not offer special entrepreneurial courses, scaling his/ her business while attending business classes with other people and the discussion of various topics will be a great benefit for him/her.

Even more accessible are the cooperations under public law or the so called Volkshochschulen. The cooperations under public law are chambers and associations that provide information materials for business owners and help them to scale up their business with specifically designed courses. If a Microentrepreneur had any problem he can always contact the chamber and ask for any kind of advices on branch specific business practices.

The best form to receiving knowledge is through the Volkshochschulen if a Microentrepreneur is using his/her business as a side hustle. Whilst working full – time it can be difficult to attend lectures in universities or have longer chats with members of a chamber. The Volkshochschule is a concept that's widely used across Germany to educate average adult people in topics that are in the individual's interest. In weekend or evening courses people can develop knowledge in the fields of Society, Business, Basic Knowledge, Health, Culture, Lifestyle, Language and Integration. Currently there are nearly 900 Volkshochschulen spread across the country and even on the countryside there are therefore many educational possibilities for Microentrepreneurs. Bavaria with 186 Volkshochschulen is Germany's leader in the field.⁶ While fees differ, you can roughly expect to pay between 30 – 100 Euros per course. The lengths of the courses vary. There are one-off courses, weekly courses for a longer duration or weekend seminars. There will be some homework and the courses are normally scheduled in the evening. Although the fees seem high for one specific course it is important to stress out that participants will get hands on experience in a very specific field that they choose to level up in.

⁶ <https://de.statista.com/statistik/daten/studie/30224/umfrage/anzahl-der-volkshochschulen-nach-bundeslaendern/>



3.3 University Courses

In Germany there are many different institutions who support entrepreneurs. With around 250 Euros per term universities and universities of applied sciences (Fachhochschulen) offer a great way of learning about Entrepreneurship. Furthermore, with an internationally acknowledge bachelors or masters degree an Entrepreneur has something substantial to show if his/her business is not evolving in the anticipated direction. There are currently 144 Professors registered who focus on Entrepreneurship studies in their universities. The latest list of those can be found via the Website of "Förderkreis Gründung Forschung e.V."

<https://www.fgf-ev.de/uebersicht-der-entrepreneurship-und-entrepreneurshipaffinen-professuren-in-deutschland/>

As there are so many possibilities in Germany to study business and entrepreneurship related topics, there will only be provided helping links in this report.

The most popular websites are:

Studycheck

<https://www.studycheck.de/studium/entrepreneurship/studiengaenge>

Zeit Campus

<https://studiengaenge.zeit.de>

Hochschulkompass

<https://www.hochschulkompass.de/studium/studiengangsuche.html>

Bachelor and more

<https://www.bachelor-and-more.de/studiengaenge/>

As decisions on what and where to study highly depend on any individual's decision, this report can't state the best courses in Germany. However, according to Studycheck those are the best rated study programmes:

| Name | University | Bachelor/ Master |
|--|----------------------|-------------------------|
| Technologie- Entrepreneurship | Hochschule Karlsruhe | Master 3 Semesters |
| Innopreneurship | Uni Duisburg – Essen | Master 4 Semesters |
| Entrepreneurship | WHU Vallendar | Master 4 Semester |
| International Management, Marketing and Entrepreneurship | Uni Magdeburg | Master 4 Semester |
| Unternehmensgründung und Unternehmensnachfolge | HWR Berlin | Bachelor 8 Semesters |

Nonetheless, it is highly recommended to look into normal business studies (BWL, Betriebswirtschaftslehre) as well as students can often chose and put together a certain number of courses during their studies. For a more detailed approach and greater variety it is found that the link provided above via Zeit Campus is very helpful. Due to the high number and individual preferences this report agrees with Companisto to state the following top 10 universities for Entrepreneurs. In difference to the study programmes provided above the universities stated below have the highest output of Entrepreneurs among their graduates. This might indicate a motivational community all over the university.

1. Technische Universität München (TMU)
2. Karlsruher Institut für Technologie (KIT)
3. Rheinisch- Westfälische Technische Hochschule Aachen (RWTH)



4. Ludwig-Maximilians-Universität München (LMU)
5. Universität Hamburg (UHH)
6. Technische Universität Berlin (TU Berlin)
7. Wissenschaftliche Hochschule für Unternehmensführung Vallendar (WHU)
8. Universität zu Köln
9. Gottfried-Wilhelm-Leibniz-Universität Hannover (LUH)
10. Technische Universität Darmstadt (TU Darmstadt)

4. DIFME ONLINE SURVEY RESULTS

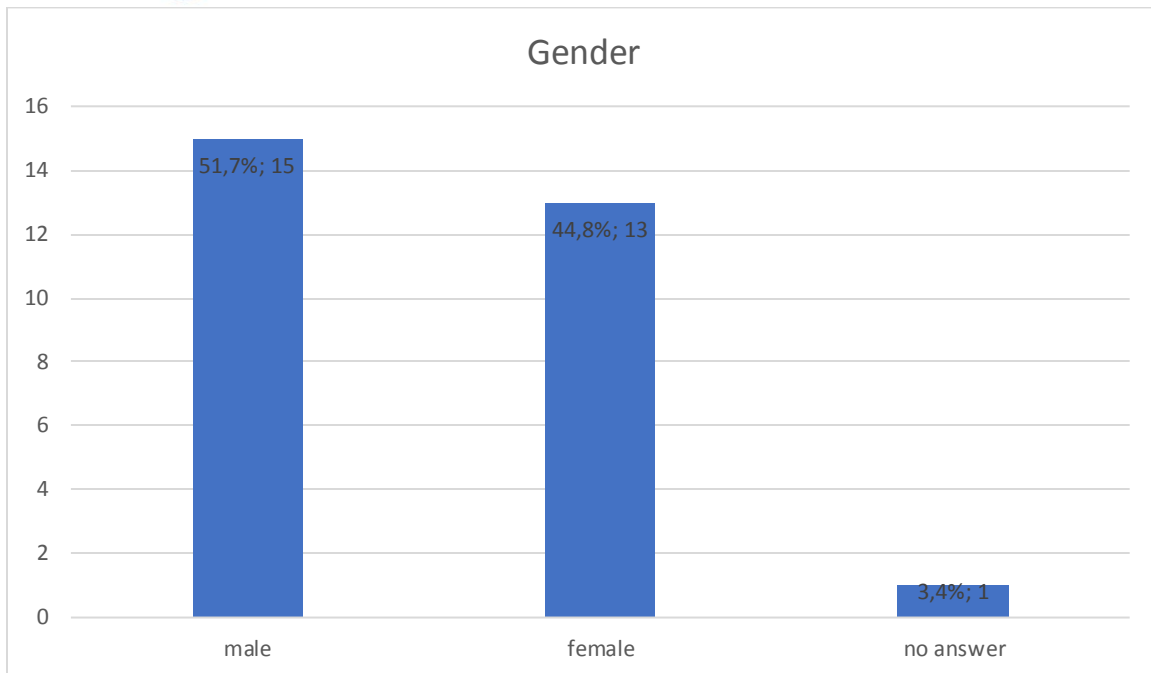
The survey consisted of a total of 34 questions, of which the first was a legal disclaimer, that had to be recognized by any respondent in order for the German team to be legally entitled to use the information for the DIFME project. 29 survey results are valid and comply with legal standards. The survey was designed to gather insights on four topics:

1. General demographics and Background of respondents
2. Financial Literacy
3. Digital Internationalization
4. Training Preferences

In the following the results will be presented and evaluated.

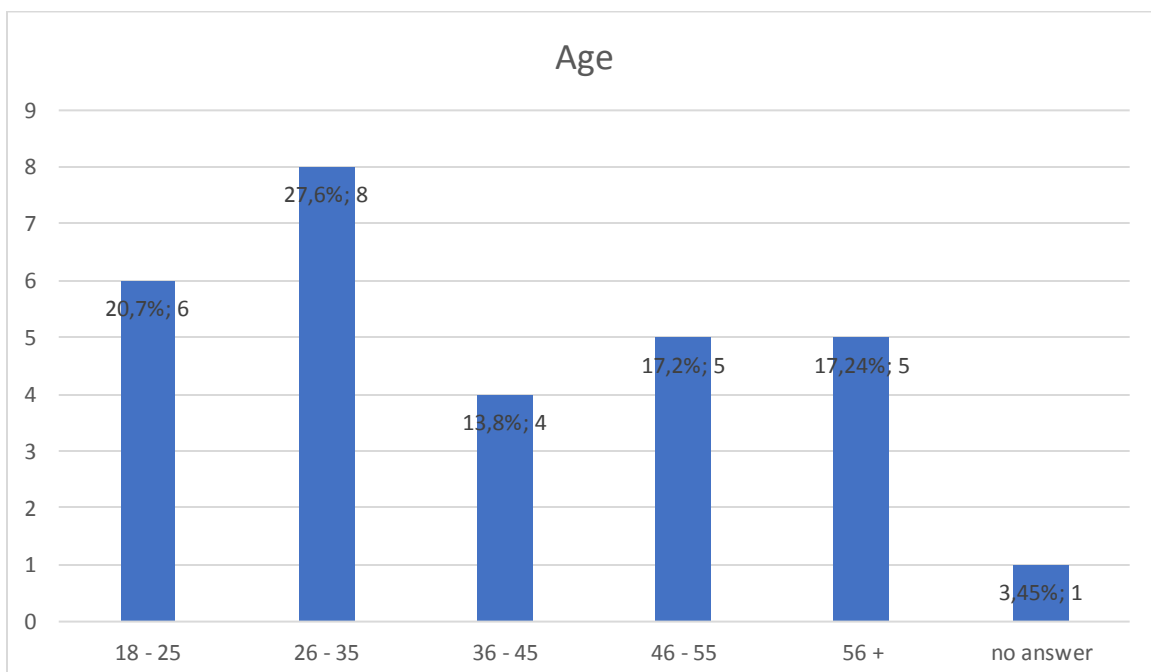
4.1 General Demographics and Background of Respondents

A total of 29 responses were received for the online survey in Germany. This section describes the sample in terms of key demographics and background information. The numbers reported relate to the respondents who answered that particular question, which sometimes were less than the full sample. I.e., those respondents who skipped particular questions were not considered in the figures presented. The corresponding number of respondents for each question is displayed within the graphics.



Just over half ($n = 15$, 51.7%) of the German respondents identify as male and about 45% as female ($n = 13$, 44.8%). One respondent did not answer this question. As the distribution is almost 50/50, the risk that one group is underrepresented in the following questions is almost eliminated.

Regarding the origin of the respondents - 27 (93,1%) of the respondents are from Germany, one (3,45%) from the United States of America and one (3,45%) from the United Kingdom.



The distribution of the participants age groups is a little more diverse, but overall all relevant groups are represented. Looking at the demographics of the Small Business Owners in Germany, it becomes

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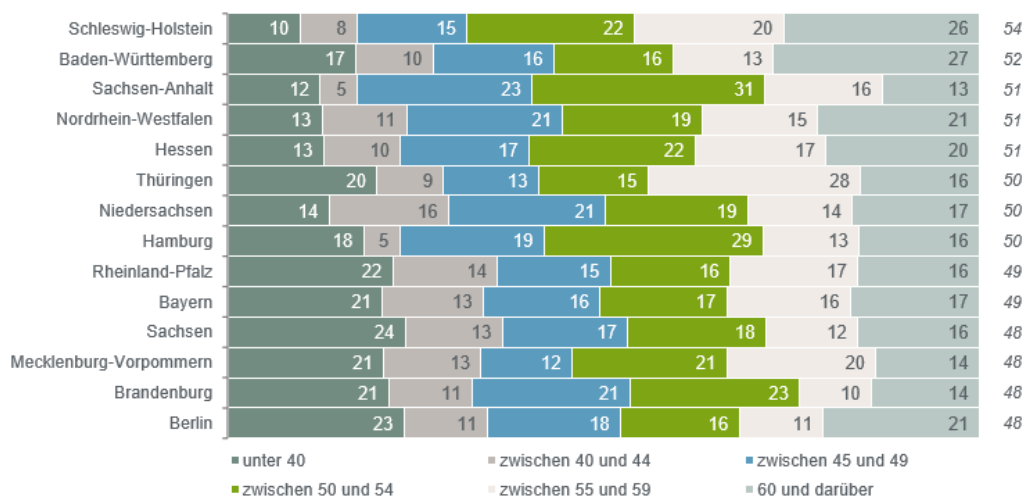
evident that the age distribution of the respondents is not analog to the general age distribution within Germany⁷. In Germany round about 40% of all small business owners are 55 or older. Only about 17% of our respondents fit this category. Therefore, keeping in mind the demographics of Germany, the category “56+” in the survey is underrepresented. Same goes for the category “46-55” – about 17% of respondents belong to this age group, whereas about 37% account for this age group in official reports.

Therefore, the group of respondents of the age between 18 and 40 is overrepresented in the survey, as about 62% of the respondents belong to the age group. In the data about German age distribution among small business owners, only about 23% are within that group.

With regards to the survey this should not be a problem, as it was designed to learn more about the need for educational resources for small business owners. As younger business owners are less experienced, it only makes sense for them to take part in a survey like this, whereas older small business owners already have the needed experience.

Grafik 14: Inhaberalter nach Bundesländern

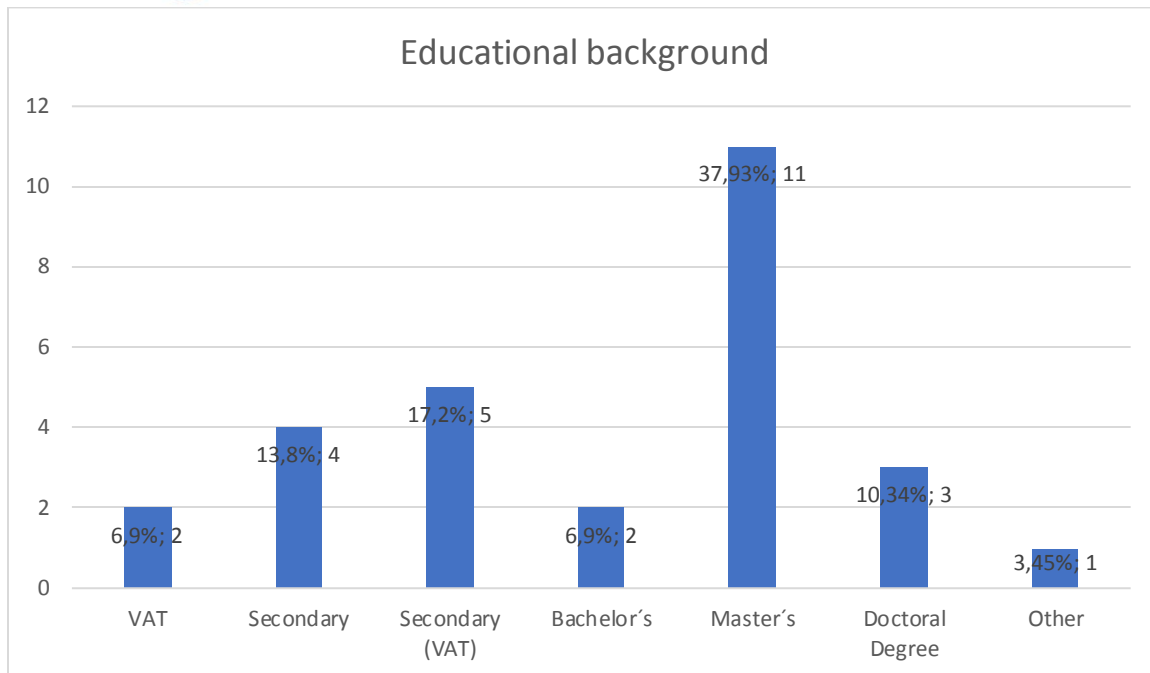
Unternehmensanteile je Inhaber-Altersklasse in Prozent – Durchschnittliches Inhaberalter in Jahren (kursiv) / Absteigende Sortierung nach Durchschnittsalter



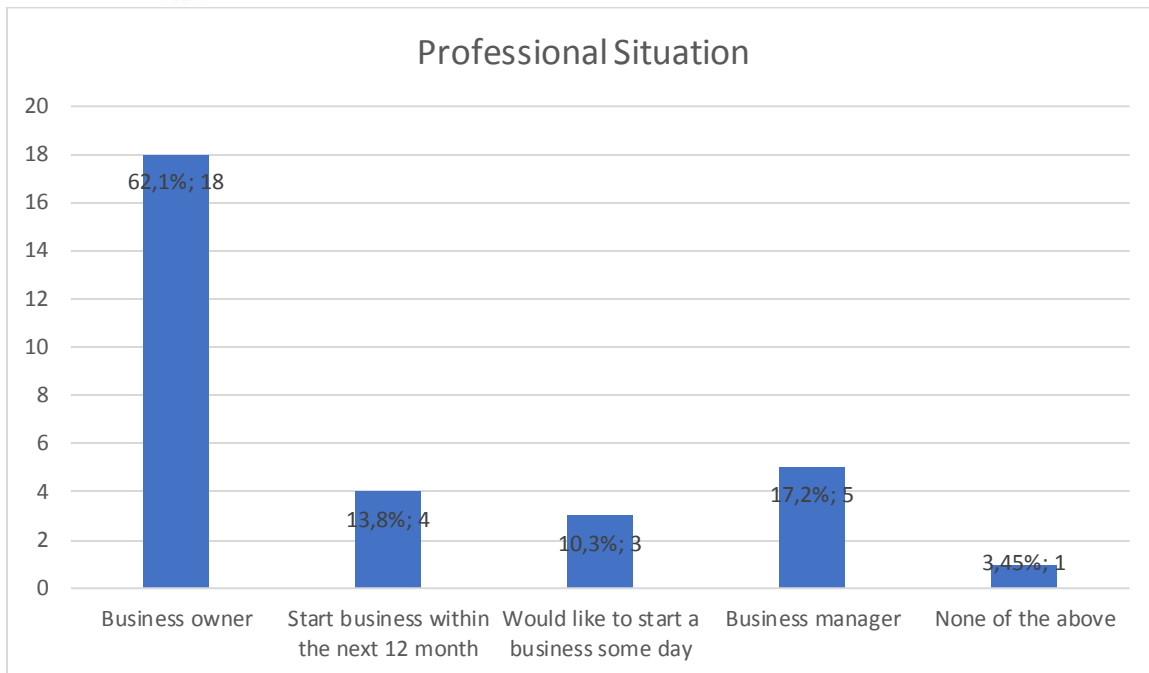
Anmerkung: Ausschließlich im jeweiligen Befragungsjahr neu in den Datensatz aufgenommene Unternehmen werden berücksichtigt. Regelmäßige Befragungsteilnehmer werden aufgrund eines per Definition zunehmendem Inhaberalter ausgeklammert.

Quelle: KfW Research.

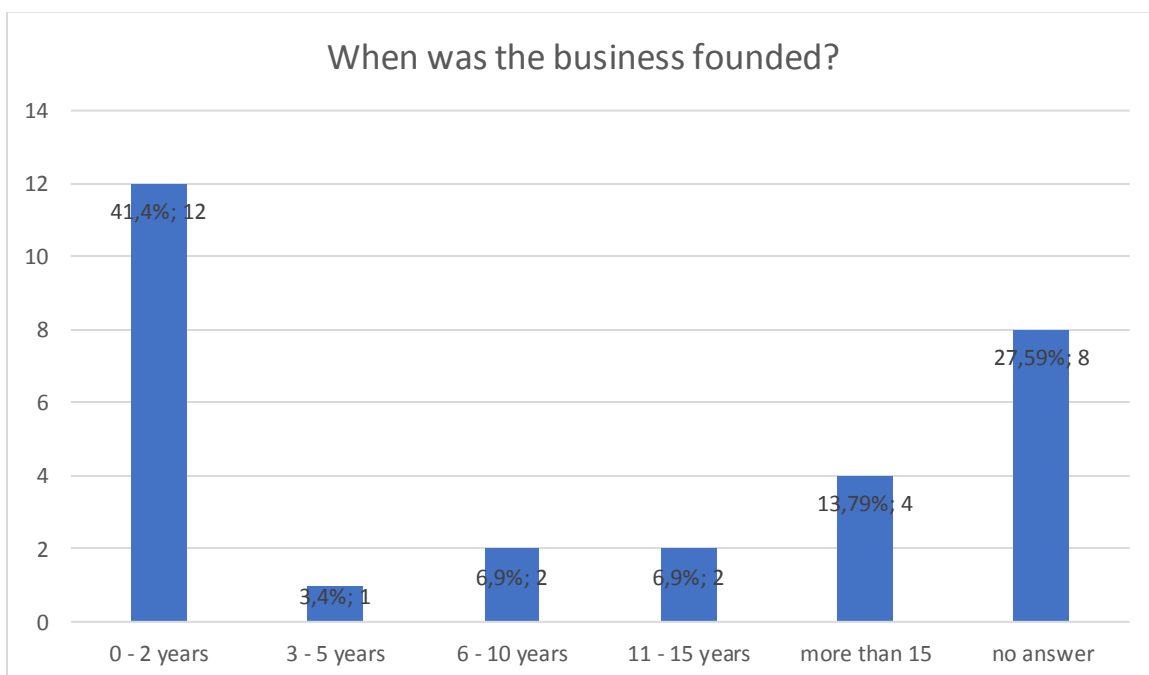
⁷ https://isb.rlp.de/fileadmin/user_upload/tt_news/2018/20180314_KfW-Mittelstandsatlas_2018.pdf



With regards to the educational background of the respondents, we can observe that about half of the participants have either a master's degree (n=11; 37,9%) or doctoral degree (n=3; 10,3%). Only about 6% hold a Bachelor's degree (n=2). About 14% completed a VAT, either after receiving a secondary degree (n=2; 6,9%), or they assumed the secondary degree during their VAT (n=5; 17,2%). Only 8 participants only hold a secondary degree (13,8%). The person who respondent with "other" holds a degree that is equivalent to a commercial master's degree.



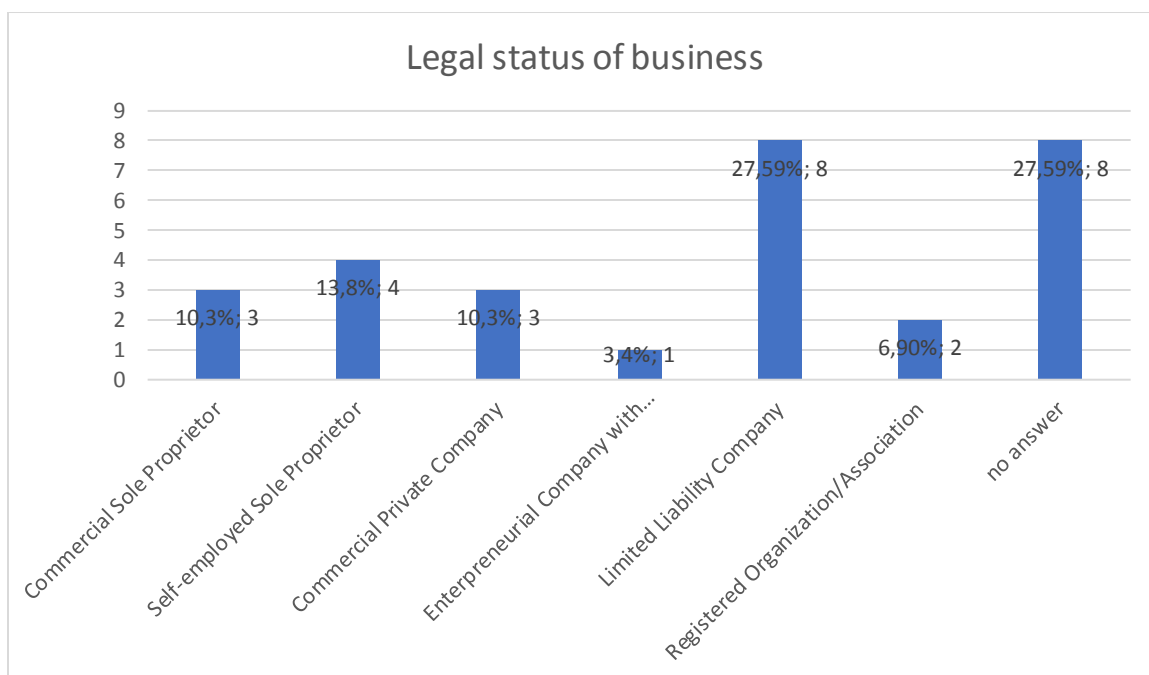
More than half (n=18, 62,1%) of respondents are business owner, with another four (13,8%) planning on opening their own business within the next 12 months. About 17% (n=5) respondents are business managers. Another 3 (10,3%) would like to start a business one day and one respondent (3,45%) answered to be none of the options. The results of this question will become interesting later on when taking a look at the results of the questions concerning the knowledge about financial literacy.



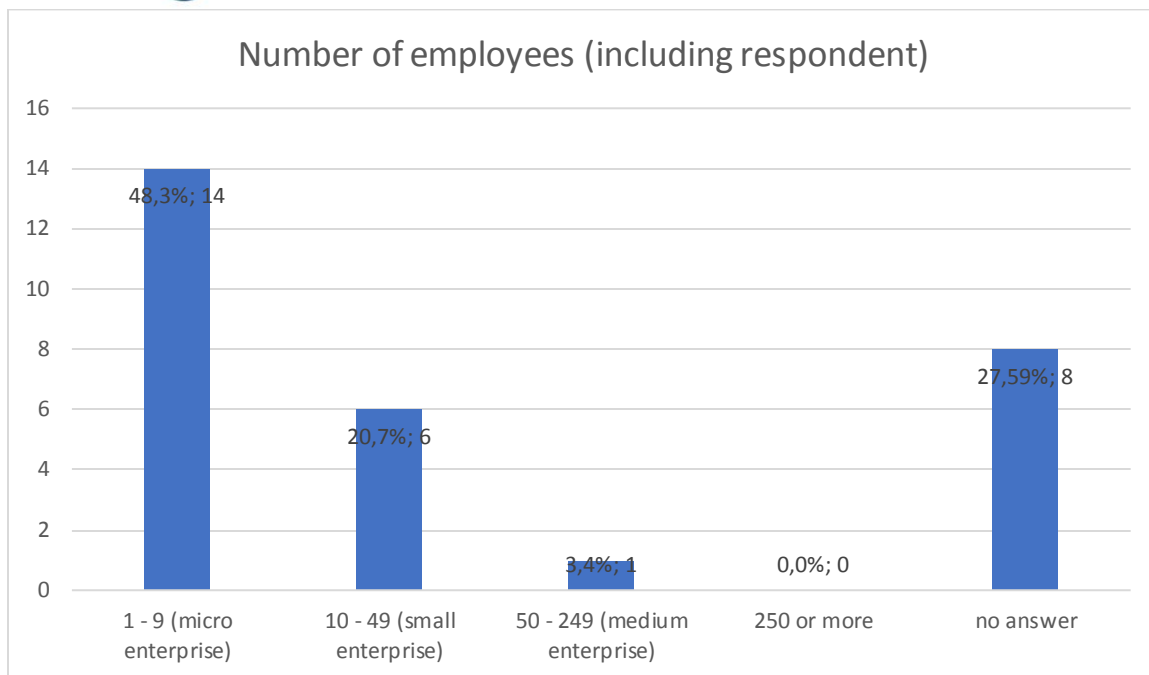
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The high number of respondents who did not answer this question results of the circumstance, described in the prior question. A total of 8 people have not yet opened their own business, nor are business managers – therefore they were unable to answer this question. Interestingly, 12 people (41,4%) work at quite young business, as they were founded less than two years ago. Half of the businesses that exists less than 2 years are owned or managed by people in the age group 18-25, the youngest group. Most of the remaining 6 belong to the age group 26-35, only one to the age group 46 – 55. Therefore, young businesses tend to be led by young people. On the other side of the scale – businesses that existed for 15+ years (n=4; 13,79%) are primarily led by people belonging to the age groups 56+ and 46 – 55.

One respondent’s business (3,4%) was founded 3 – 5 years ago. Two respondents each stated that their businesses were founded 6 – 10 years or 11- 15 years ago.



With regards to the legal status of the business, the answers varied quite a lot, with a majority of respondents (n=8; 27,59%) indicating a Limited Liability company. The respondents who gave no answer (n=8; 27,59%) have not yet opened their business and could therefore not answer this question.



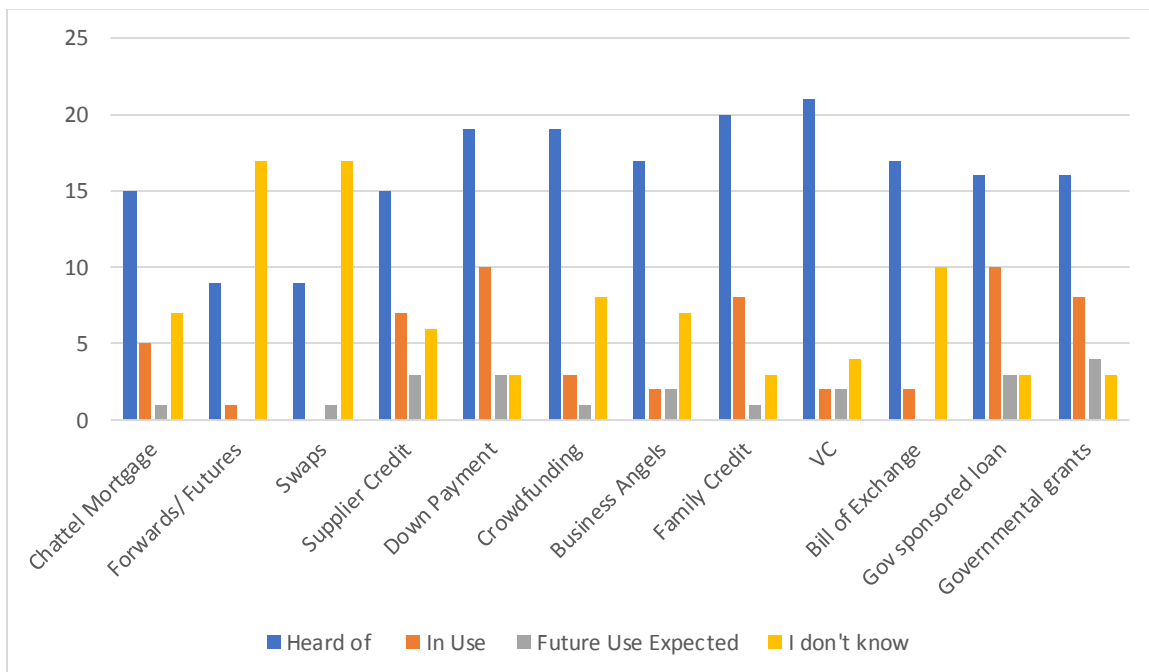
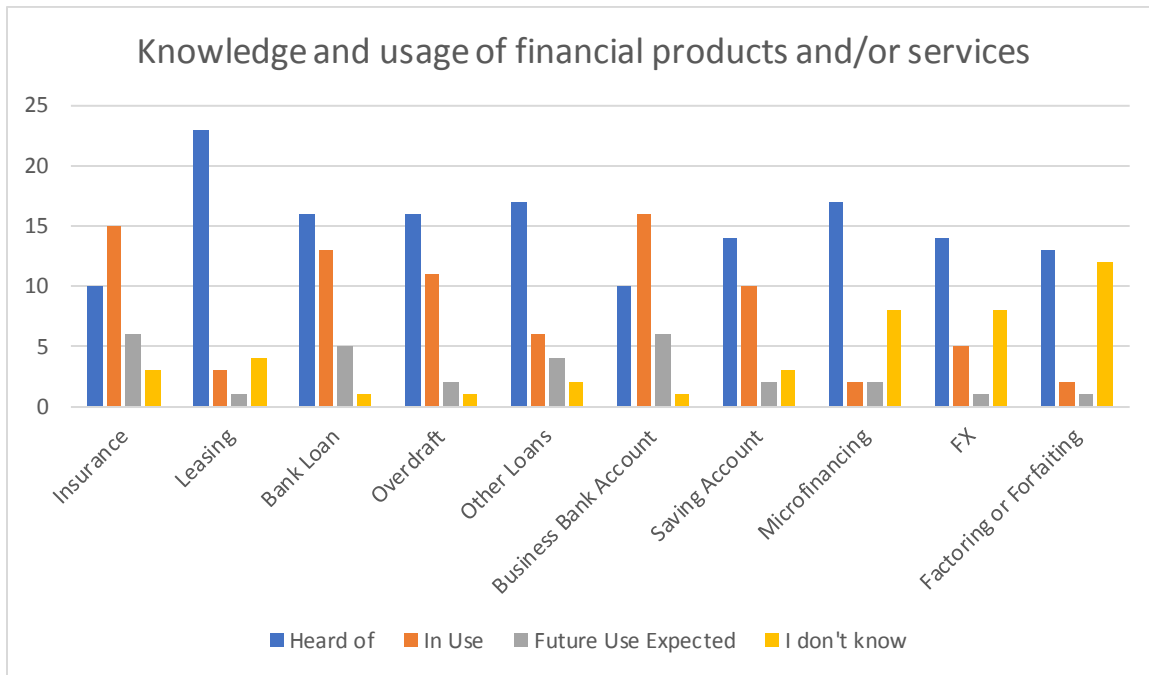
The respondents who gave no answer are yet to open their own business and could therefore not answer this question (n=8; 27,59%). The majority of respondents stated that the company has between 1-9 employees (n=14; 48,3%). Five (20,7%) work in a small enterprise of 10 – 49 employees and only one indicated to work in a medium enterprise with 50 -249 employees.

4.2 Financial Literacy

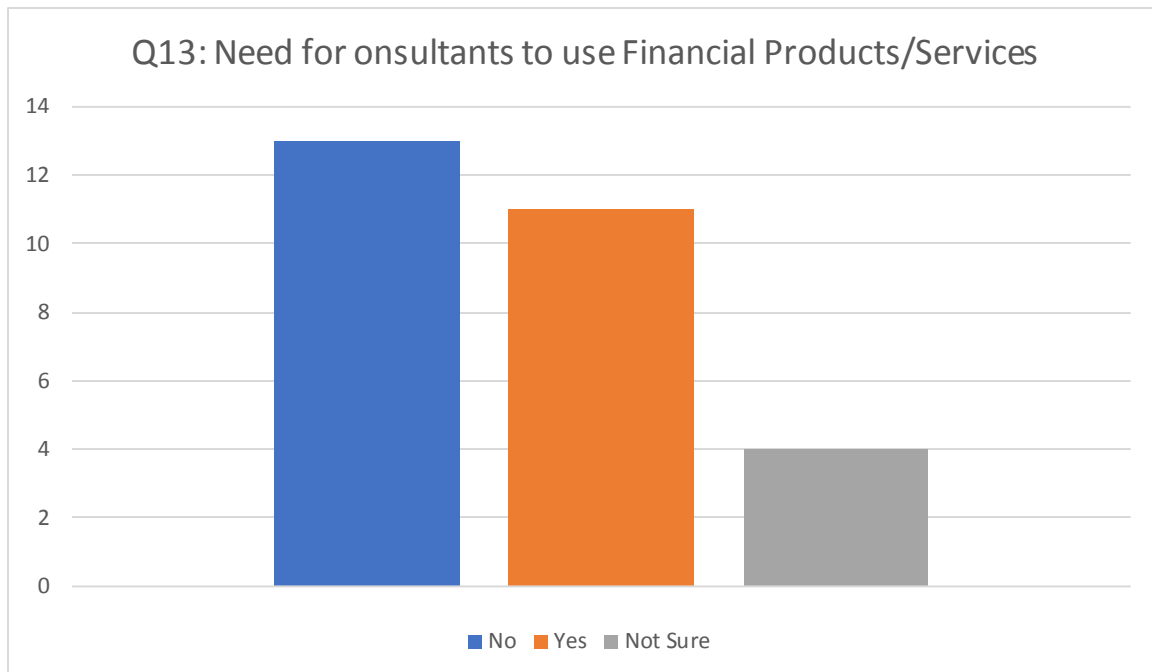
Question 12: Knowledge and usage of financial products and/or services

When examining the results from the survey to determine knowledge gaps from entrepreneurs it is important to know that some knowledge might not be necessarily relevant for the average mini entrepreneur. The most heard of products/ services are Leasing, Down Payment, Crowdfunding, Family Credit and Venture Capital. However, comparing those results with the products and services that are already in use could unveil a structural problem resulting from the questioning whether the participant have heard of or are using the product/service. For participants to use the service they would have necessarily heard of it. To deliver results for this question the category “heard of” is seen as ‘heard of but not in use’. The most popular products in use are Business Bank Accounts, Insurance, Down Payment and Government sponsored loans. Although the majority of the products/services expected to be used in the future only reflect an insignificant percentage of participant it is to note that participants seem keen to use Business Bank Accounts, Bank Loans and eventually Government Grants. The lack of knowledge is represented through the category “I don’t know”. Participants opted most for typical banking products like Forward Contracts and Swaps. Those rather specialized products that are often used for hedging risks would either way still needed to be proved necessary for mini entrepreneurs. This is especially as Entrepreneurs with small

businesses potentially would not have the need to hedge against any risks of price developments due to orders of primary goods in smaller quantities. Furthermore, the time and money necessary to understand the products and trade with them effectively could outweigh the benefits. More suitable topics to educate participant about could be simple FX rates and calculations, Crowdfunding Business Angels and the Bill of Exchange.

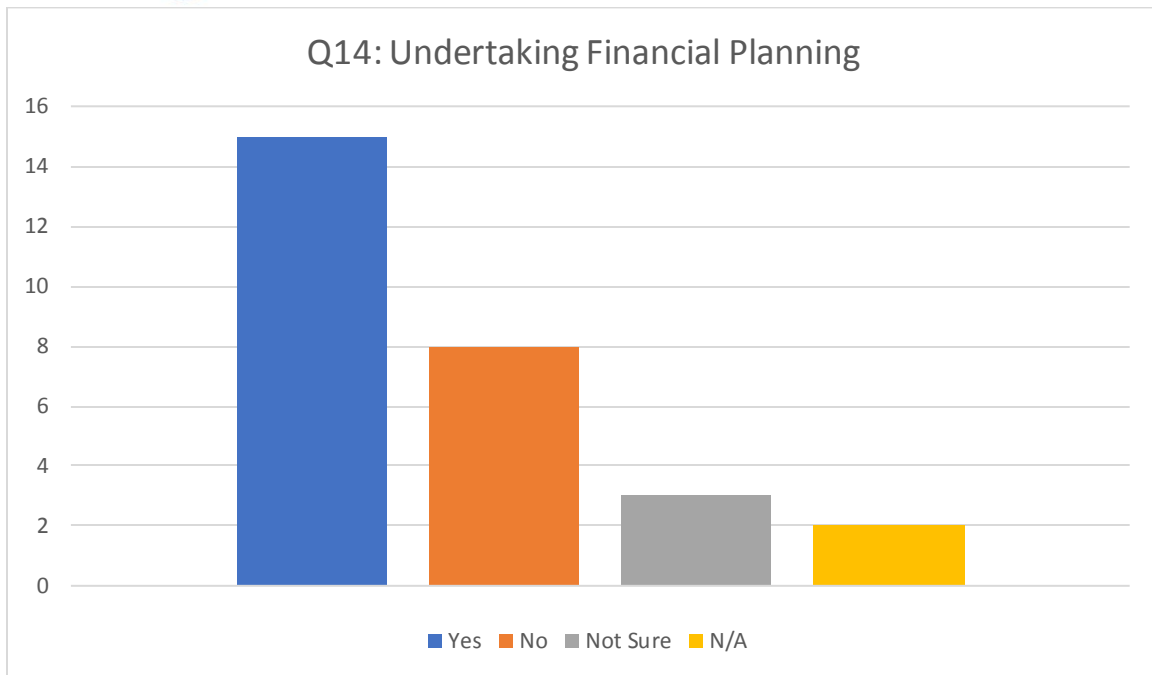


Q13: Do you need guiding or consultation from Banks, Tax Consultancies, Financial Advisors or other Consultancies (for example) to decide about Financial Products/ Services?



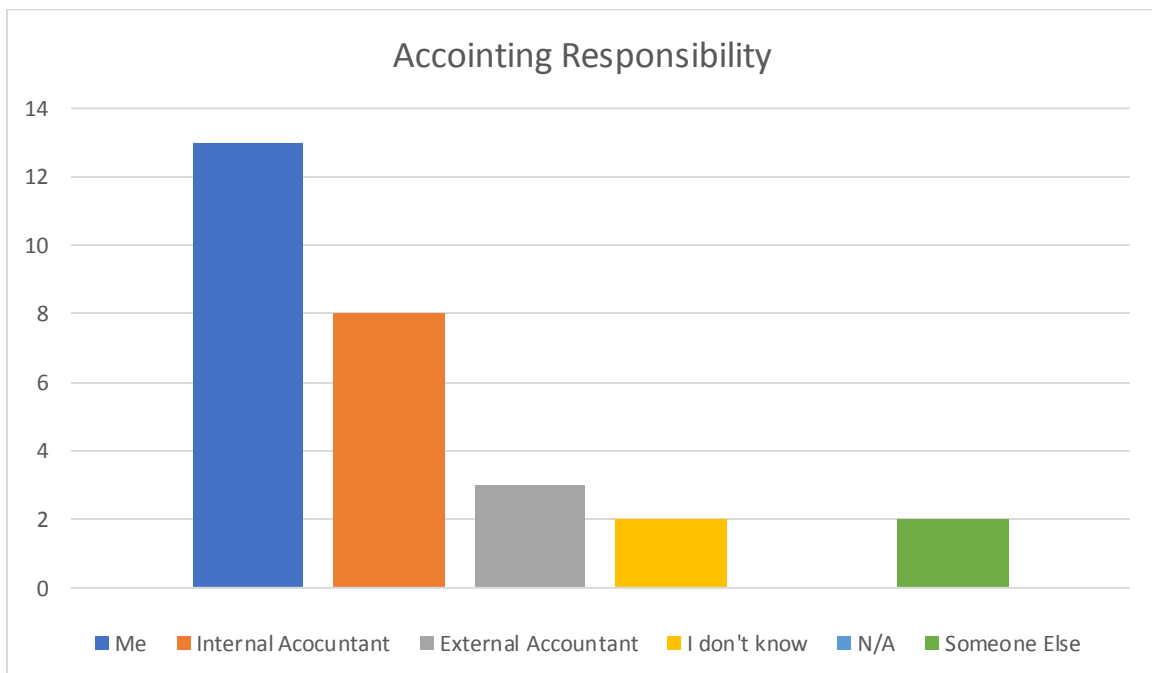
More than half of the survey participants are at least not sure about how to make decisions on Financial Services or Products. This result could have occurred because of the nature of the participant's different businesses as already discussed in Q3.

Q14: Did you create a financial plan for your company?



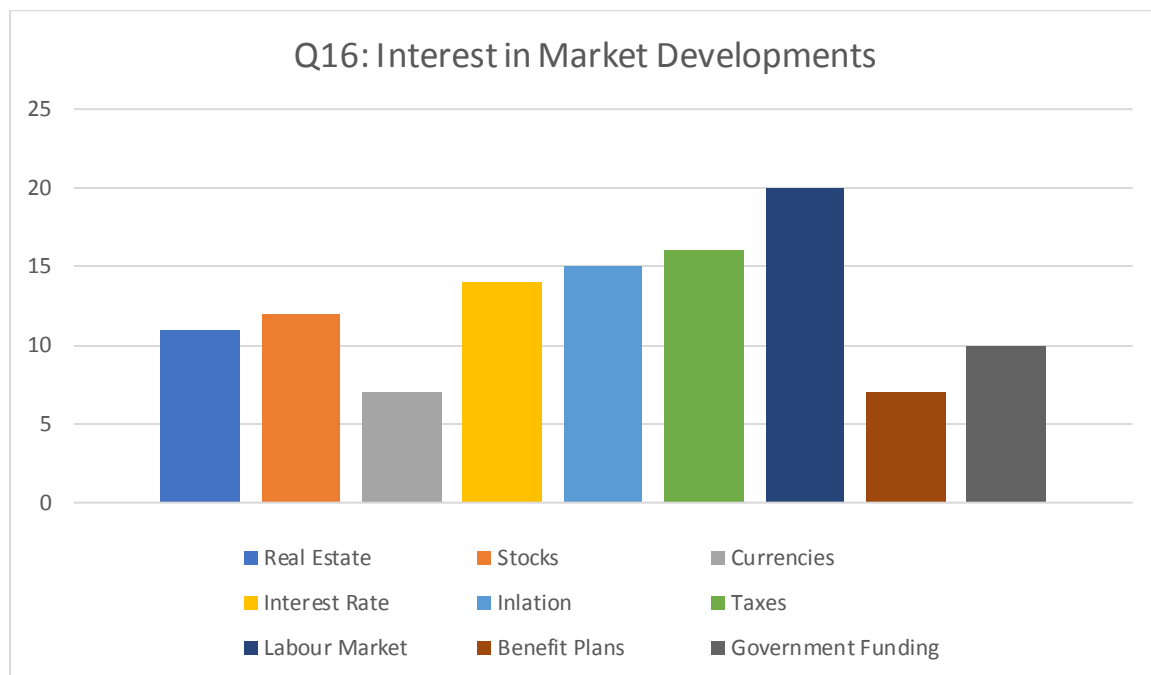
According to Q4 there are 7 participants who haven't found their companies yet. In combination with the results from Q11 and Q14 it is therefore recommendable to provide more content on Financial Planning.

Q15: Who is responsible/will be responsible for Accounting/ Book Keeping in your venture?



As book keeping is often a vital part to evaluate a business’s own status it should be considered important to inform participants about procedures and standards to either prepare future entrepreneurs or make it easier for them to interpret and handle data and language necessary to understand an accountant.

Q16: Do you personally follow developments in one or more of the below markets?

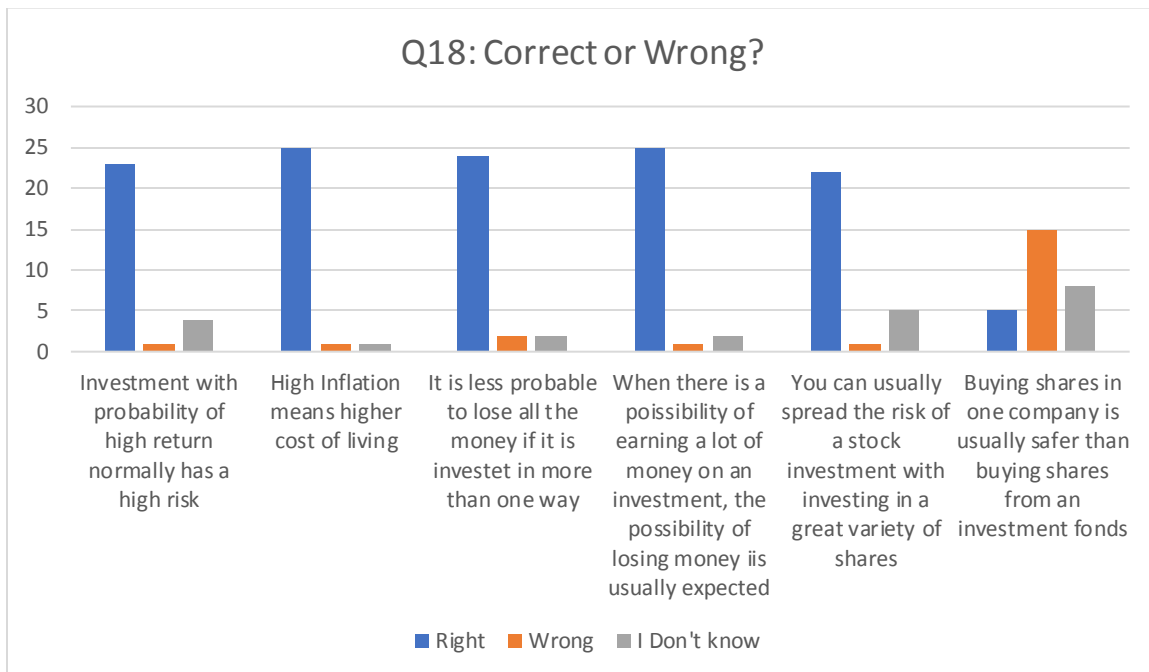


Whether government funding, taxes or benefit plans are in common terms to be defined as markets is still to be analyzed. However, the large interest lies in the fields of Labour Market, Taxes, Inflation and interest Rate. An assumption could again be drawn from the combination of the results from Q16 and Q4. As an entrepreneur to-be or mini entrepreneur in charge the labour market is in your interest either because a participant might want to hire or look out for a backup job. As entrepreneurs need to work for themselves to make a living, taxes might be interesting. Although there is no assumption on why Inflation is relevant, the interest in interest rates might come from daily news and the need to payback a loan. As Real Estate and Stocks could eventually be helpful in a long term to save up for a retirement, offering insights is recommended. Furthermore, as many of the participants haven’t yet started their company, the address of Government Funding could prove helpful.

Q17: Chose the correct definition of: Balance Sheet, Cash Flow Calculation and Profit & Loss Calculation.

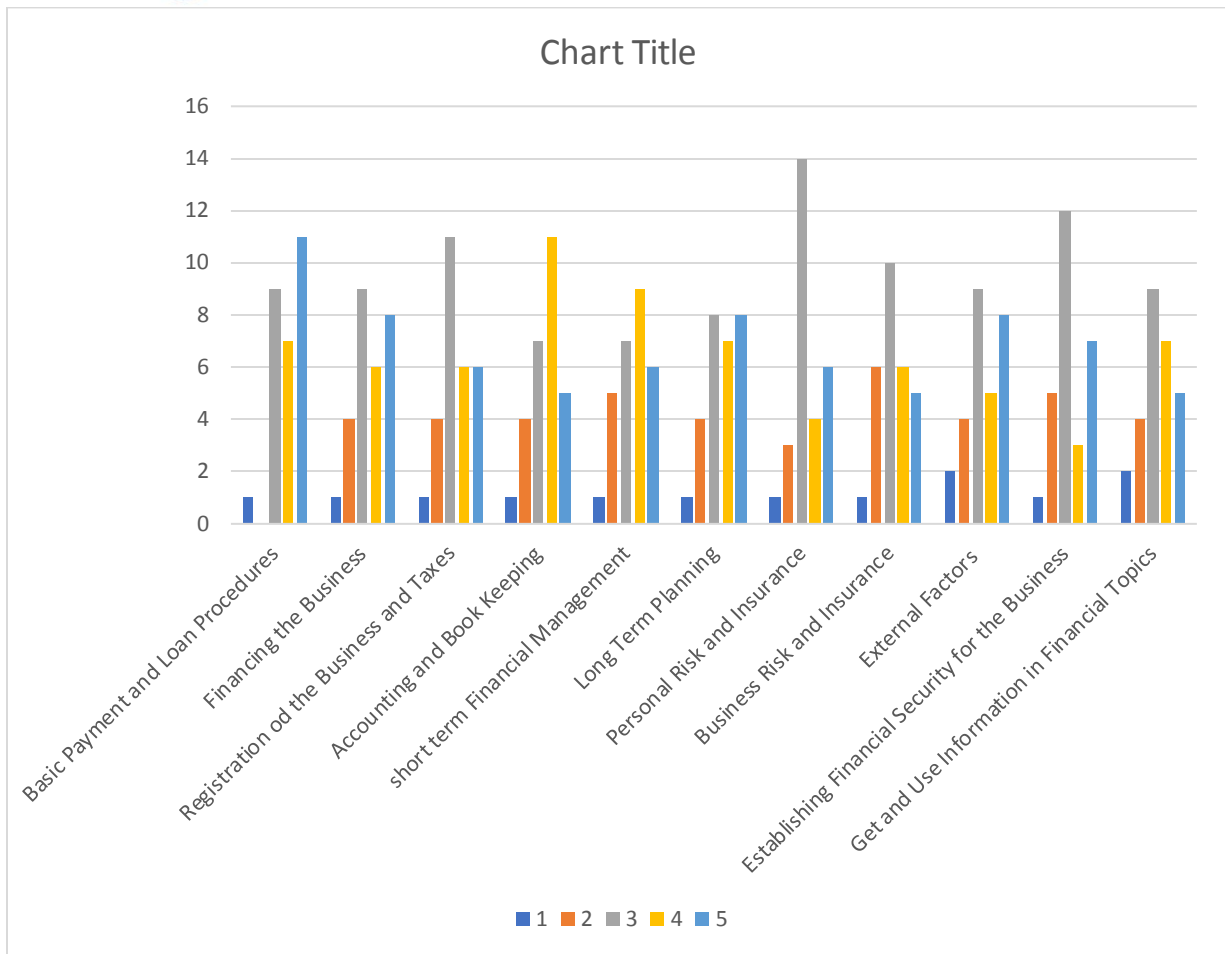
The vast majorities have opted for the correct answers. (92 % for Balance Sheet, 89 % for CF and 75 % for PnL) It is recommended to clear the differences between CF and PnL Calculations during courses.

Q18: Are the following terms correct or wrong?



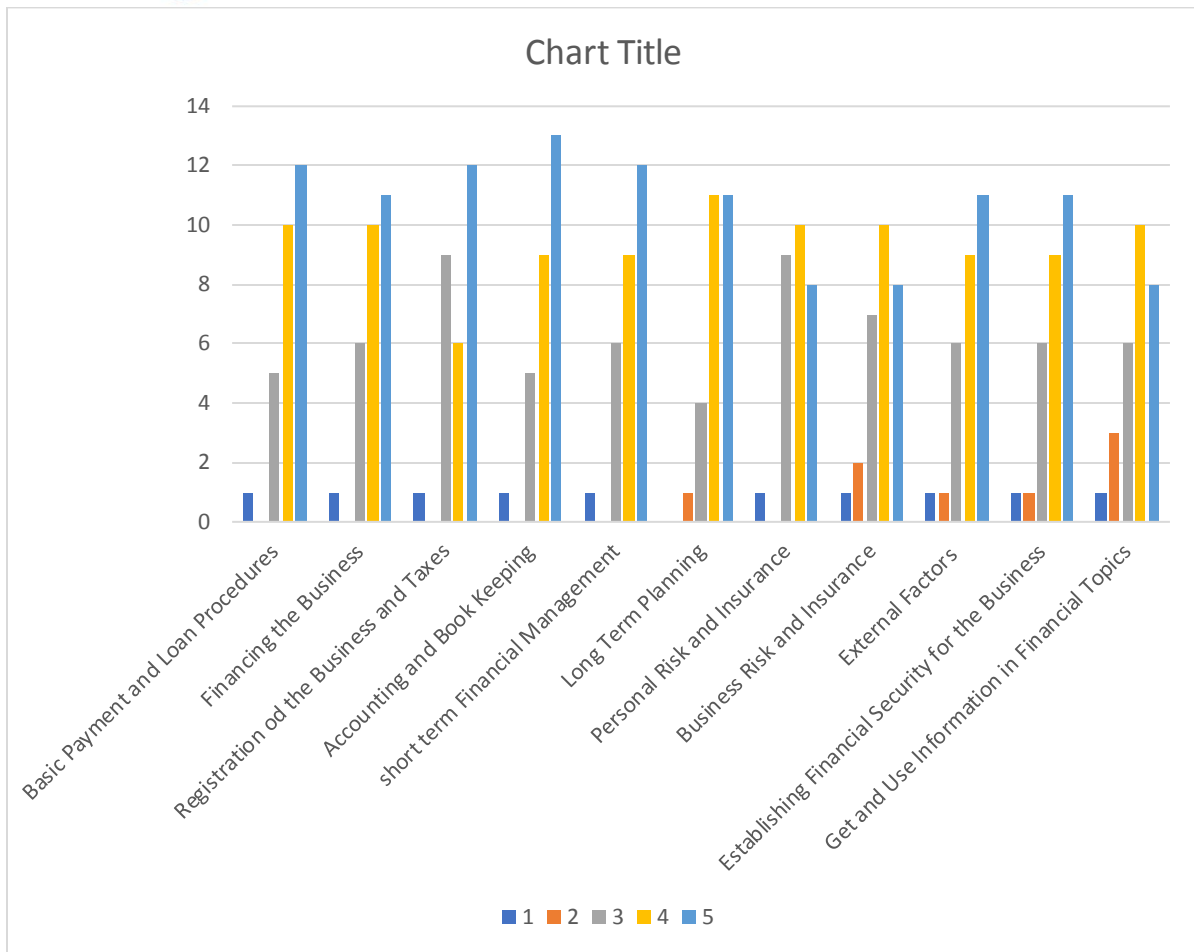
The participants have shown a common understanding of risk and investments. The weak answers to the last statement could potentially be a result of business atypical knowledge of the participants. For the interviewed group it could not be business-necessary to gain in-depth knowledge about investments.

Q19: Please evaluate your level of knowledge on the skills provided below



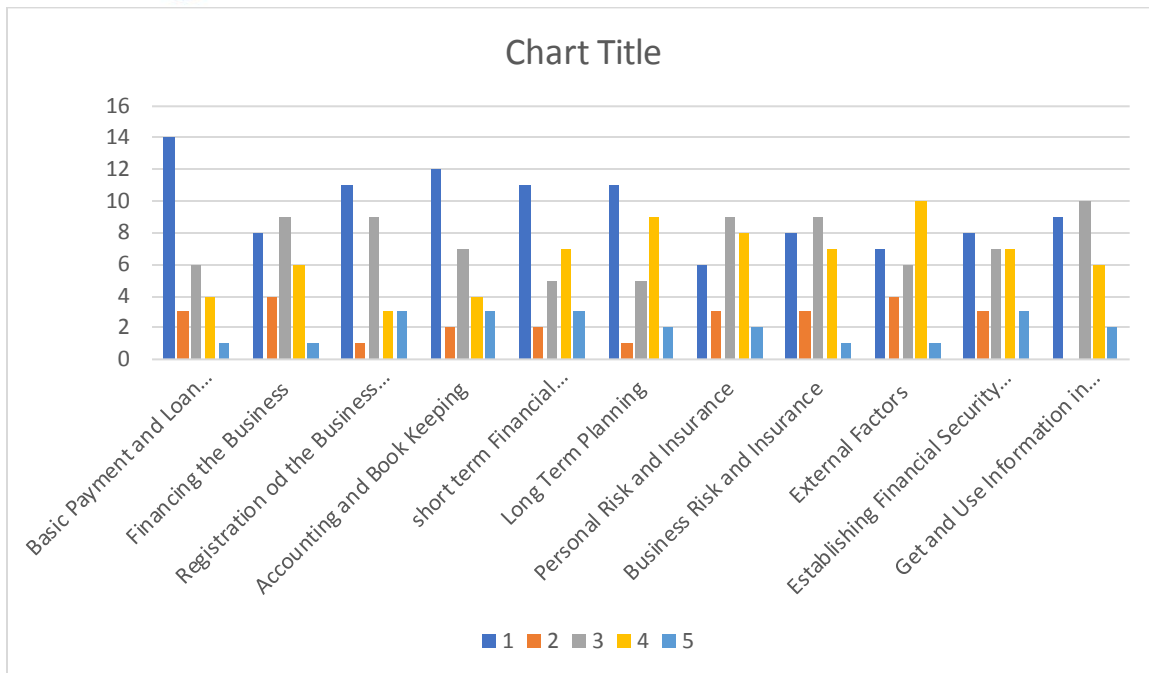
Many participants have opted for the middle skill level in the majority of skills provided. Therefore, it is to evaluate what skills dominate in the mid-skill-level and to deepen the knowledge with the aim to lift participants up to 4 or better. Categories recommended for further deepening procedures are: Financing of the Business, Registration and Taxation, Personal Risk and Insurance, Business Risk and Insurance, External Factors and Establishing Financial Security for the business.

Q 20: How important are the following skills?



The range of weighted averages for this question is relatively close spread. This indicates that participant regard most topics important. With a weighted average of 4.19, Financial Planning seems most important followed by Accounting and Basic Payment and Loan Procedures. The least interesting 'skill' with a weighted average of 3,75 is How to get Information on Financial Planning.

Q20: Please indicate your desire for further education in the fields below.

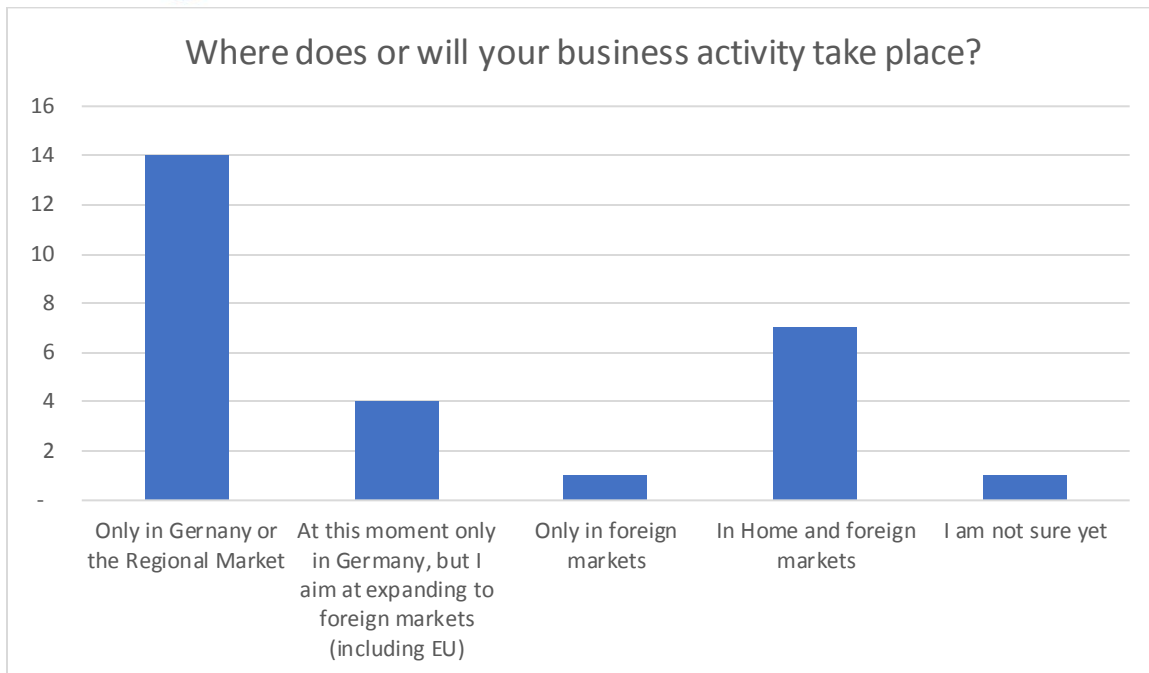


Although the weighted averages indicate a close spread in this framework as well, it is important to note that there are often extreme highs between 1 and 3s or 4s. While the need and willingness to undertake more seminars could be the origin of younger participant groups, the low interest occurring at the same time is eventually explained through nearly the same amount of participants who belong to older ge groups which may indicate more business or life experience.

4.3 Digital Internationalisation

Question 22

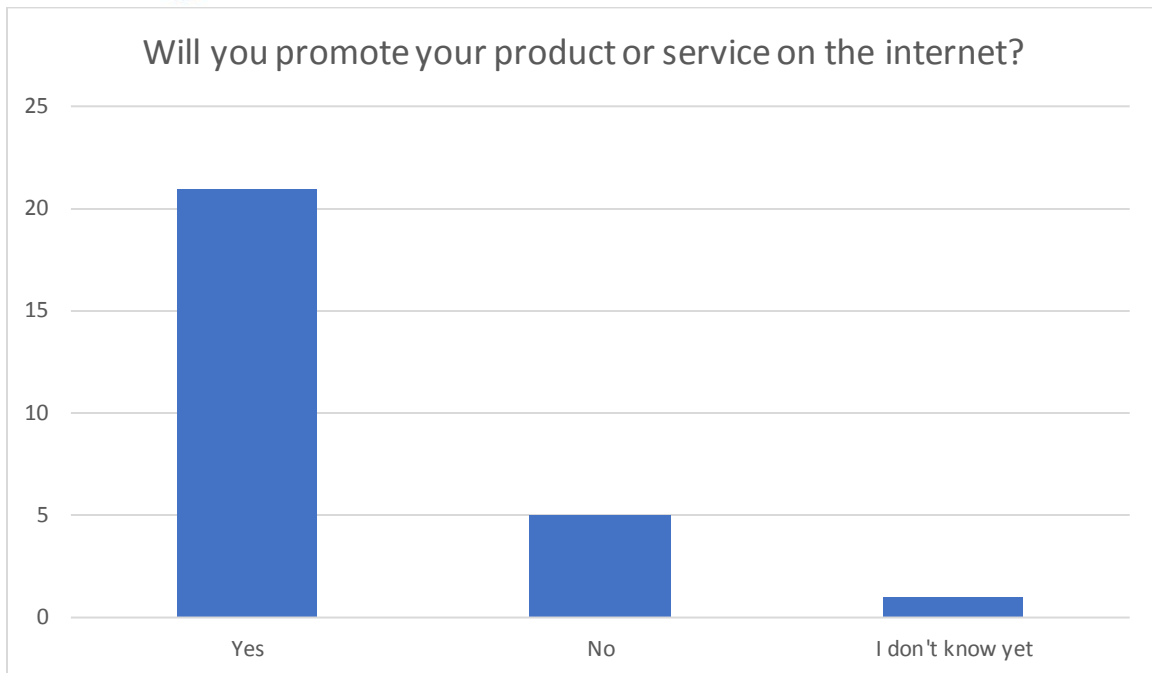
Where does or will your business activity take place?



14 of the 27 (51,85%) respondents answered that they are planning their business activity to take place in only Germany or the regional market. At this moment only in Germany but with the aim to expand to foreign markets said 4 respondents which is equals to 14,81%.

Only in foreign markets seven 1 respondent (3,7%), In home and foreign markets: 25,92% (n=7). To sum up, 12 (44,44%) responders already do or plan on selling internationally. Not sure yet are 3,7% of respondents (n=1). The question was skipped by 2 responders.

Question 23



Of the 27 responders 77,78% (n=21) say to promote on the internet. 18,52% (n=5) say not to promote on the internet, whereas 3,7% (n=1) say they didn't know yet. Of the responders saying to promote or plan on promoting on the internet 12 are between the ages 18-35, whereas the responders saying not to or not planning to promote on the internet three are over the age of 36. This question was skipped by two people.

“Yes” (21) age:

- 18-25: 6
- 26-35: 6
- 36-45: 3
- 46-55: 3
- 56+: 3

“No” (5) age:

- 18-25: 0
- 26-35: 1

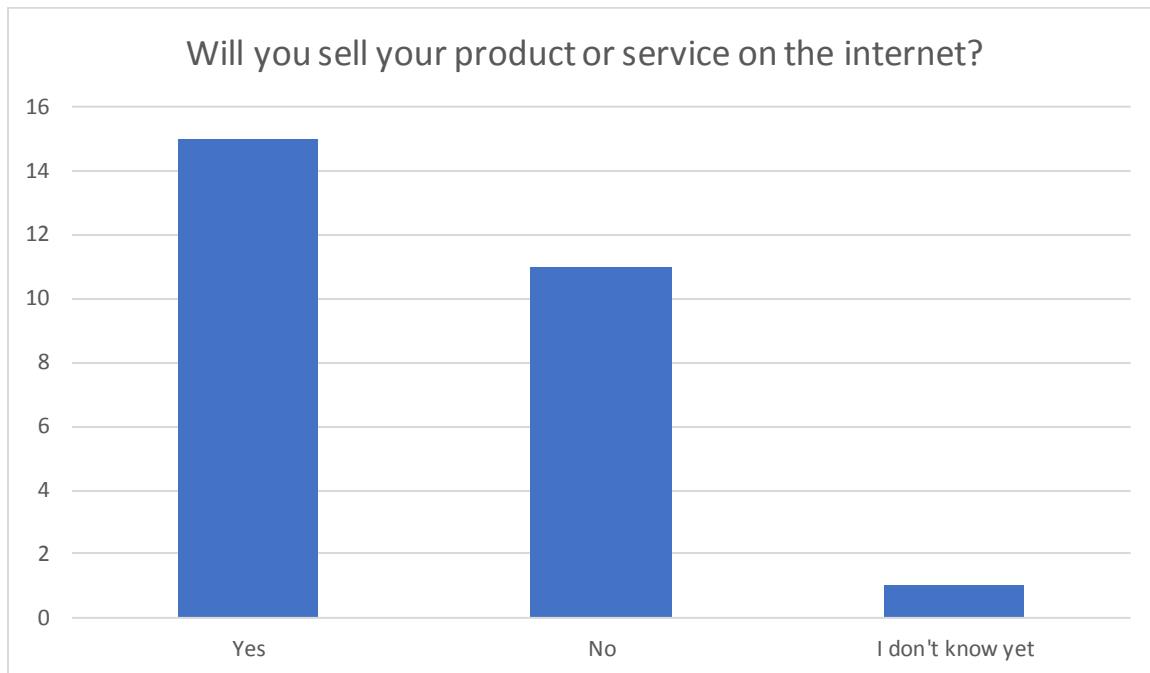
36-45: 1

46-55: 2

56+: 1

“I don’t know yet”(1): 56+: 1

Question 24



Of the 27 responders 55,56% (n=15) say to sell on the internet. 40,74% (n=11) say not to sell on the internet, whereas 3,7% (n=1) say they didn’t know yet. Of the responders saying to sell or plan on selling on the internet 10 are between the ages 18-35, whereas the responders saying not to or not planning to sell on the internet 8 are over the age of 36. This question was skipped by two people.

“Yes” (15) age: 18-25: 6



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26-35: 4

36-45: 3

46-55: 1

56+: 1

“No” (11) age:

18-25:

26-35: 3

36-45: 1

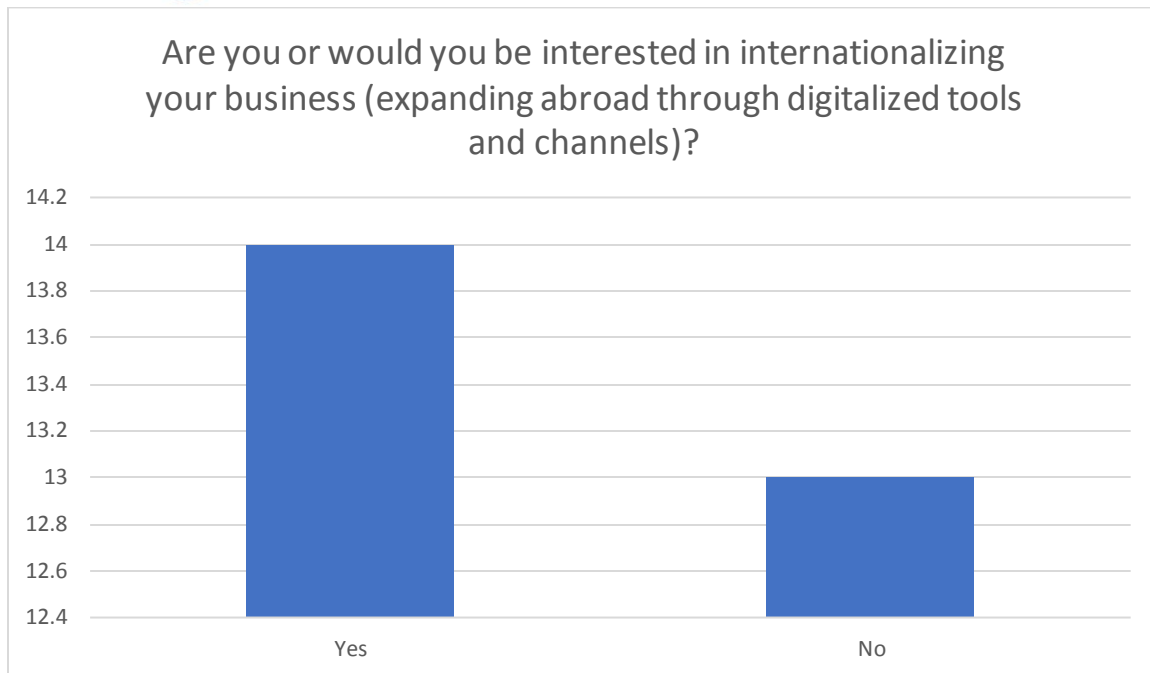
46-55: 4

56+: 3

“I don’t know yet” (1): 56+

Question 25

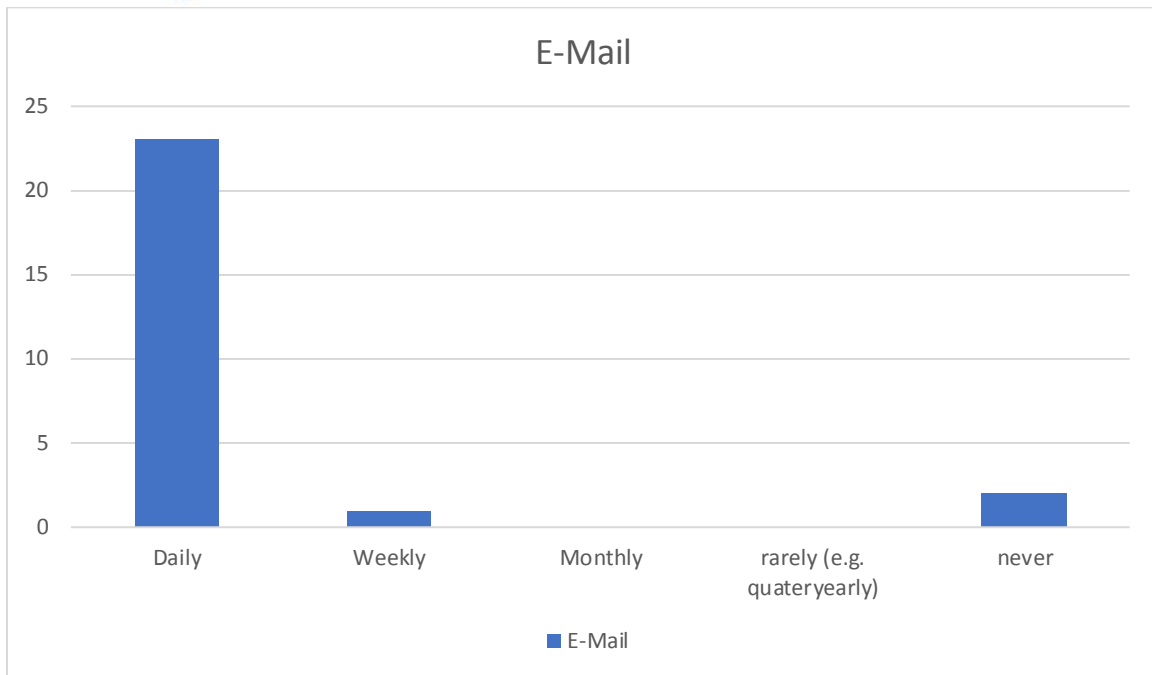
Are you or would you be interested in internationalizing your business (expanding abroad through digitalized tools and channels)?



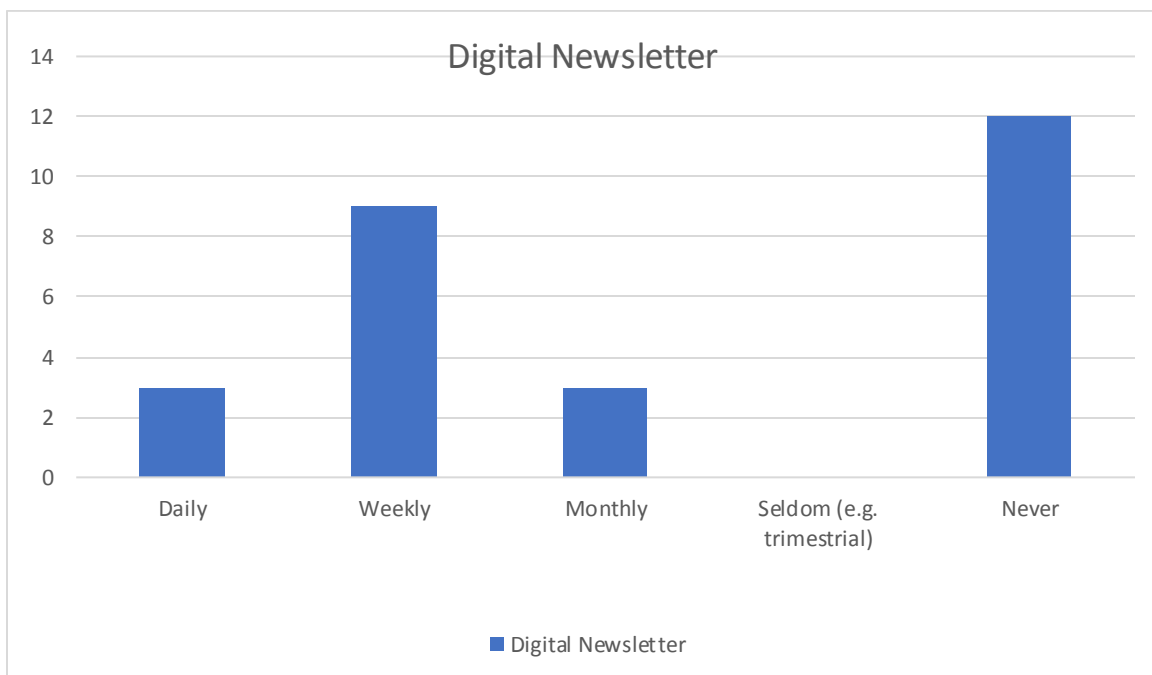
Of the 27 responders 51,85% (n=14) say they would you be interested in internationalizing their business (expanding abroad through digitalized tools and channels). On the other hand, 48,15% (n=13) are not interested. The question was skipped by 2 responders.

Question 26

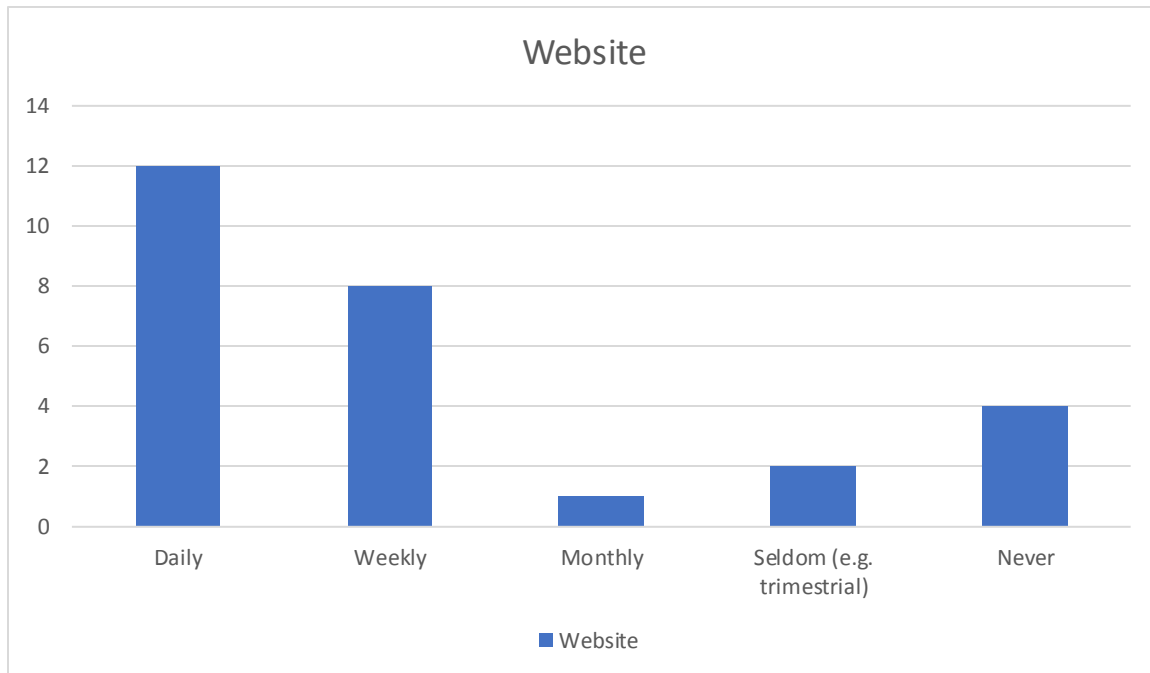
How often do you use following tools for commercial activities?



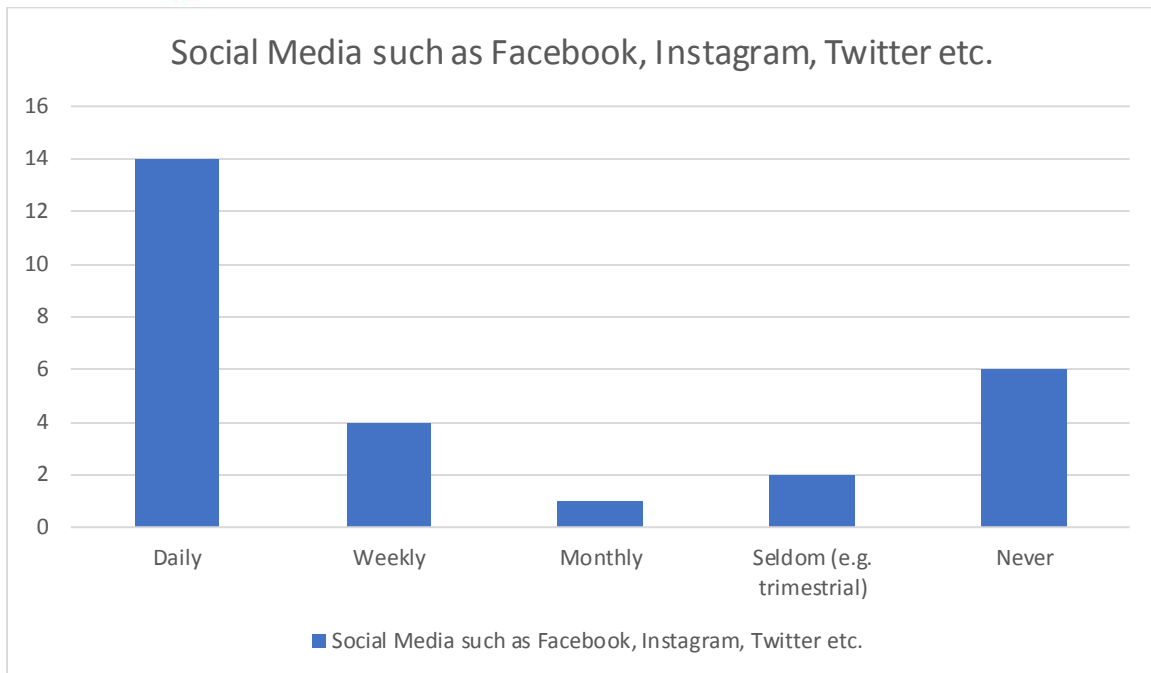
Of the 26 responders 88,46% (n=23) say they daily use E-Mail for commercial activities. 3,85% (n=1) use email weekly and 7,69% (n=2) never use E-Mail for commercial activities. The question was skipped by 3 respondents.



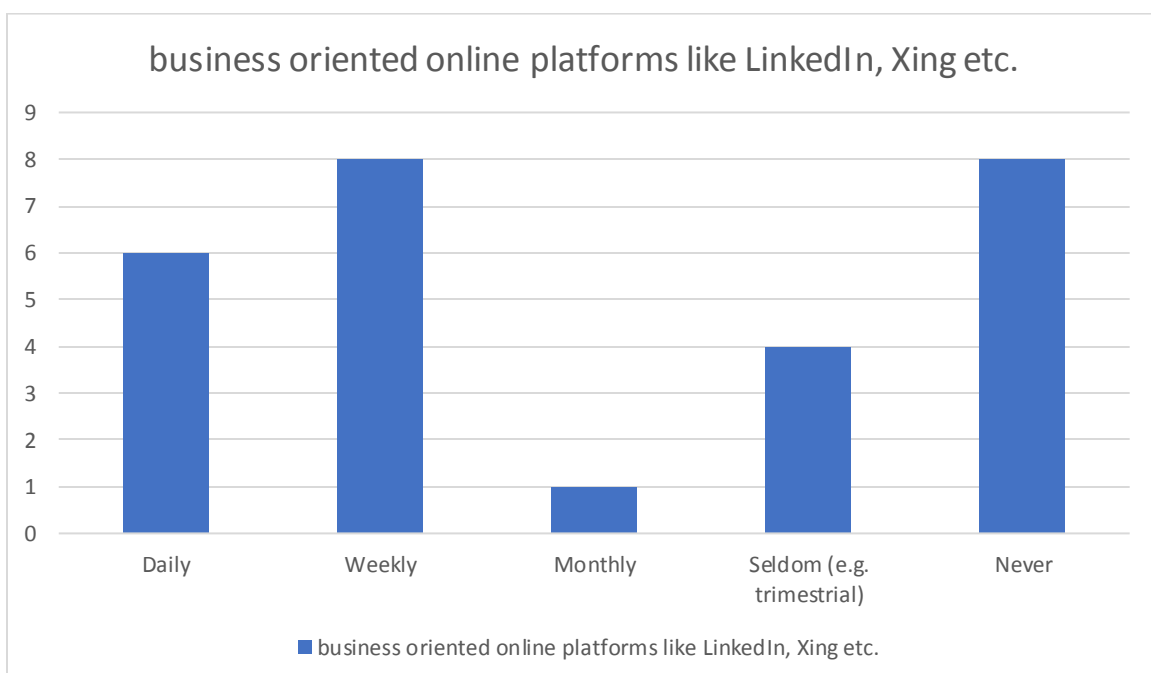
Of the 27 responders 11,11% (n=3) say they daily use digital newsletter for commercial activities. 33,33% (n=9) use digital newsletter weekly, 11,11% (n=3) Monthly and 44,44% (n=12) said to never use digital newsletter for commercial activities. The question was skipped by 2 respondents.



Of the 27 responders 44,44% (n=12) say to use a Website for commercial activities daily, 29,63% (n=8) use Websites weekly, 3,70% (n=1) Monthly, 7,41% (n=2) say to seldom use Websites and 44,44% (n=12) said to never Websites for commercial activities. The question was skipped by 2 respondents.



Of the 27 responders 51,85% (n=14) say to use Social Media for commercial activities daily, 14,18% (n=4) use Social Media weekly, 3,70% (n=1) Monthly, 7,41% (n=2) say to seldom use Social Media and 22,22% (n=6) said to never Social Media for commercial activities. The question was skipped by 2 respondents.

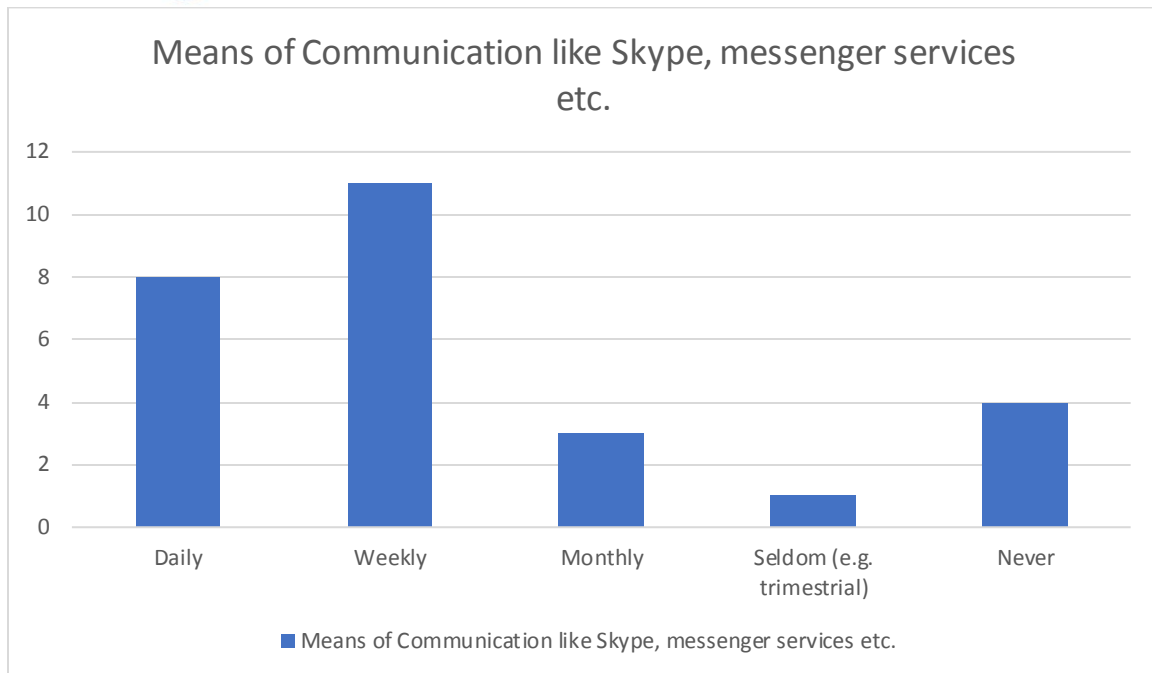


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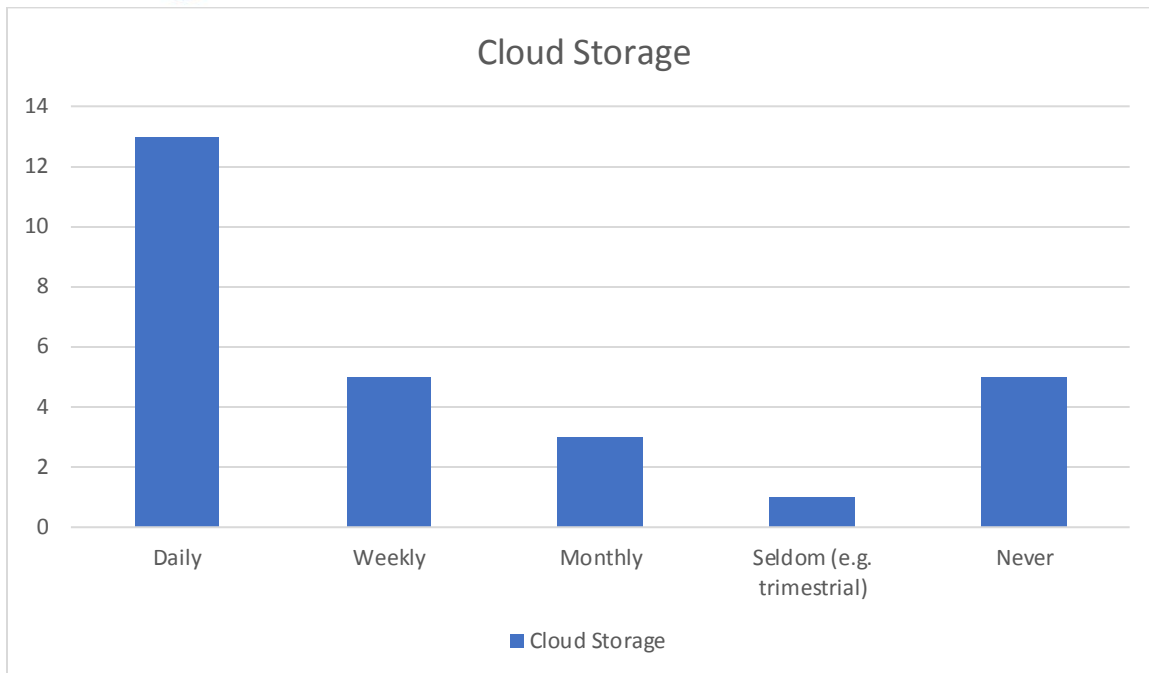
Of the 27 responders 22,22% (n=6) say to use Business oriented online platforms for commercial activities daily, 29,63% (n=8) use Business oriented online platforms weekly, 3,70% (n=1) Monthly, 14,81% (n=4) say to seldom use Business oriented online platforms and 29,63% (n=8) said to never use Business oriented online platforms for commercial activities. The question was skipped by 2 respondents.



Of the 27 responders 3,70% (n=1) say to use Online Sales platforms for commercial activities daily, 18,52% (n=8) use online Sales platforms weekly, 18,52% (n=5) Monthly, 11,11% (n=3) say to seldom use online Sales platforms and 48,15% (n=13) said to never use online Sales platforms for commercial activities. The question was skipped by 2 respondents.



Of the 27 responders 29,63% (n=8) say to use Means of Communication like Skype, Messenger services for commercial activities daily, 40,74% (n=11) use Means of Communication like Skype, Messenger services weekly, 11,11% (n=3) Monthly, 3,70% (n=1) say to seldom use Means of Communication like Skype, Messenger services and 14,81% (n=4) said to never use Means of Communication like Skype, Messenger services for commercial activities. The question was skipped by 2 respondents.



Of the 27 responders 29,63% (n=8) say to use Cloud Storage for commercial activities daily, 40,74% (n=11) use Cloud Storage weekly, 11,11% (n=3) Monthly, 3,70% (n=1) say to seldom use Cloud Storage and 14,81% (n=4) said to never use Cloud Storage for commercial activities. The question was skipped by 2 respondents.

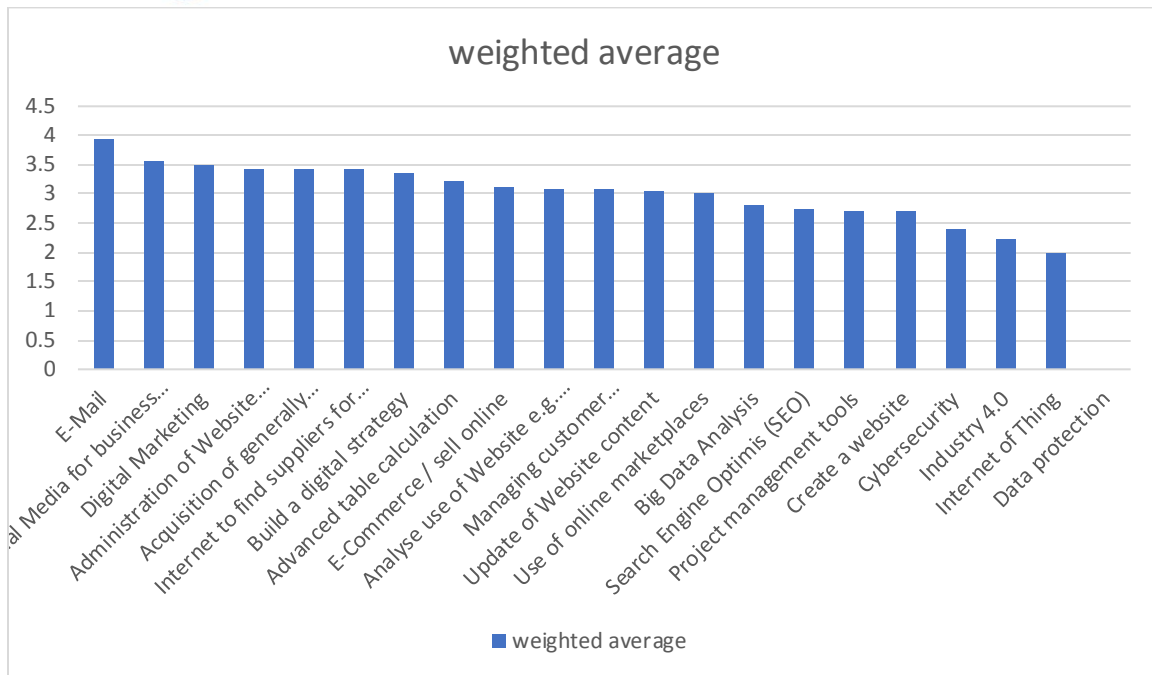
Other tools such as:

- Self-owned web shop
- Process management tools for real estate valuation and VK

Question 27

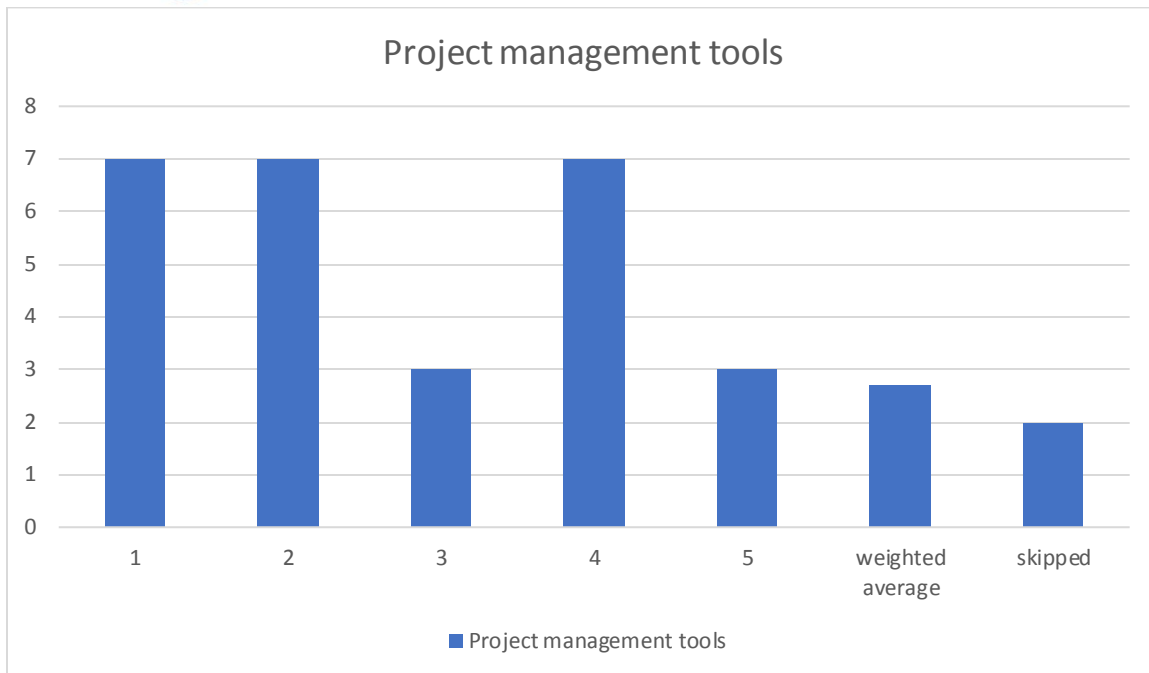
Please evaluate yourself: How proficient are your skills handling digital tools? 1= no skills to 5= very high skilled

Weighted average

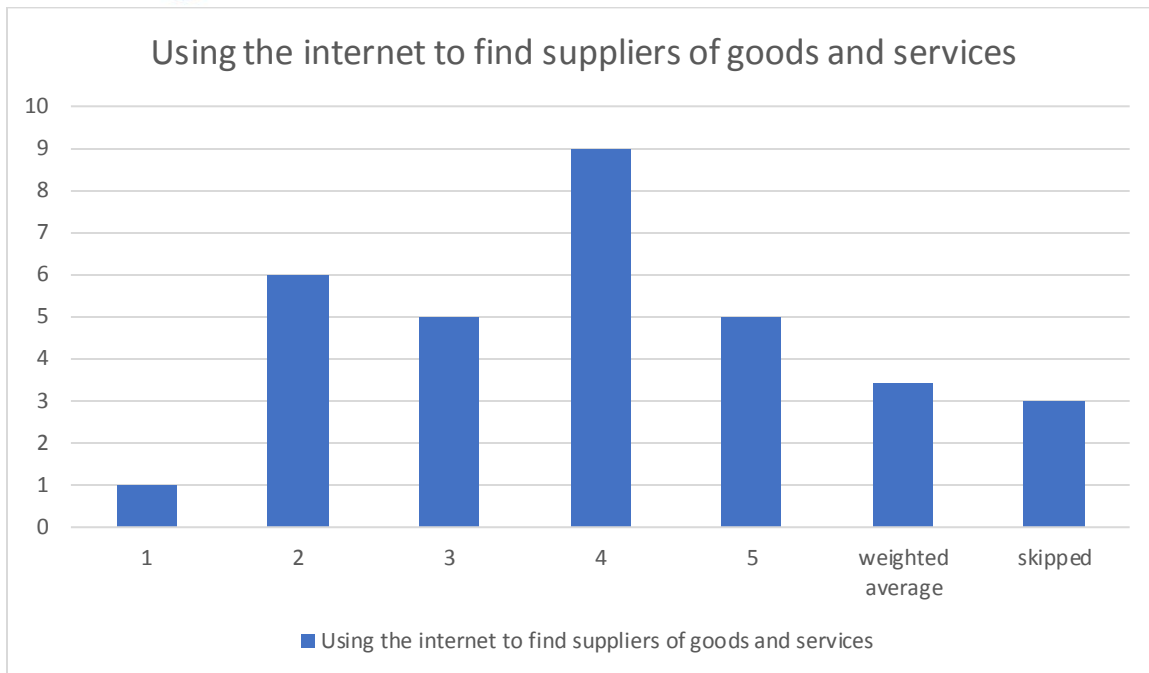


Due to the amount of possible answers the previous table indicates the weighted average of all the participants answers in order to gain a general overview. Following all the possible selections are explained in more detail.

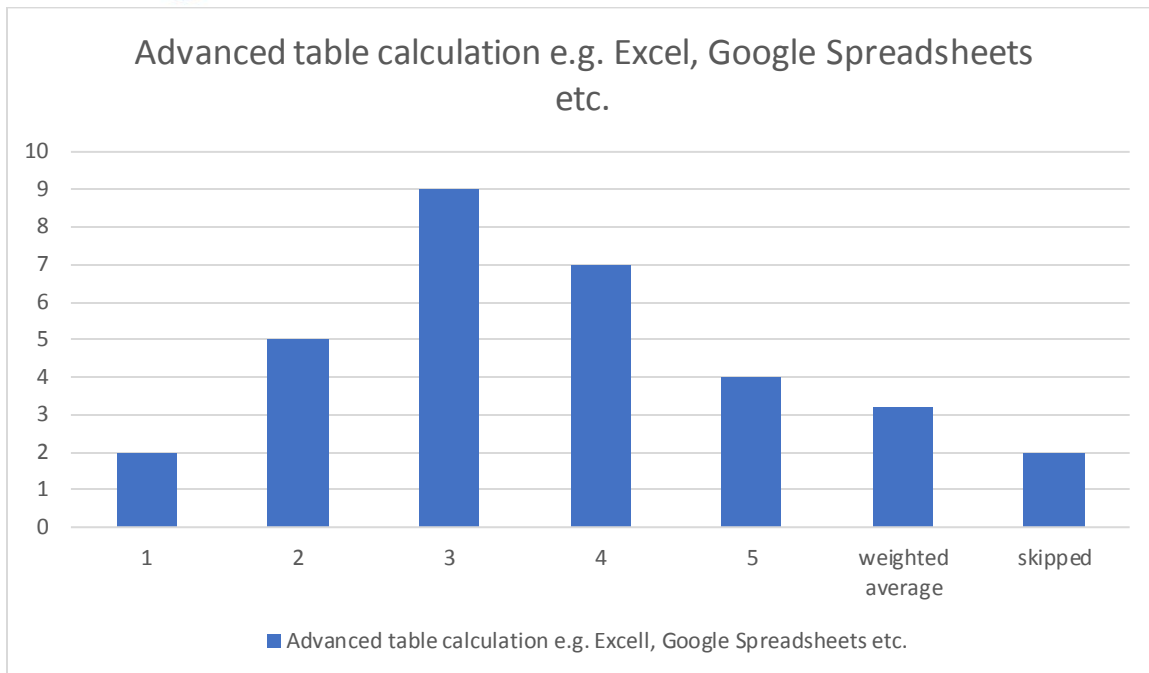
The three skills best mastered by the respondents according to themselves are E-Mail, Social media for business purposes and digital marketing. The three least mastered skills are Cybersecurity, Industry 4.0 and IoT. Data protection remains without answers as the questionnaire failed.



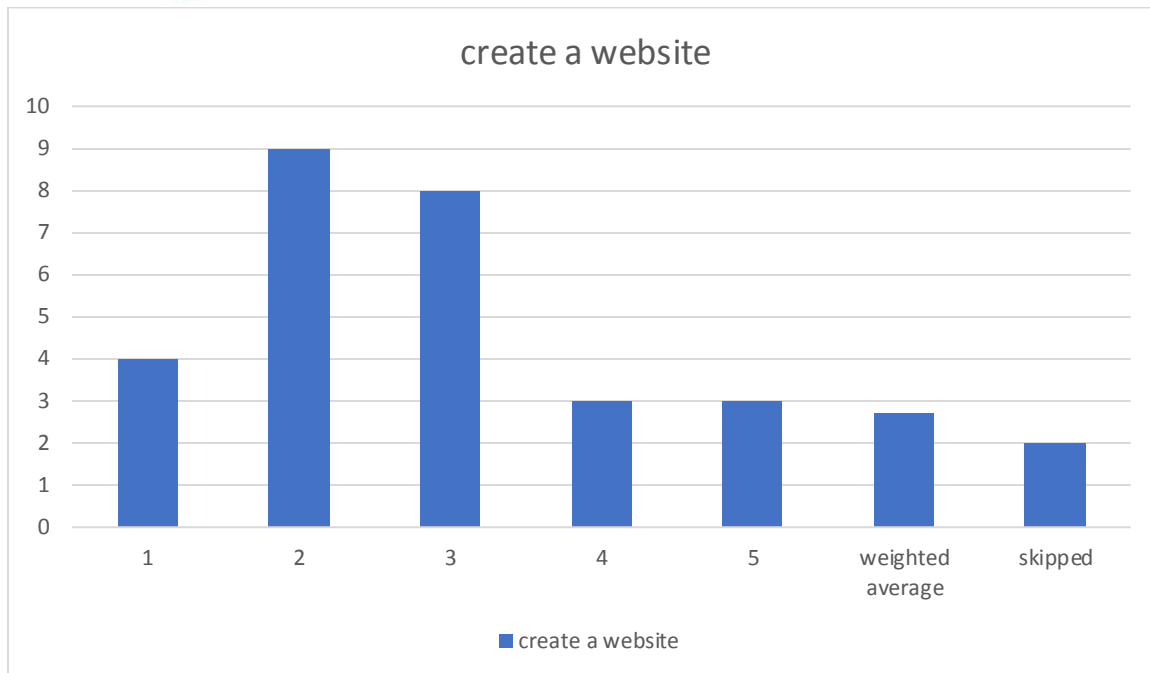
Of the 27 responders, 25,93% (n=7) evaluate their own digital skills regarding project management tools as “1- no skills”. 25,93% (n=7) evaluate their project management skills as “2”, 11,11% (n=3) evaluate their own skills as “3”. 25,93% (n=7) say their skill is at a level 4. 11,11% (n=3) say to be very high skilled in project management. The weighted average gives a skill level of 2,7. This question was skipped by 2 responders.



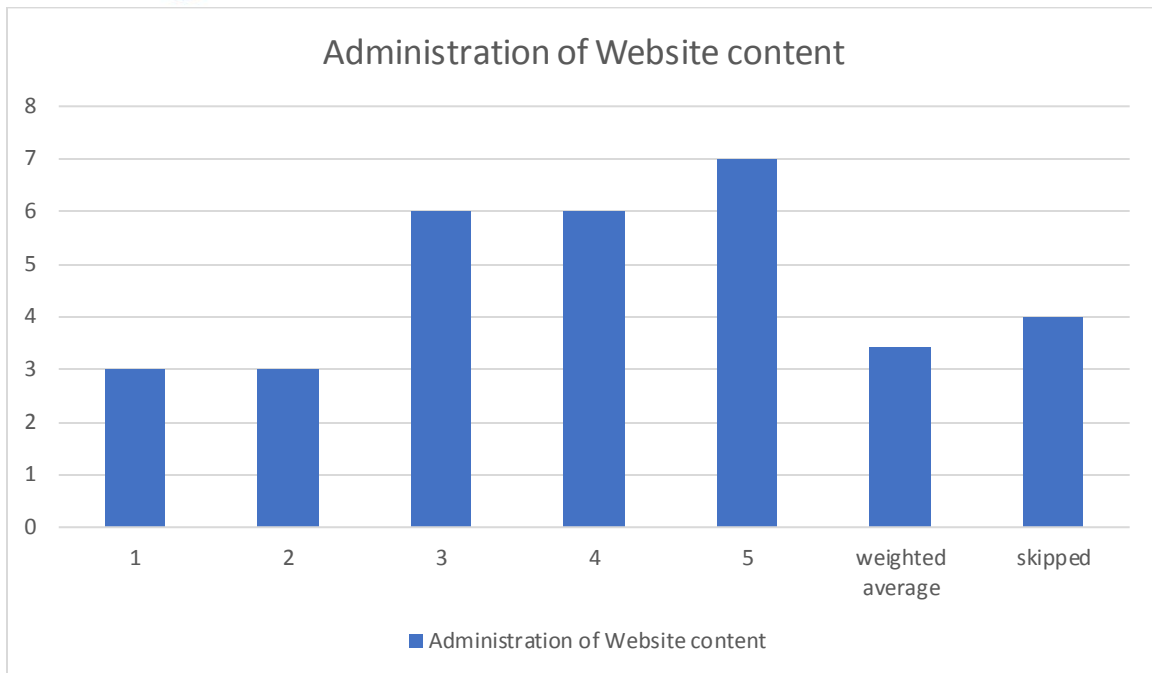
Of the 26 responders, 3,85% (n=1) evaluate their own skills to use the internet to find suppliers of goods and services as “1- no skills”. 23,08% (n=6) evaluate their skills to use the internet to find suppliers of goods and services as “2”, 19,23% (n=5) evaluate their own skills as “3”. 33,33% (n=9) say their skill is at a level 4”. 19,23% (n=5) say to be very high skilled in project management. The weighted average gives a skill level of 3,47. This question was skipped by 3 responders.



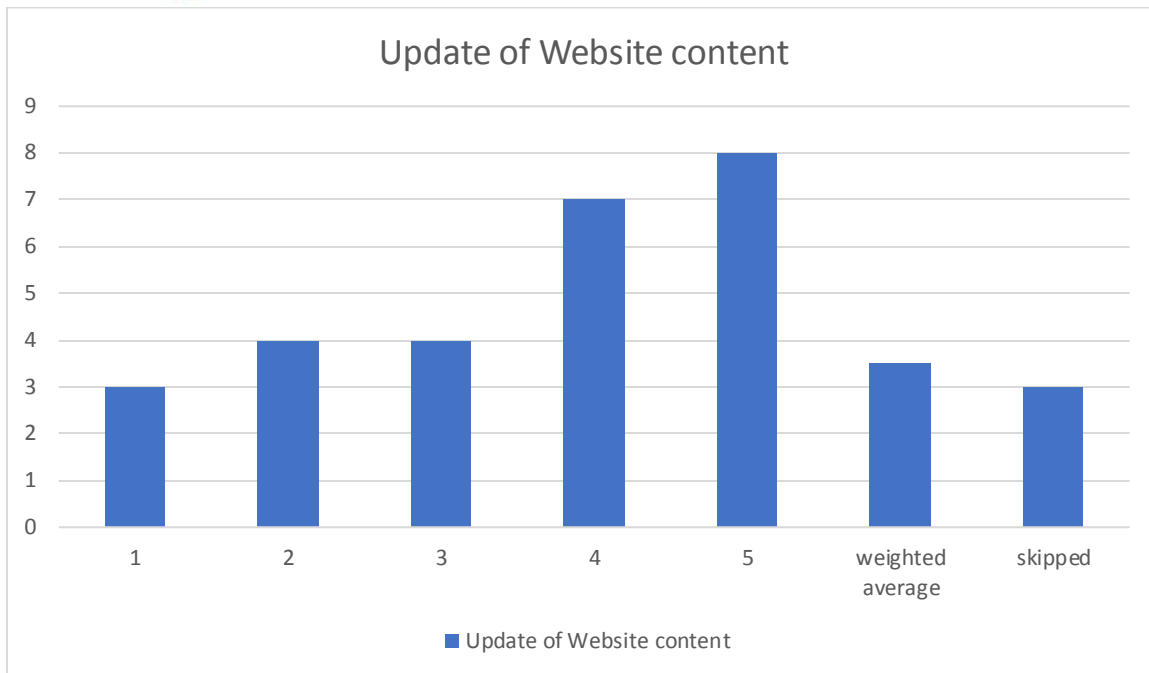
Of the 27 responders, 7,41% (n=2) evaluate their own skills regarding Advanced table calculation e.g. Excel, Google Spreadsheets etc. as “1- no skills”. 18,52% (n=5) evaluate their project management skills as “2”, 33,33% (n=9) evaluate their own skills as “3”. 25,93% (n=7) say their skill is at a „level 4“ level. 14,81% (n=4) say to be very high skilled in advanced table calculations. The weighted average gives a skill level of 3,22. This question was skipped by 2 responders.



Of the 27 responders, 14,18% (n=4) evaluate their own skills to create a website as “1- no skills”. 33,33% (n=9) evaluate their project management skills as “2”, 29,63% (n=8) evaluate their own skills as “3”. 11,11% (n=3) say their skill is at a level 4. 11,11% (n=3) say to be very high skilled in create a website. The weighted average gives a skill level of 2,7. This question was skipped by 2 responders.

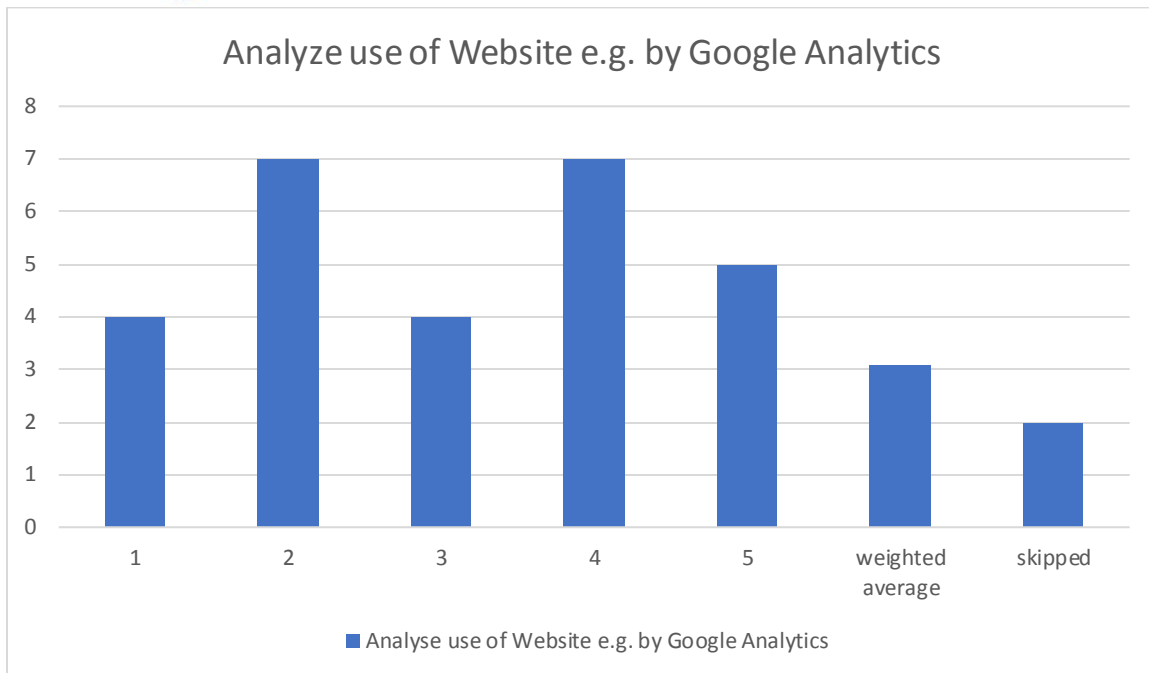


Of the 25 responders, 12,00% (n=3) evaluate their own skills regarding Administration of Website content as “1- no skills”. 12,00% (n=3) evaluate their project management skills as “2”, 24,00% (n=6) evaluate their own skills as “3”. 24,00% (n=6) say their skill is at a level 4. 28,00% (n=7) say to be very high skilled in xxx. The weighted average gives a skill level of 3,44. This question was skipped by 4 responders.

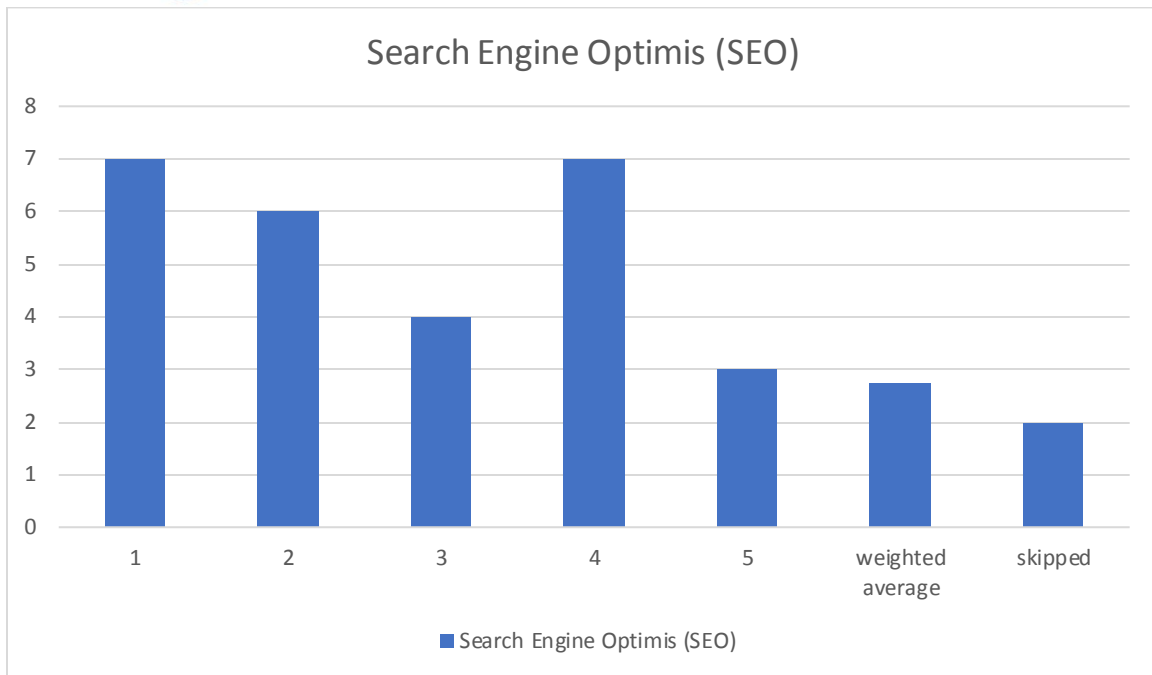


Of the 26 responders, 22,54% (n=3) evaluate their own skills to Update of Website content

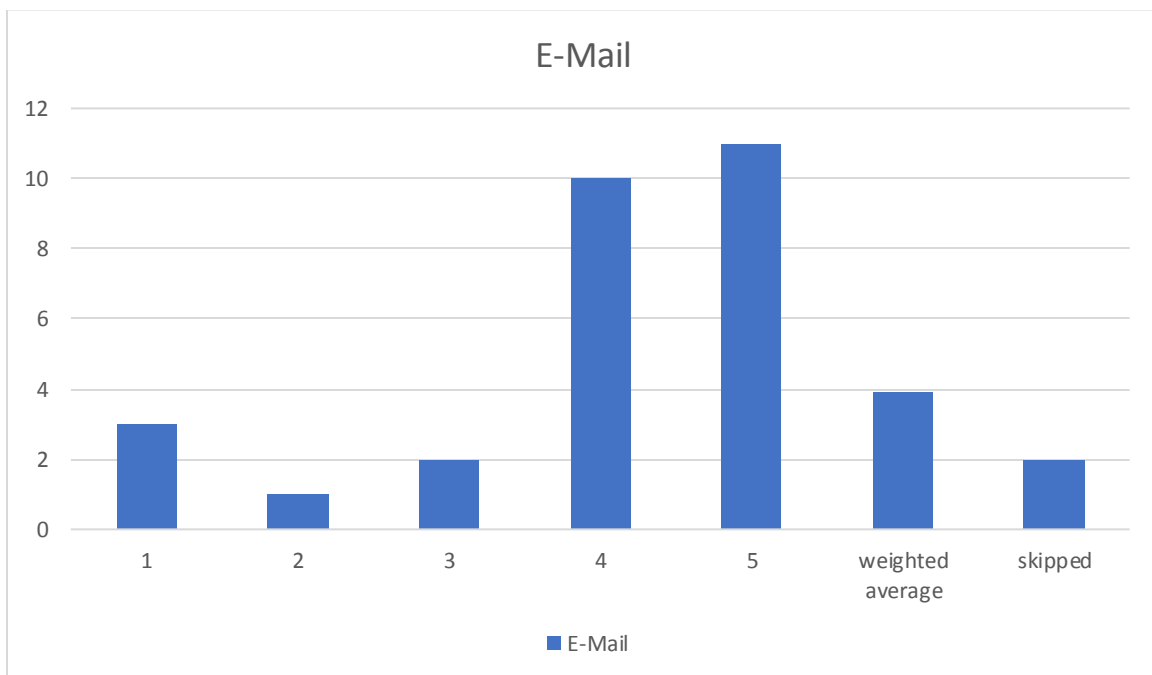
as “1- no skills”. 15,38% (n=4) evaluate their project management skills as “2”, 15,38% (n=4) evaluate their own skills as “3”. 26,92% (n=7) say their skill is at a level 4. 30,77% (n=8) say to be very high skilled in Update of Website content. The weighted average gives a skill level of 3,5. This question was skipped by 3 responders.



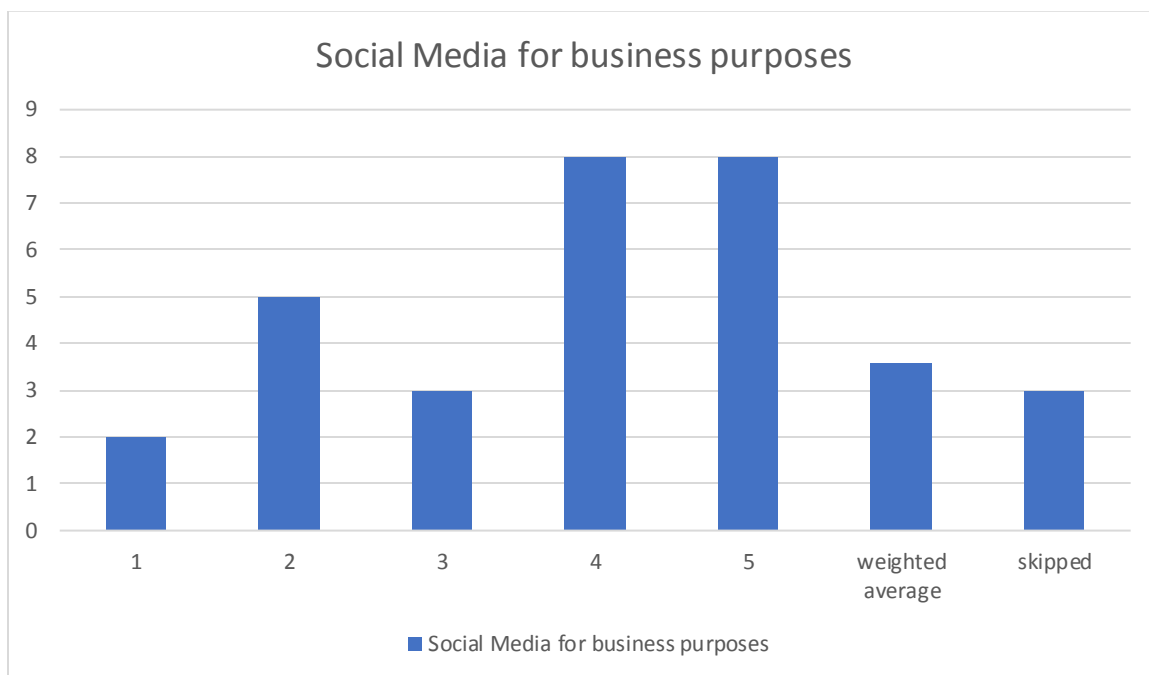
Of the 27 responders, 14,81% (n=4) evaluate their own skills regarding Analyze use of Website e.g. by Google Analytics as “1- no skills”. 25,93% (n=7) evaluate their project management skills as “2”, 14,81% (n=4) evaluate their own skills as “3”. 25,93% (n=7) say their skill is at a level 4. 18,52% (n=5) say to be very high skilled in Analyze use of Website e.g. by Google Analytics. The weighted average gives a skill level of 3,07. This question was skipped by 2 responders.



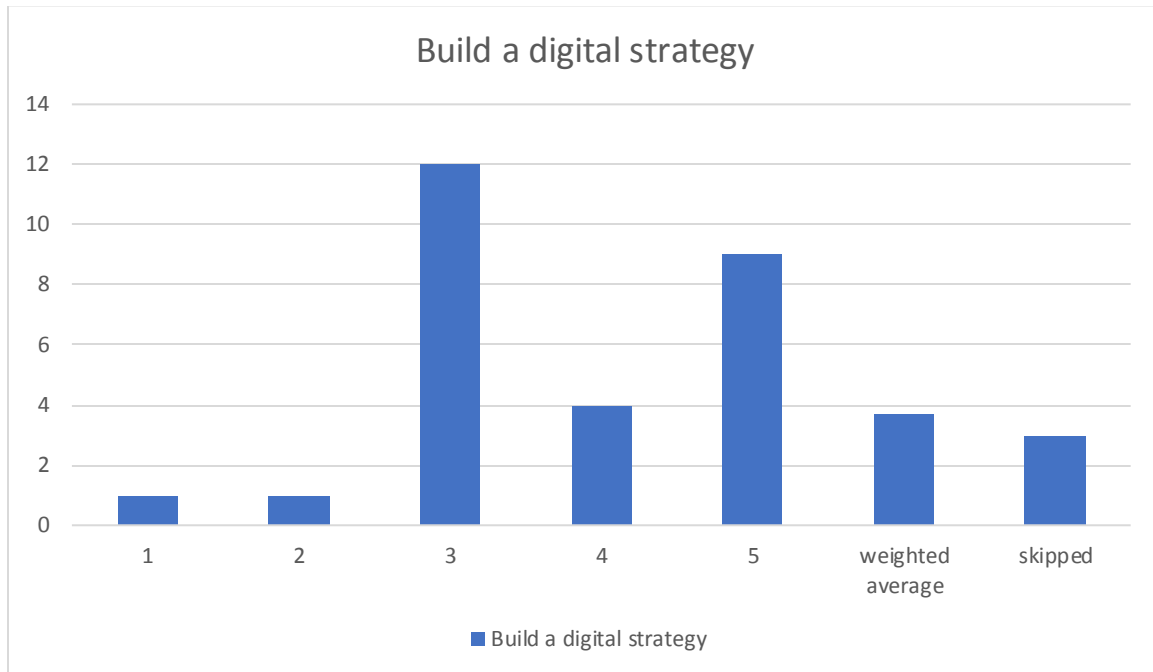
Of the 27 responders, 25,93% (n=7) evaluate their own skills regarding Search Engine Optimis (SEO) as “1- no skills”. 22,22% (n=6) evaluate their project management skills as “2”, 14,81% (n=4) evaluate their own skills as “3”. 25,93% (n=7) say their skill is at a level 4. 11,11% (n=3) say to be very high skilled in SEO. The weighted average gives a skill level of 2,74. This question was skipped by 2 responders.



Of the 27 responders, 11,11% (n=3) evaluate their own skills regarding E-Mail as “1- no skills”. 3,70% (n=1) evaluate their project management skills as “2”, 7,41% (n=2) evaluate their own skills as “3”. 37,04% (n=10) say their skill is at a level 4. 40,74% (n=11) say to be very high skilled in E-Mail. The weighted average gives a skill level of 3,93. This question was skipped by 2 responders.

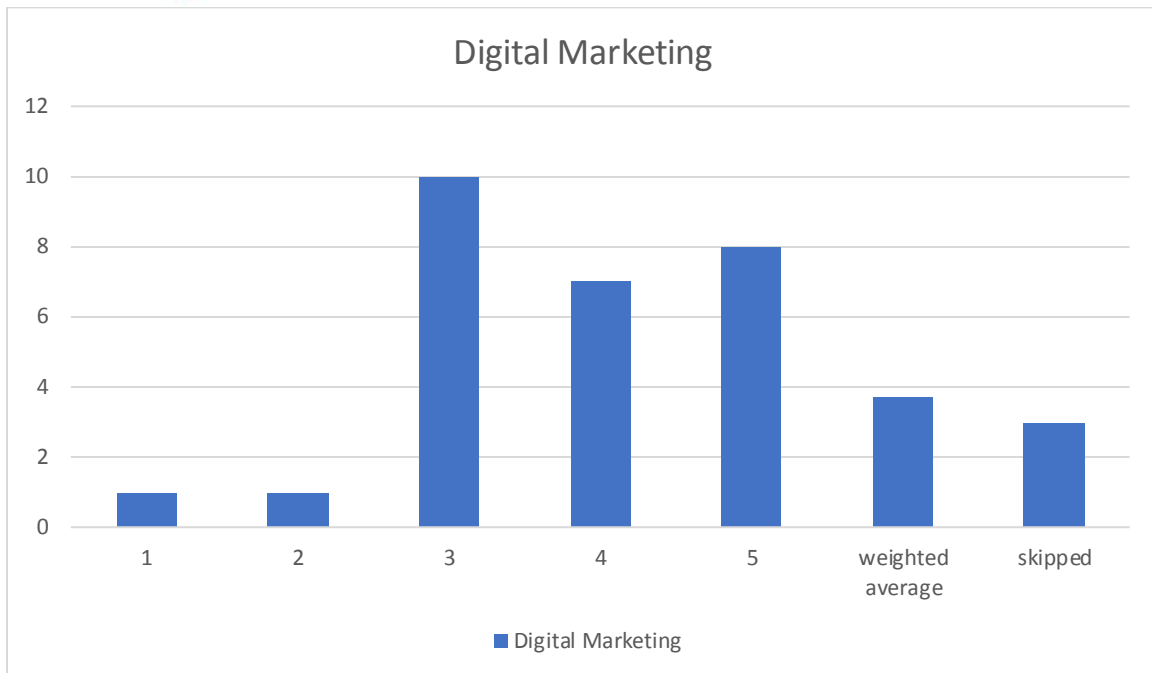


Of the 26 responders, 7,69% (n=2) evaluate their own skills regarding Social Media for business purposes as “1- no skills”. 19,23% (n=5) evaluate their project management skills as “2”, 11,54% (n=3) evaluate their own skills as “3”. 30,77% (n=8) say their skill is at a level 4. 30,77% (n=8) say to be very high skilled in Social Media for business purposes. The weighted average gives a skill level of 3,58. This question was skipped by 3 responders.



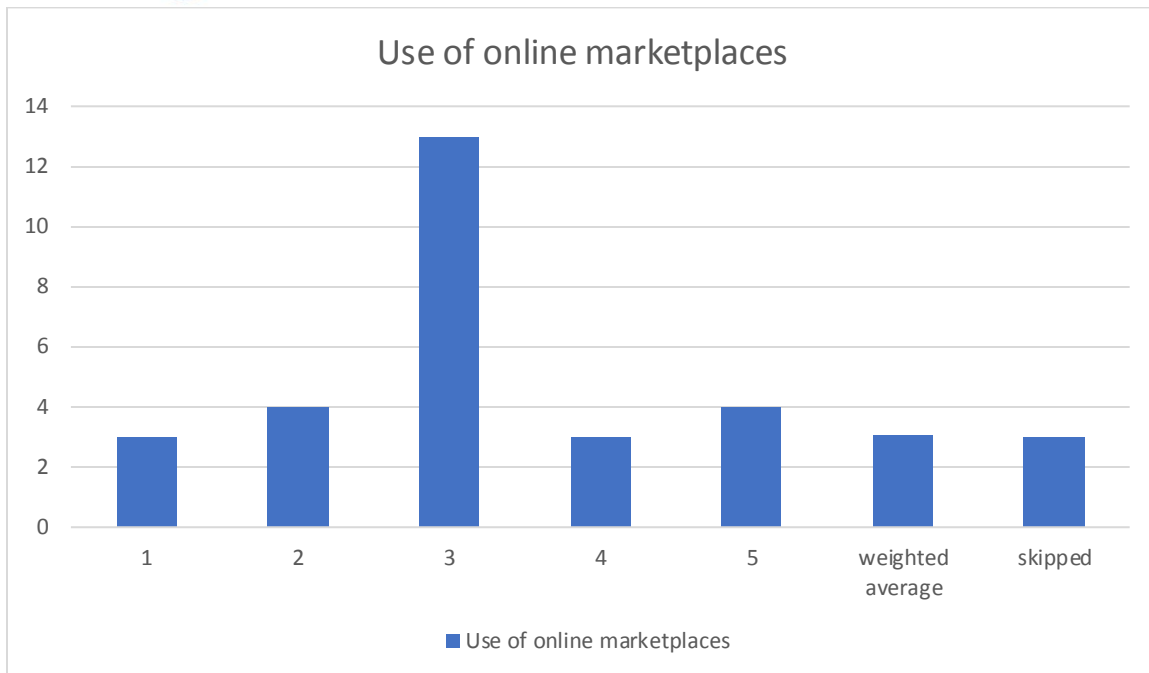
Total r 27

Of the x responders, x% (n=x) evaluate their own skills regarding x as "1- no skills". x% (n=x) evaluate their project management skills as "2", x% (n=x) evaluate their own skills as "3". x% (n=x) say their skill is at a level 4. x% (n=x) say to be very high skilled in x. The weighted average gives a skill level of x. This question was skipped by x responders.



Total r 27

Of the x responders, x% (n=x) evaluate their own skills regarding x as “1- no skills”. x% (n=x) evaluate their project management skills as “2”, x% (n=x) evaluate their own skills as “3”. x% (n=x) say their skill is at a level 4. x% (n=x) say to be very high skilled in x. The weighted average gives a skill level of x. This question was skipped by x responders.



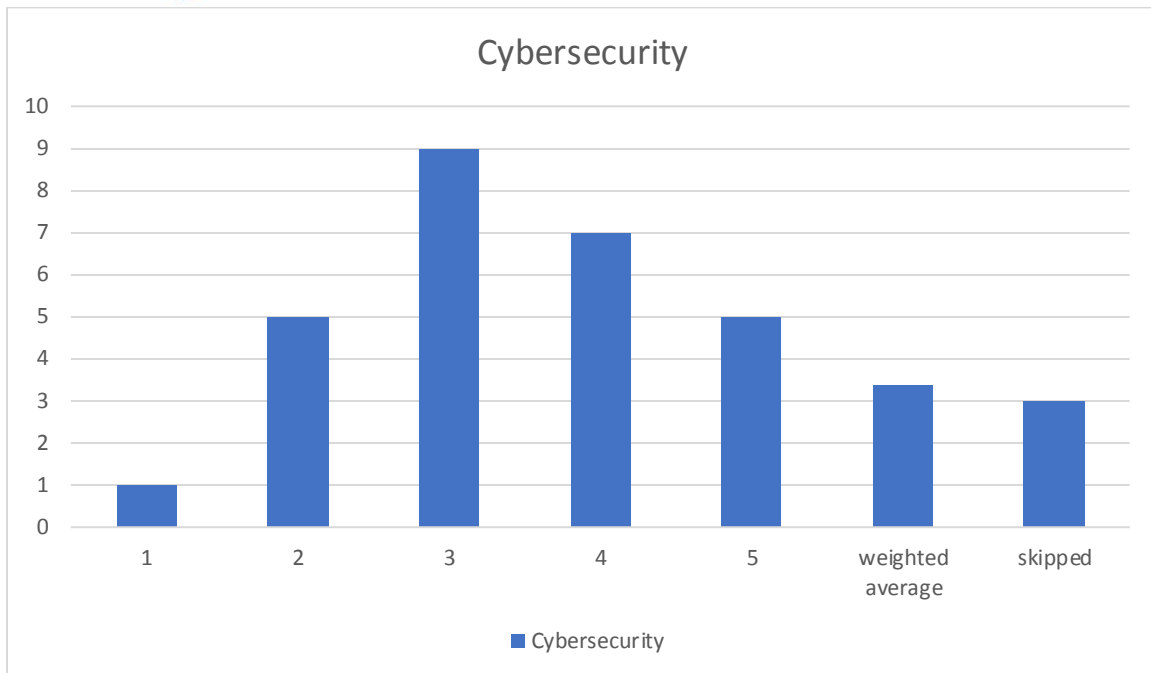
Total r 27

Of the x responders, x% (n=x) evaluate their own skills regarding x as "1- no skills". x% (n=x) evaluate their project management skills as "2", x% (n=x) evaluate their own skills as "3". x% (n=x) say their skill is at a level 4. x% (n=x) say to be very high skilled in x. The weighted average gives a skill level of x. This question was skipped by x responders.



Total r 27

Of the x responders, x% (n=x) evaluate their own skills regarding x as “1- no skills”. x% (n=x) evaluate their project management skills as “2”, x% (n=x) evaluate their own skills as “3”. x% (n=x) say their skill is at a level 4. x% (n=x) say to be very high skilled in x. The weighted average gives a skill level of x. This question was skipped by x responders.



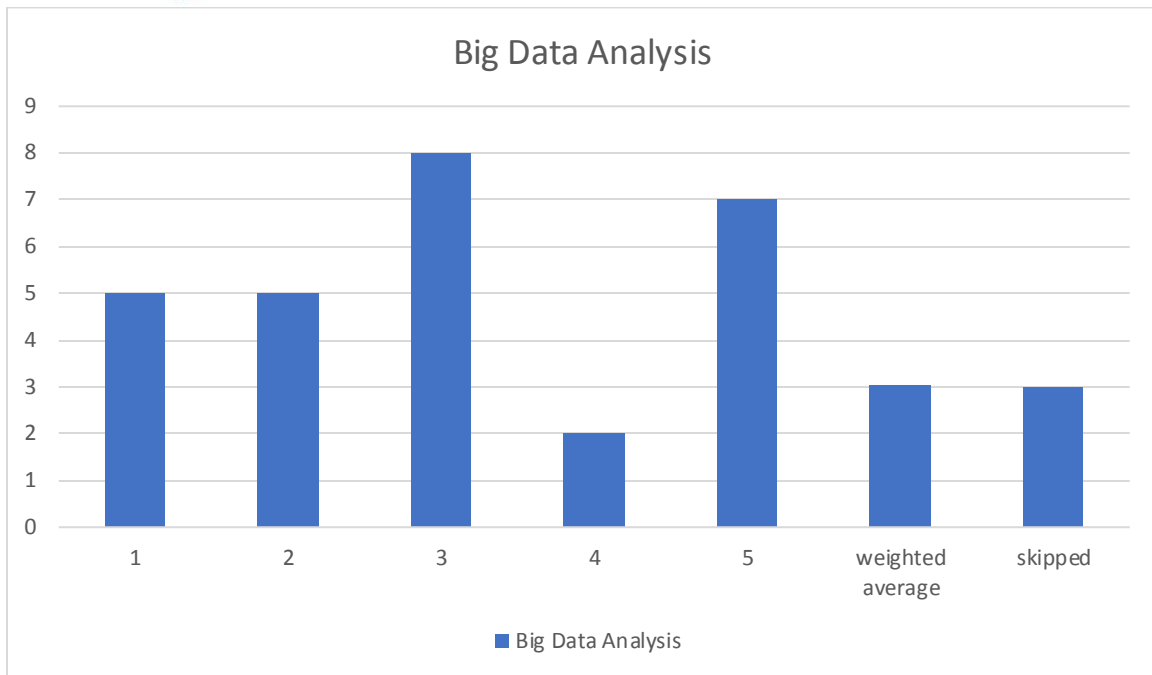
Total r 27

Of the x responders, x% (n=x) evaluate their own skills regarding x as “1- no skills”. x% (n=x) evaluate their project management skills as “2”, x% (n=x) evaluate their own skills as “3”. x% (n=x) say their skill is at a level 4. x% (n=x) say to be very high skilled in x. The weighted average gives a skill level of x. This question was skipped by x responders.



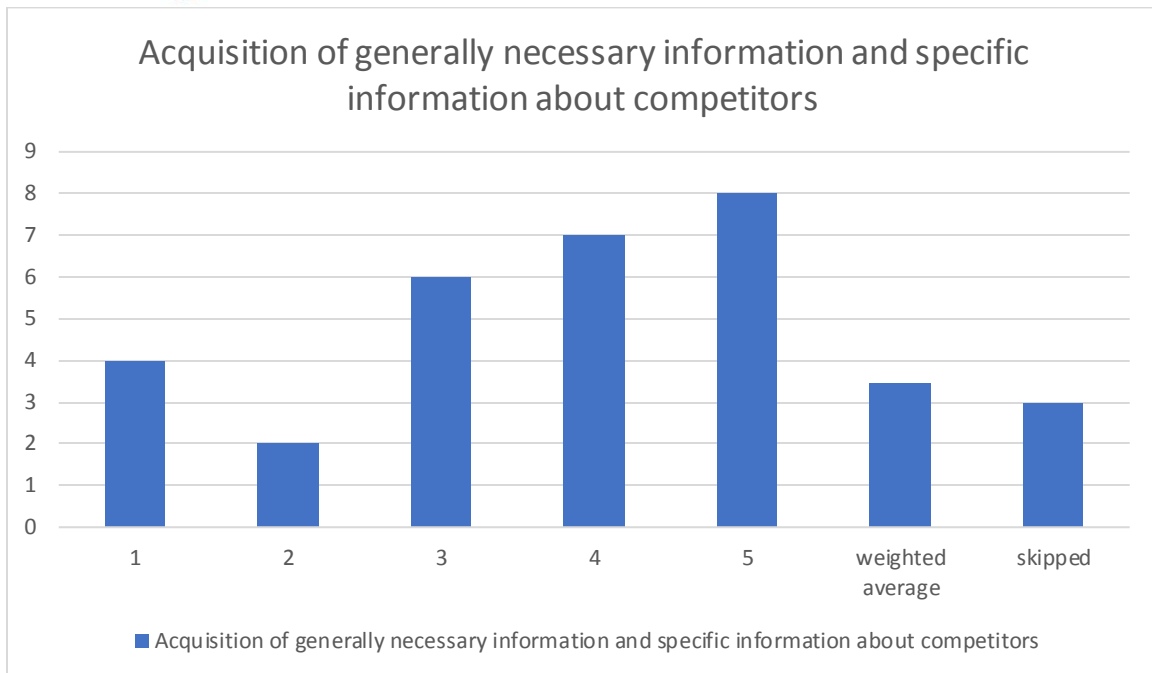
Total r 27

Of the x responders, x% (n=x) evaluate their own skills regarding x as “1- no skills”. x% (n=x) evaluate their project management skills as “2”, x% (n=x) evaluate their own skills as “3”. x% (n=x) say their skill is at a level 4. x% (n=x) say to be very high skilled in x. The weighted average gives a skill level of x. This question was skipped by x responders.



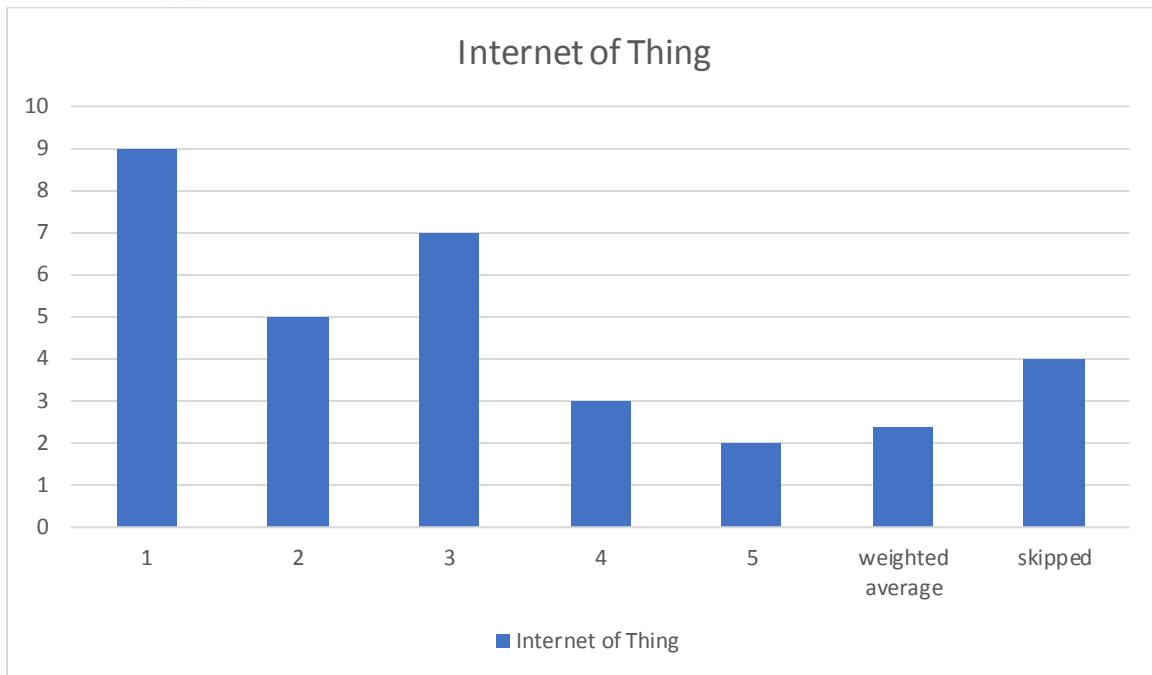
Total r 27

Of the x responders, x% (n=x) evaluate their own skills regarding x as "1- no skills". x% (n=x) evaluate their project management skills as "2", x% (n=x) evaluate their own skills as "3". x% (n=x) say their skill is at a level 4. x% (n=x) say to be very high skilled in x. The weighted average gives a skill level of x. This question was skipped by x responders.



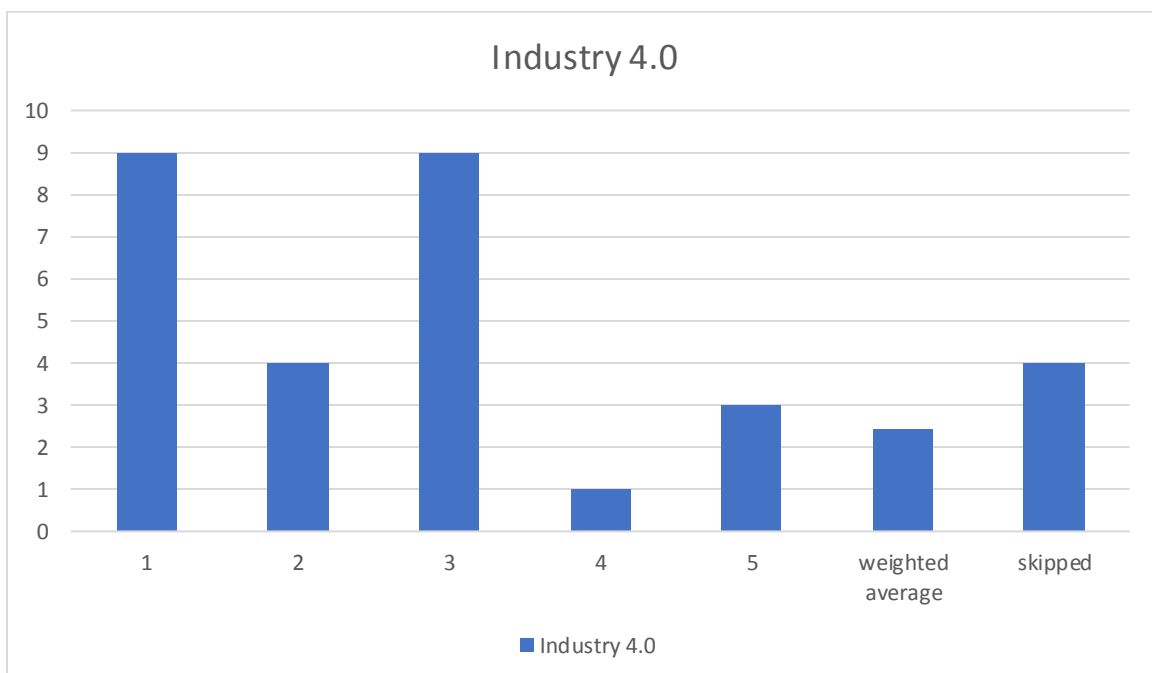
Total r 27

Of the x responders, x% (n=x) evaluate their own skills regarding x as “1- no skills”. x% (n=x) evaluate their project management skills as “2”, x% (n=x) evaluate their own skills as “3”. x% (n=x) say their skill is at a level 4. x% (n=x) say to be very high skilled in x. The weighted average gives a skill level of x. This question was skipped by x responders.



Total r 26

Of the x responders, x% (n=x) evaluate their own skills regarding x as “1- no skills”. x% (n=x) evaluate their project management skills as “2”, x% (n=x) evaluate their own skills as “3”. x% (n=x) say their skill is at a level 4. x% (n=x) say to be very high skilled in x. The weighted average gives a skill level of x. This question was skipped by x responders.



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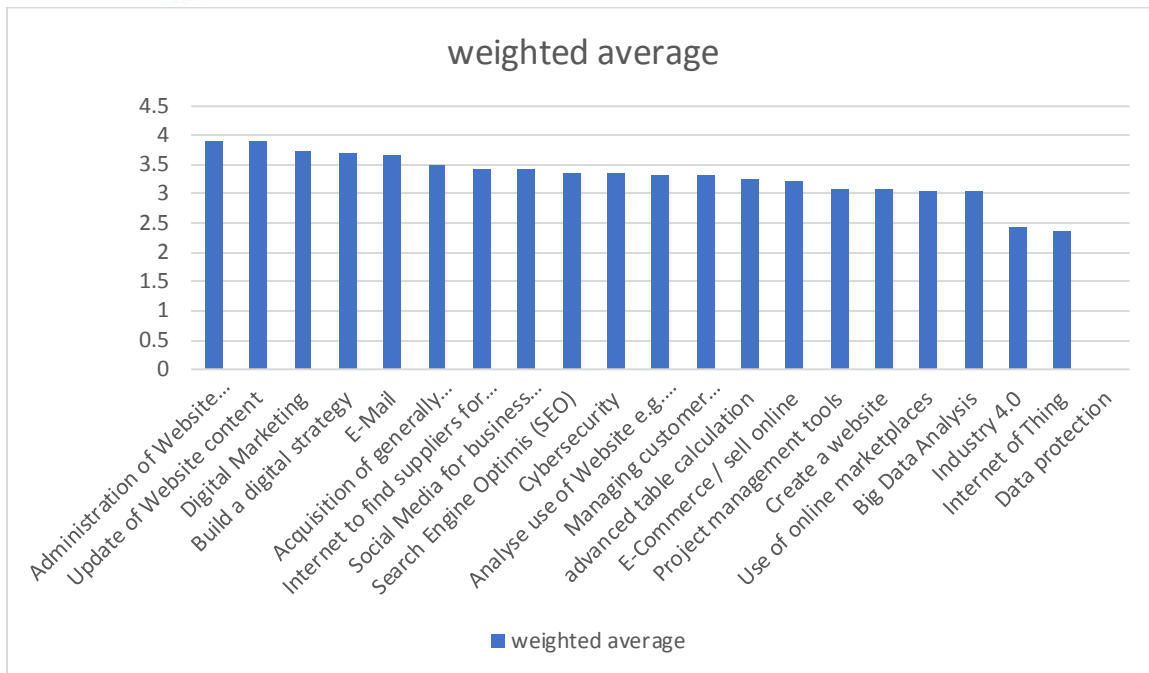


Total r 26

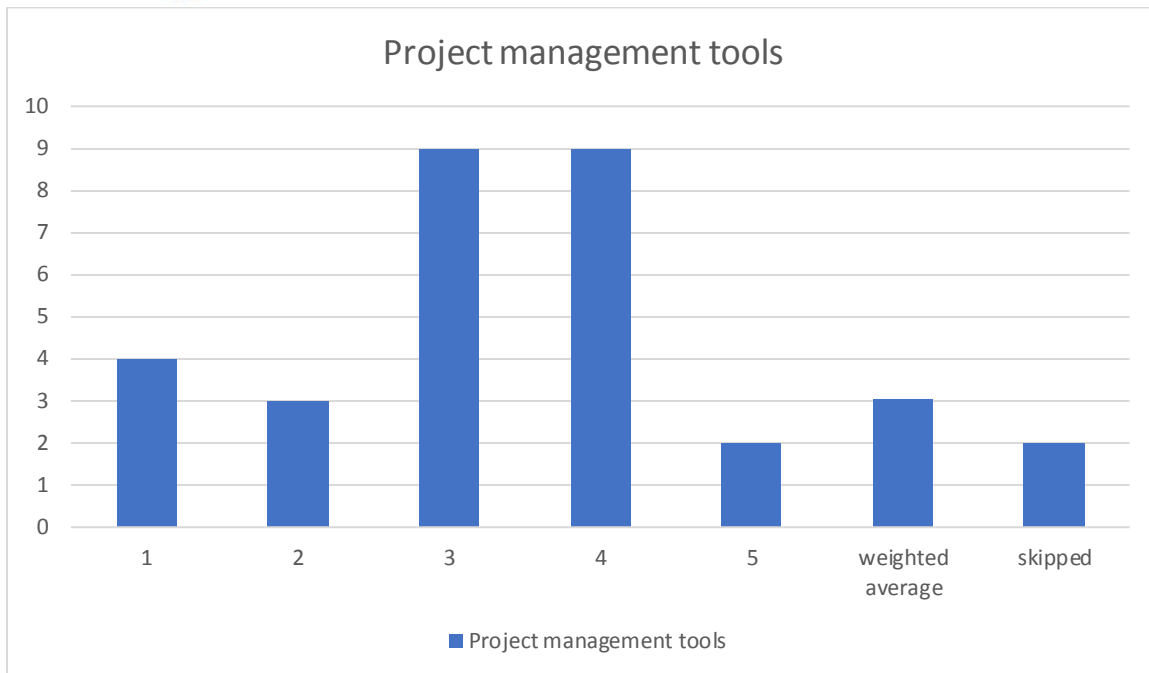
Of the x responders, $x\%$ ($n=x$) evaluate their own skills regarding x as “1- no skills”. $x\%$ ($n=x$) evaluate their project management skills as “2”, $x\%$ ($n=x$) evaluate their own skills as “3”. $x\%$ ($n=x$) say their skill is at a level 4. $x\%$ ($n=x$) say to be very high skilled in x . The weighted average gives a skill level of x . This question was skipped by x responders.

Question 28

Please evaluate on a scale of 1 = “not at all important” to 5 = “very important”: How important these skills are for a successful internationalization of a business?

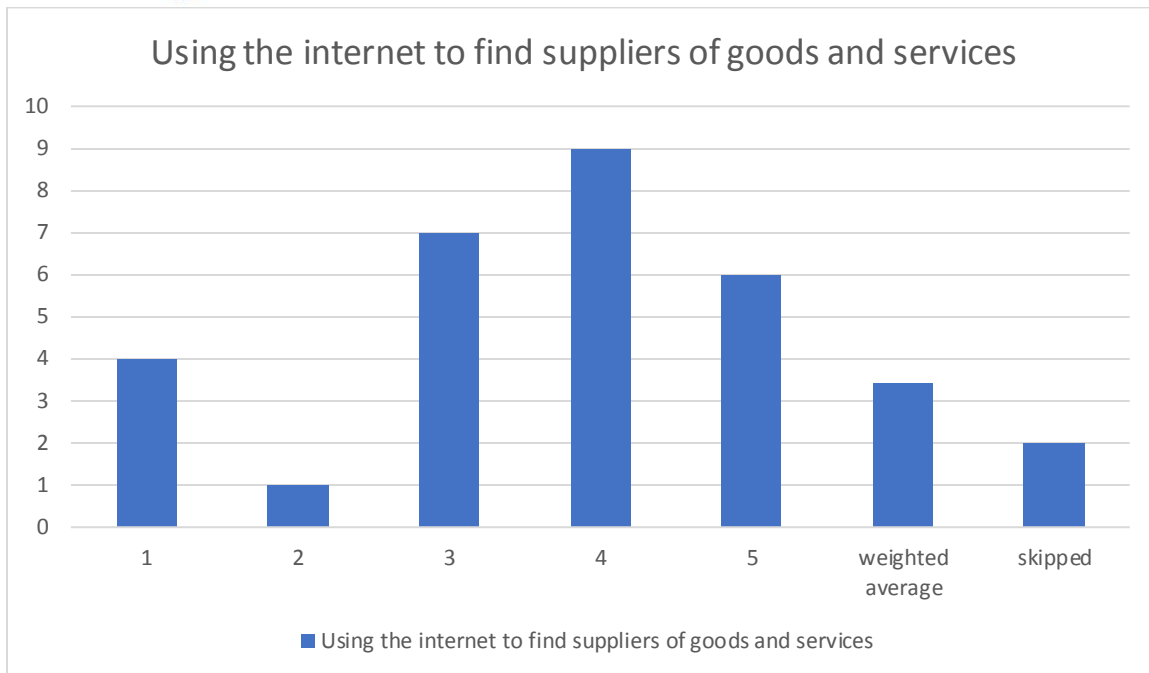


The three skills considered to be most important for a successful internationalization of a business by the respondents are Administration of Website content, Updating of Website content, and digital marketing strategy. The three skills least important for a successful internationalization of a business according to the respondents are Big Data Analysis, Industry 4.0 and IoT. Data protection remains without answers as the questionnaire failed.



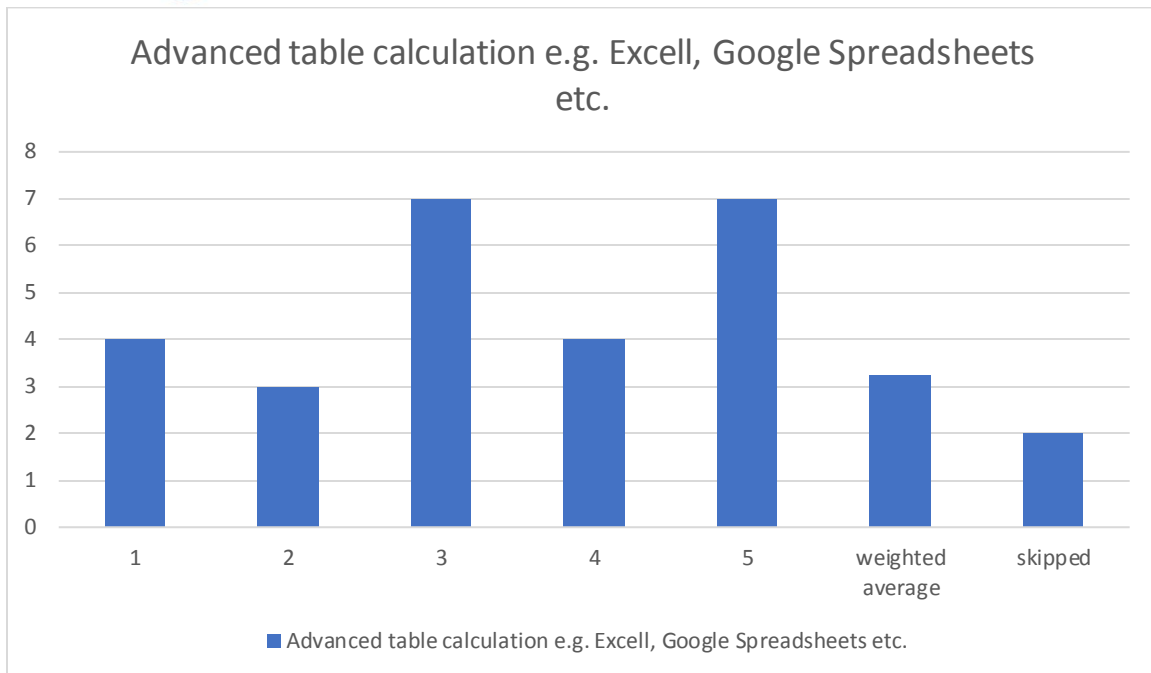
Number of respondents: 27

Of the x responders, x% (n=x) evaluate the importance of xxx essential for a successful internationalization of a business. own skills regarding x as "1- no skills". x% (n=x) evaluate their project management skills as "2", x% (n=x) evaluate their own skills as "3". x% (n=x) say their skill is at a level 4. x% (n=x) say to be very high skilled in x. The weighted average gives a skill level of x. This question was skipped by x responders.



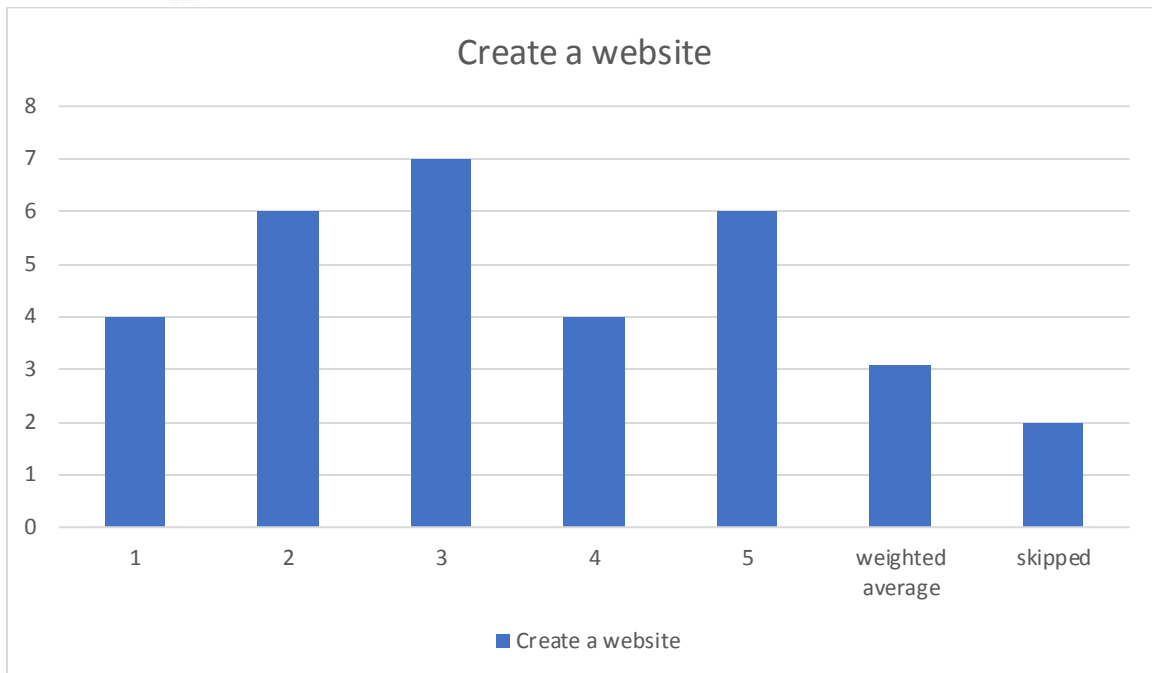
Total respondents: 27

Of the x responders, x% (n=x) evaluate the importance of xxx essential for a successful internationalization of a business. own skills regarding x as "1- no skills". x% (n=x) evaluate their project management skills as "2", x% (n=x) evaluate their own skills as "3". x% (n=x) say their skill is at a level 4. x% (n=x) say to be very high skilled in x. The weighted average gives a skill level of x. This question was skipped by x responders.



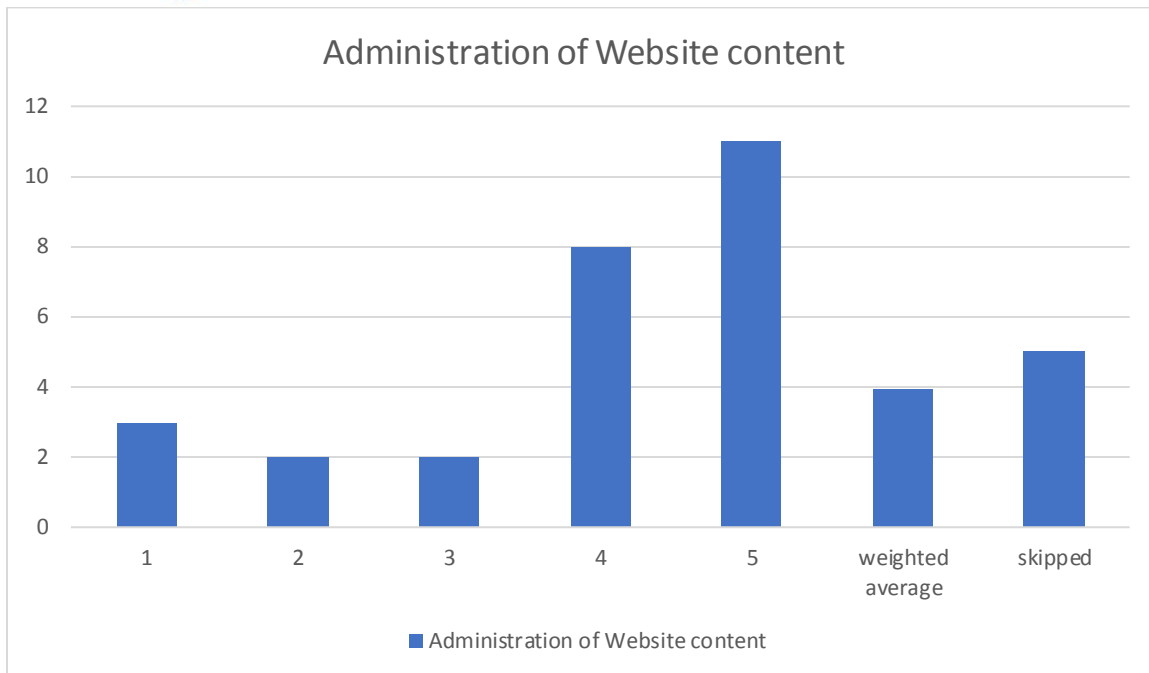
Total respondents: 27

Of the x responders, x% (n=x) evaluate the importance of xxx essential for a successful internationalization of a business. own skills regarding x as "1- no skills". x% (n=x) evaluate their project management skills as "2", x% (n=x) evaluate their own skills as "3". x% (n=x) say their skill is at a level 4. x% (n=x) say to be very high skilled in x. The weighted average gives a skill level of x. This question was skipped by x responders.



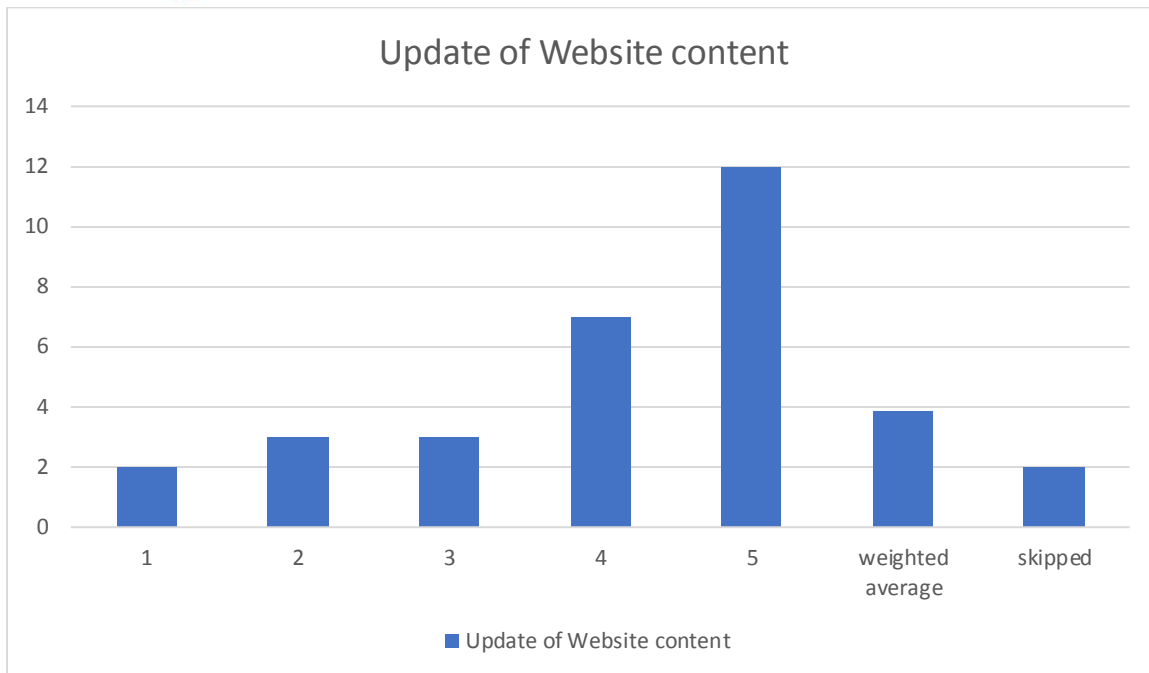
Total respondents: 27

Of the x responders, x% (n=x) evaluate the importance of xxx essential for a successful internationalization of a business. own skills regarding x as "1- no skills". x% (n=x) evaluate their project management skills as "2", x% (n=x) evaluate their own skills as "3". x% (n=x) say their skill is at a level 4. x% (n=x) say to be very high skilled in x. The weighted average gives a skill level of x. This question was skipped by x responders.



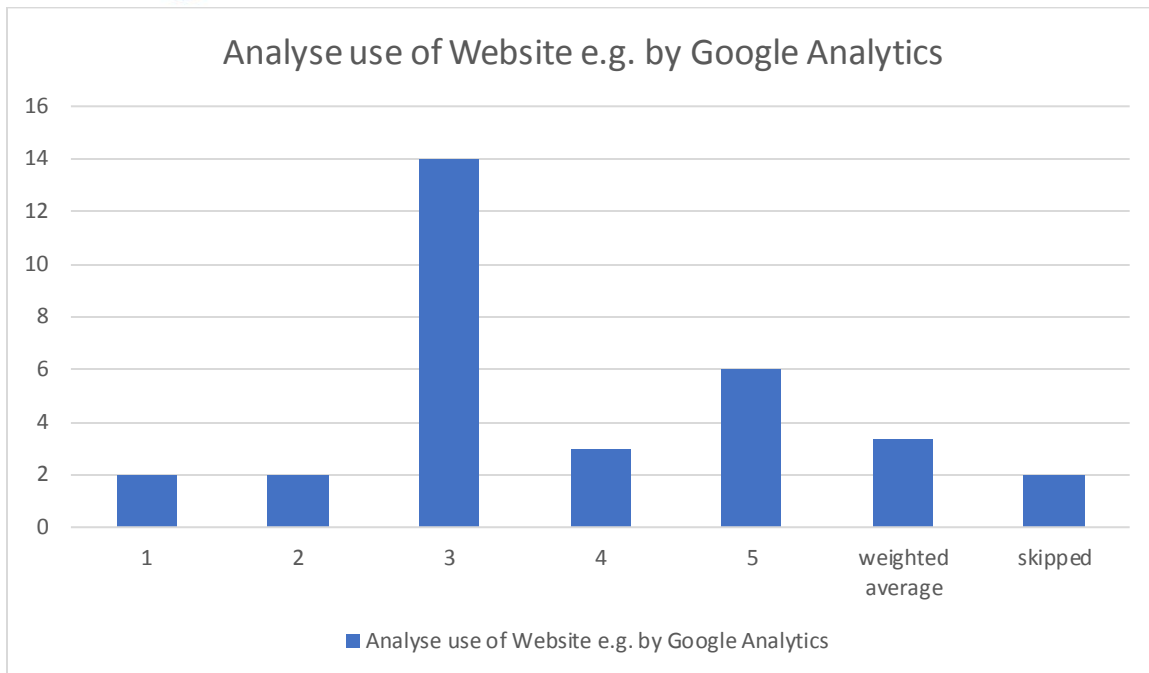
Total respondents: 26

Of the x responders, x% (n=x) evaluate the importance of xxx essential for a successful internationalization of a business. own skills regarding x as "1- no skills". x% (n=x) evaluate their project management skills as "2", x% (n=x) evaluate their own skills as "3". x% (n=x) say their skill is at a level 4. x% (n=x) say to be very high skilled in x. The weighted average gives a skill level of x. This question was skipped by x responders.



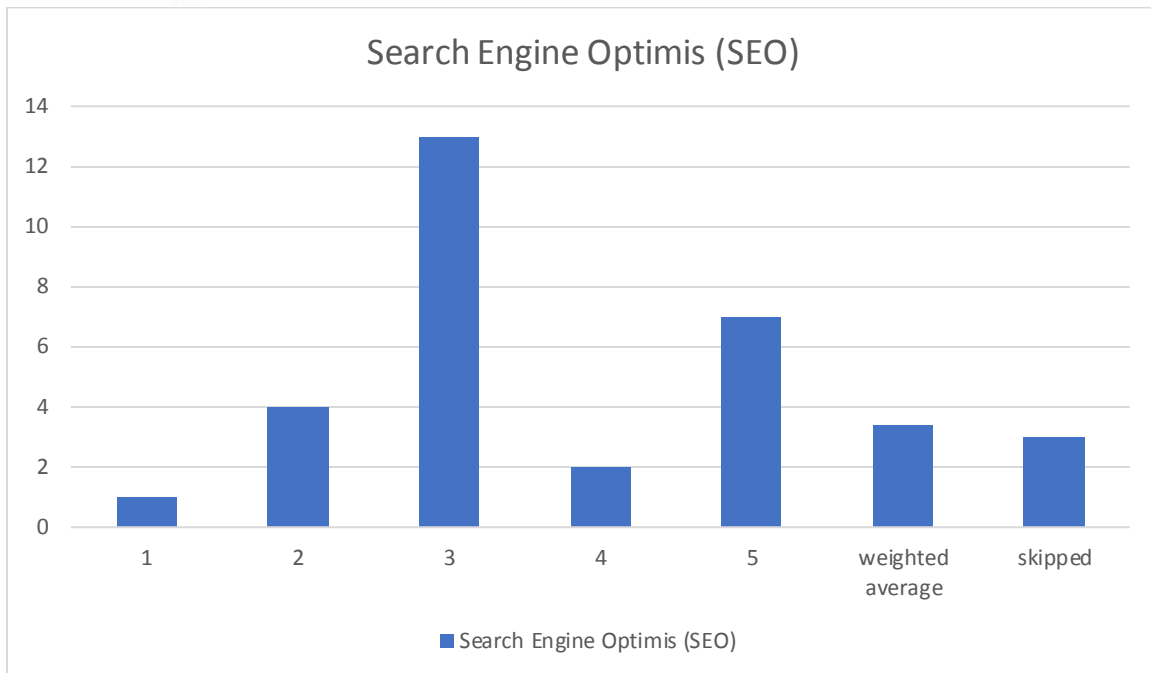
Total r:27

Of the x responders, x% (n=x) evaluate the importance of xxx essential for a successful internationalization of a business. own skills regarding x as "1- no skills". x% (n=x) evaluate their project management skills as "2", x% (n=x) evaluate their own skills as "3". x% (n=x) say their skill is at a level 4. x% (n=x) say to be very high skilled in x. The weighted average gives a skill level of x. This question was skipped by x responders.



Total r 27

Of the x responders, x% (n=x) evaluate the importance of xxx essential for a successful internationalization of a business. own skills regarding x as "1- no skills". x% (n=x) evaluate their project management skills as "2", x% (n=x) evaluate their own skills as "3". x% (n=x) say their skill is at a level 4. x% (n=x) say to be very high skilled in x. The weighted average gives a skill level of x. This question was skipped by x responders.



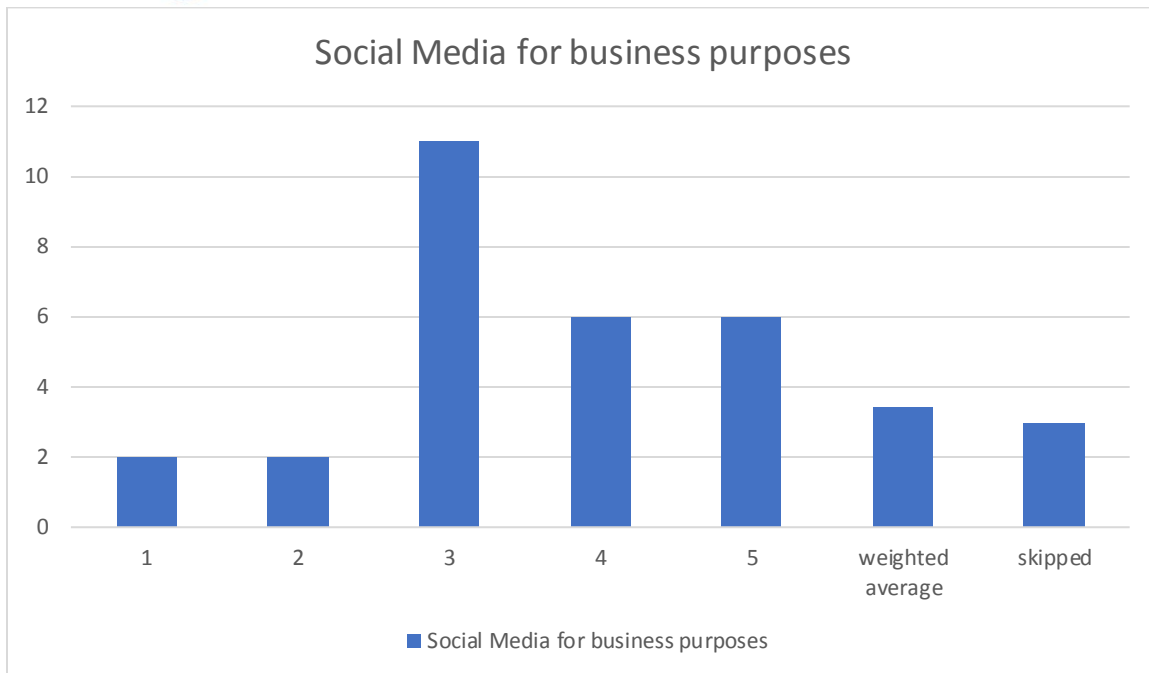
Total r 27

Of the x responders, x% (n=x) evaluate the importance of xxx essential for a successful internationalization of a business. own skills regarding x as "1- no skills". x% (n=x) evaluate their project management skills as "2", x% (n=x) evaluate their own skills as "3". x% (n=x) say their skill is at a level 4. x% (n=x) say to be very high skilled in x. The weighted average gives a skill level of x. This question was skipped by x responders.



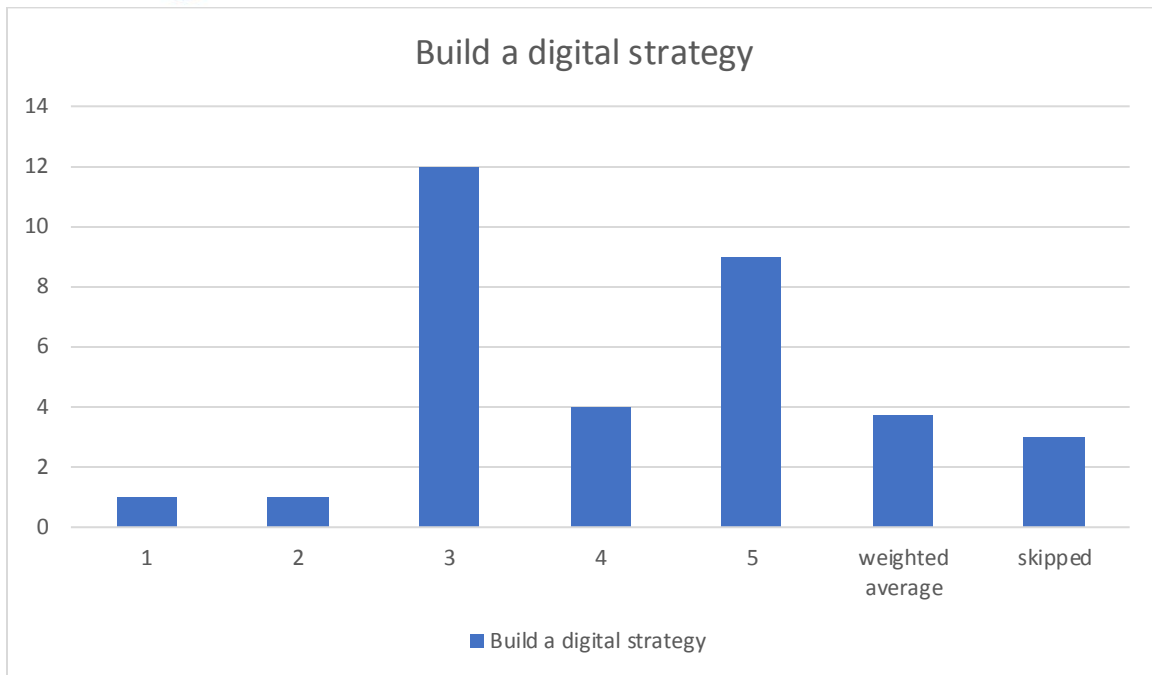
Total r: 27

Of the x responders, x% (n=x) evaluate the importance of xxx essential for a successful internationalization of a business. own skills regarding x as "1- no skills". x% (n=x) evaluate their project management skills as "2", x% (n=x) evaluate their own skills as "3". x% (n=x) say their skill is at a level 4. x% (n=x) say to be very high skilled in x. The weighted average gives a skill level of x. This question was skipped by x responders.



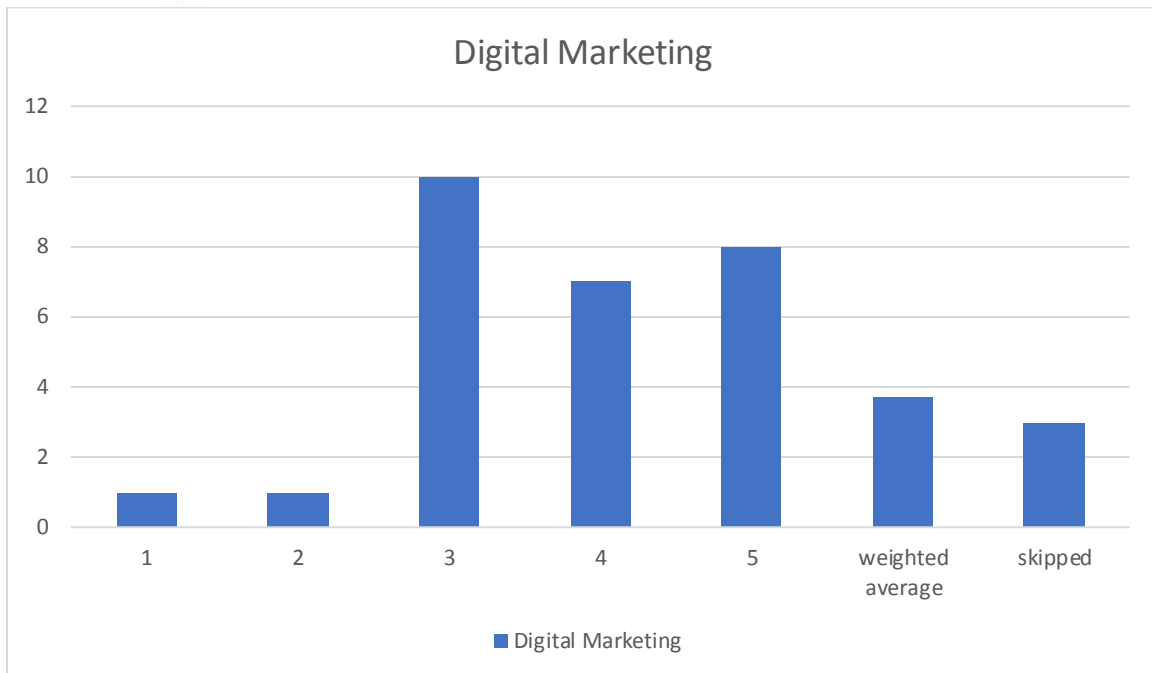
Total r: 27

Of the x responders, x% (n=x) evaluate the importance of xxx essential for a successful internationalization of a business. own skills regarding x as "1- no skills". x% (n=x) evaluate their project management skills as "2", x% (n=x) evaluate their own skills as "3". x% (n=x) say their skill is at a level 4. x% (n=x) say to be very high skilled in x. The weighted average gives a skill level of x. This question was skipped by x responders.



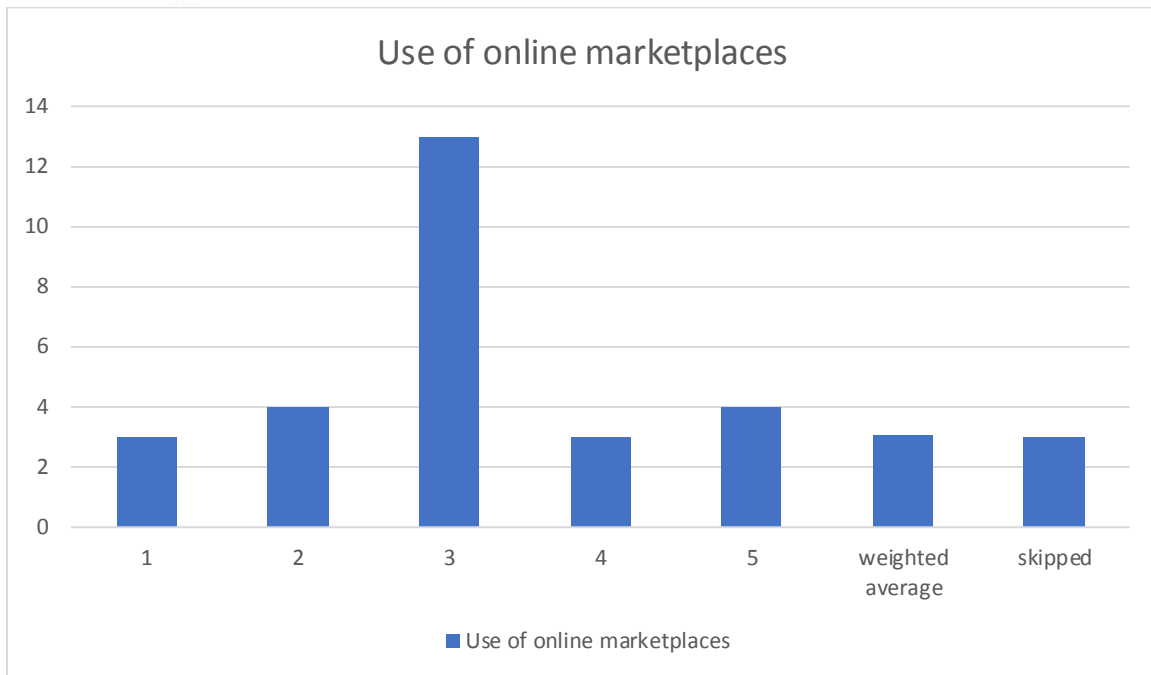
Total r 27

Of the x responders, x% (n=x) evaluate the importance of xxx essential for a successful internationalization of a business. own skills regarding x as "1- no skills". x% (n=x) evaluate their project management skills as "2", x% (n=x) evaluate their own skills as "3". x% (n=x) say their skill is at a level 4. x% (n=x) say to be very high skilled in x. The weighted average gives a skill level of x. This question was skipped by x responders.



Total r 27

Of the x responders, x% (n=x) evaluate the importance of xxx essential for a successful internationalization of a business. own skills regarding x as "1- no skills". x% (n=x) evaluate their project management skills as "2", x% (n=x) evaluate their own skills as "3". x% (n=x) say their skill is at a level 4. x% (n=x) say to be very high skilled in x. The weighted average gives a skill level of x. This question was skipped by x responders.



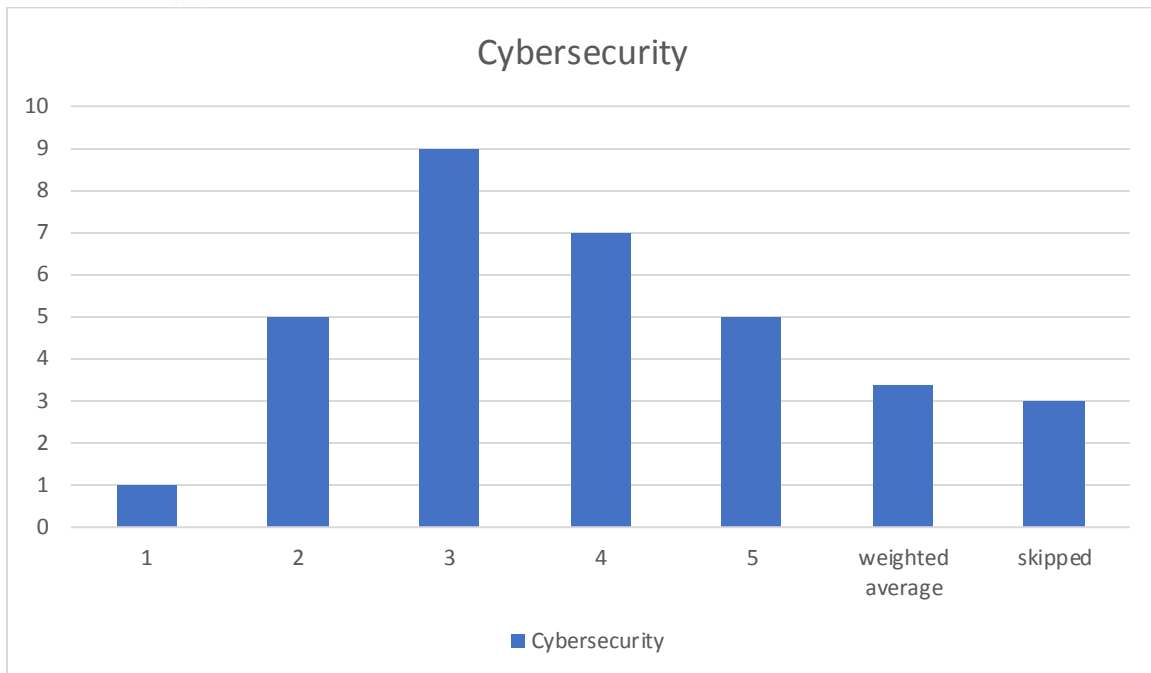
Total r 27

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Total r 27

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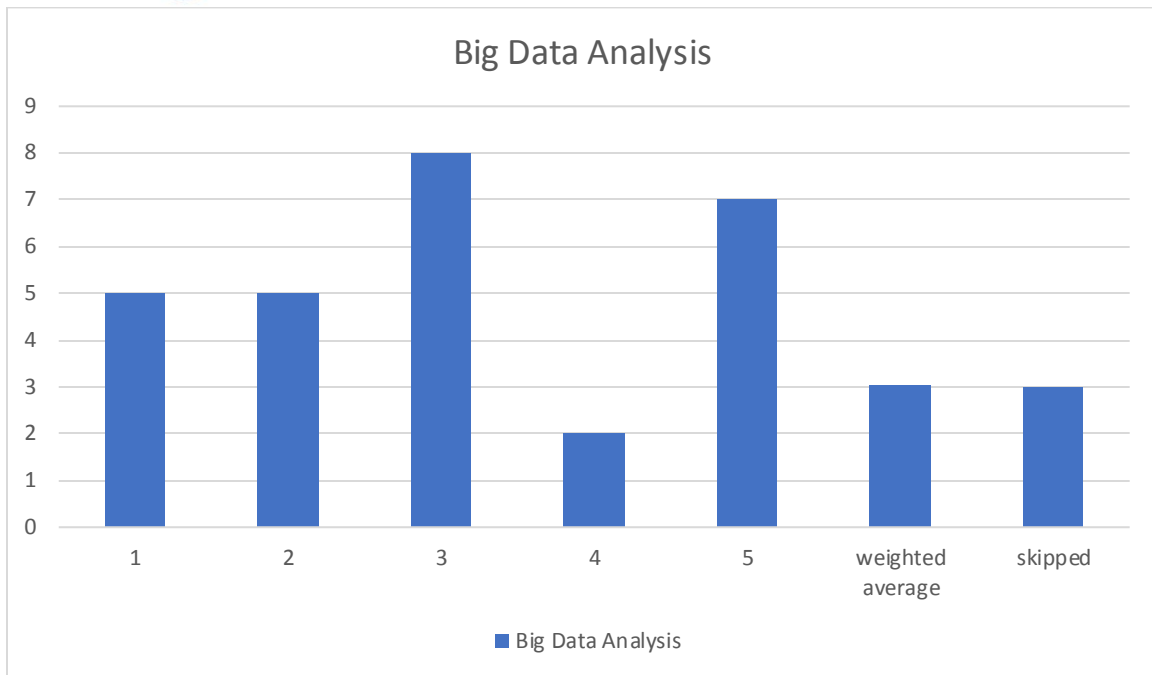
Total r 27

Of the x responders, x% (n=x) evaluate the importance of xxx essential for a successful internationalization of a business. own skills regarding x as "1- no skills". x% (n=x) evaluate their project management skills as "2", x% (n=x) evaluate their own skills as "3". x% (n=x) say their skill is at a level 4. x% (n=x) say to be very high skilled in x. The weighted average gives a skill level of x. This question was skipped by x responders.



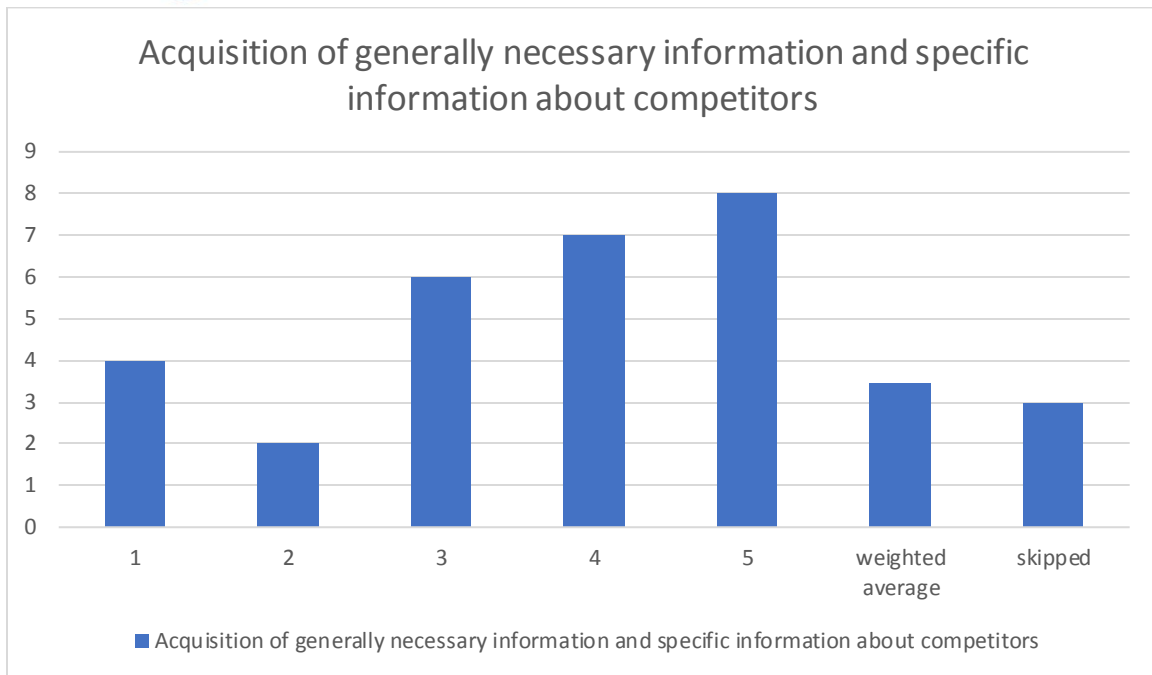
Total r 27

Of the x responders, x% (n=x) evaluate the importance of xxx essential for a successful internationalization of a business. own skills regarding x as "1- no skills". x% (n=x) evaluate their project management skills as "2", x% (n=x) evaluate their own skills as "3". x% (n=x) say their skill is at a level 4. x% (n=x) say to be very high skilled in x. The weighted average gives a skill level of x. This question was skipped by x responders.



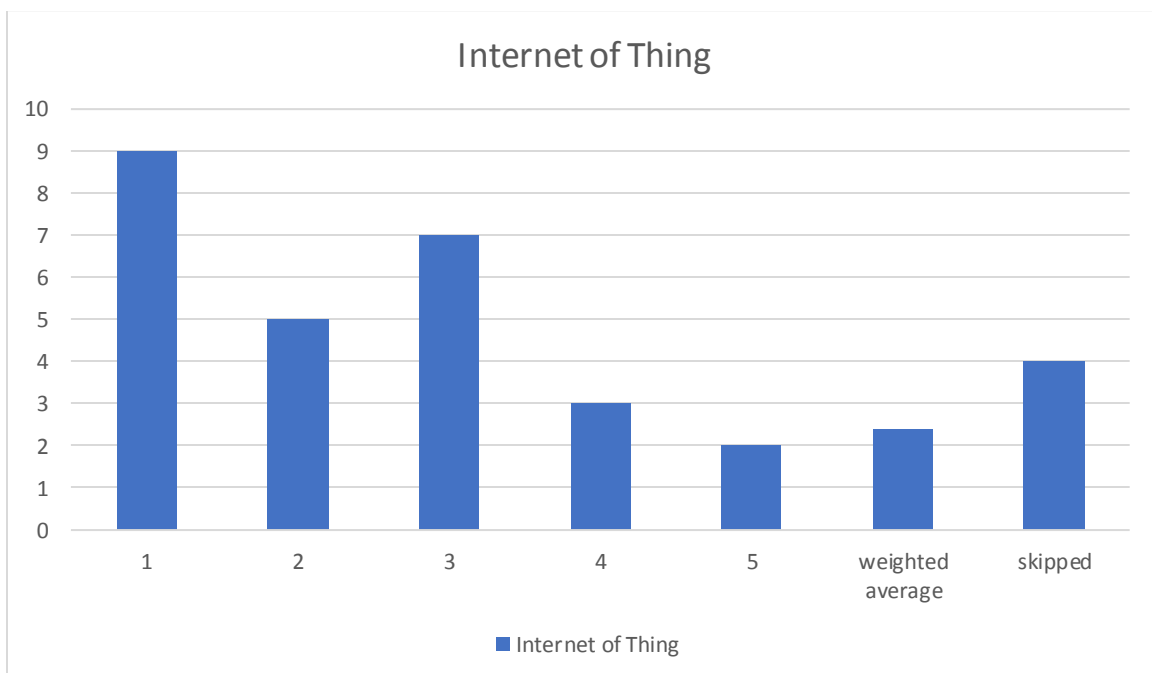
Total r 27

Of the x responders, x% (n=x) evaluate the importance of xxx essential for a successful internationalization of a business. own skills regarding x as "1- no skills". x% (n=x) evaluate their project management skills as "2", x% (n=x) evaluate their own skills as "3". x% (n=x) say their skill is at a level 4. x% (n=x) say to be very high skilled in x. The weighted average gives a skill level of x. This question was skipped by x responders.



Total r 27

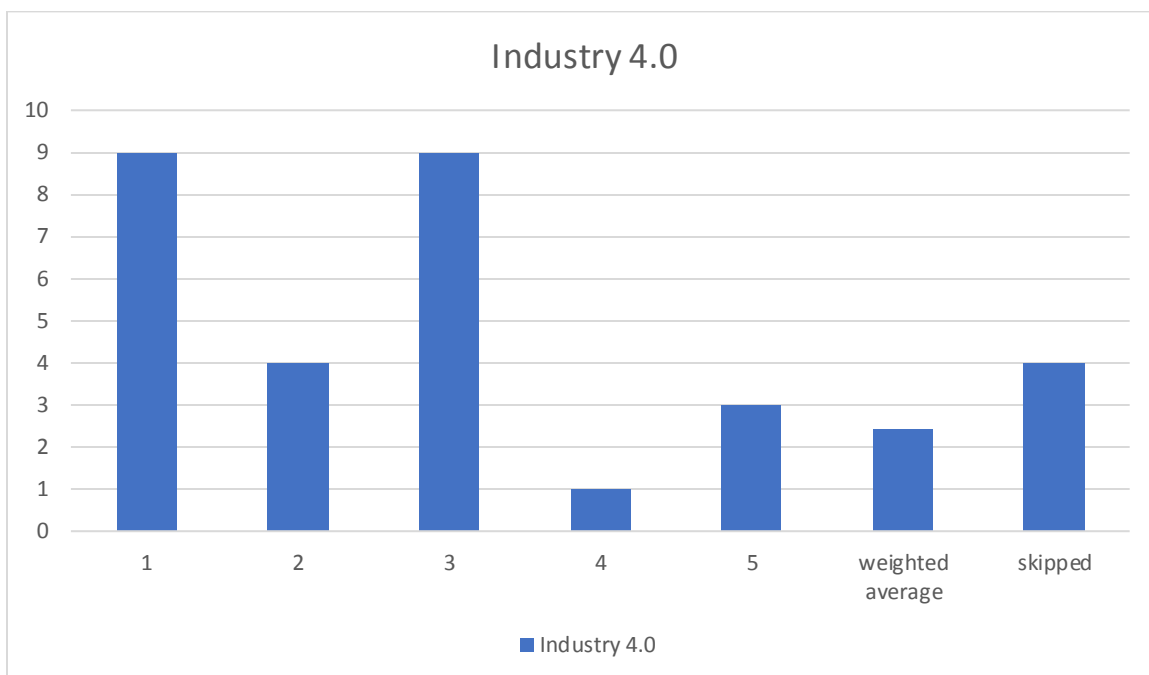
Of the x responders, x% (n=x) evaluate the importance of xxx essential for a successful internationalization of a business. own skills regarding x as "1- no skills". x% (n=x) evaluate their project management skills as "2", x% (n=x) evaluate their own skills as "3". x% (n=x) say their skill is at a level 4. x% (n=x) say to be very high skilled in x. The weighted average gives a skill level of x. This question was skipped by x responders.



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Total r 26

Of the x responders, x% (n=x) evaluate the importance of xxx essential for a successful internationalization of a business. own skills regarding x as “1- no skills”. x% (n=x) evaluate their project management skills as “2”, x% (n=x) evaluate their own skills as “3”. x% (n=x) say their skill is at a level 4. x% (n=x) say to be very high skilled in x. The weighted average gives a skill level of x. This question was skipped by x responders.



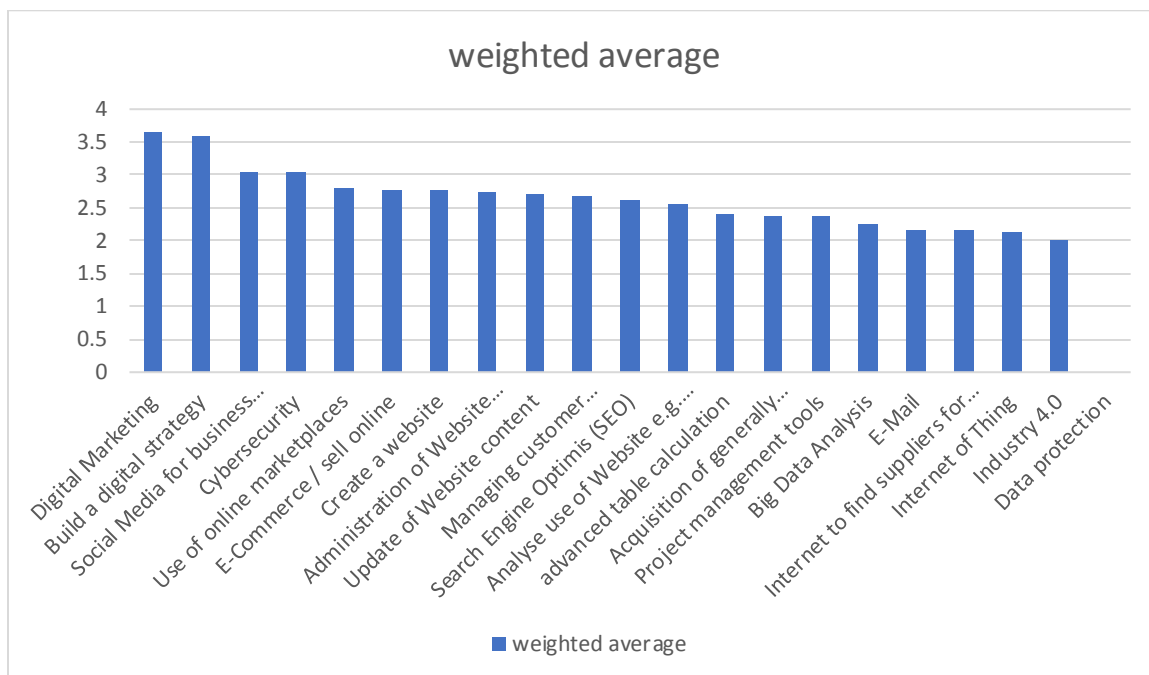
Total r 26

Of the x responders, x% (n=x) evaluate the importance of xxx essential for a successful internationalization of a business. own skills regarding x as “1- no skills”. x% (n=x) evaluate their project management skills as “2”, x% (n=x) evaluate their own skills as “3”. x% (n=x) say their skill is at a level 4. x% (n=x) say to be very high skilled in x. The weighted average gives a skill level of x. This question was skipped by x responders.

Question 29

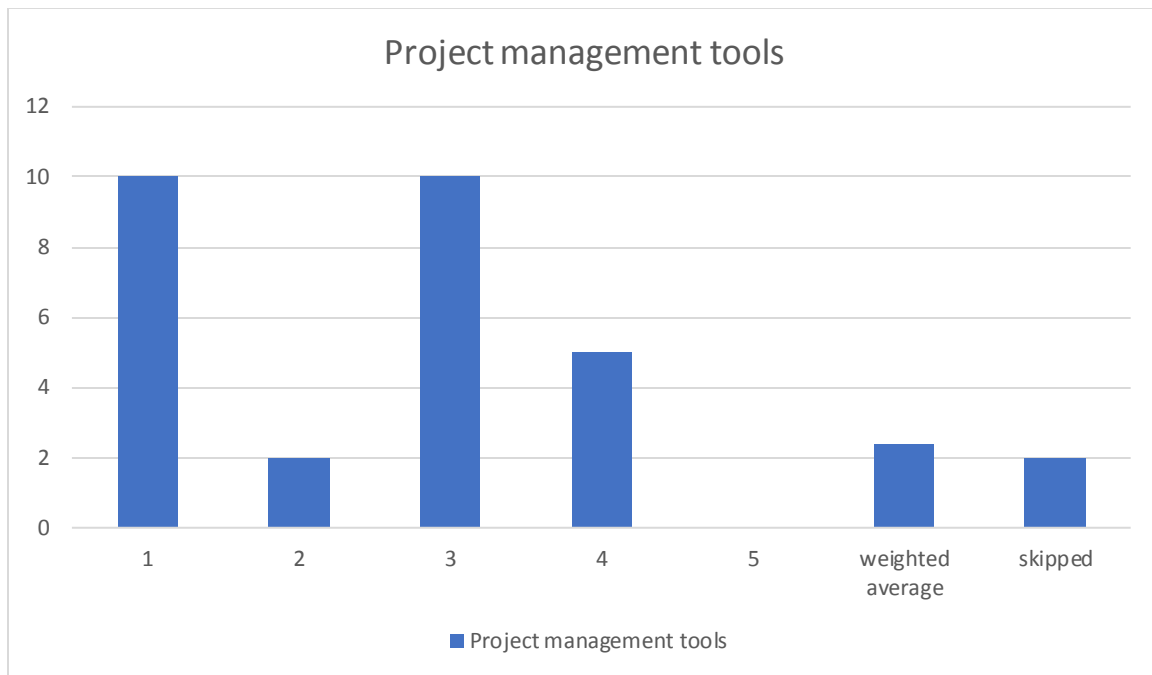
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Please indicate on a scale of 1 = “not interested” to 5 = “very interested” how interested you are in further training (if temporal and organizational possible) about following topics!

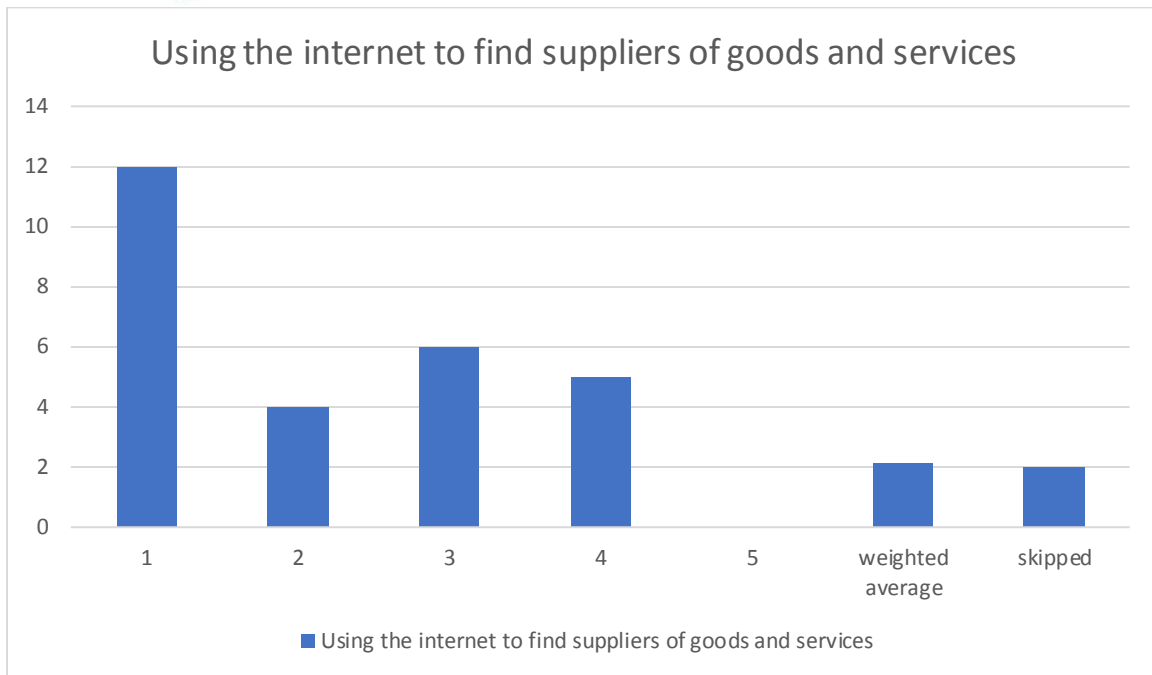


The three skills the respondents were most interested in improving are Digital Marketing, Building a digital strategy and social media for business purposes. The three least interesting topics for responders are Use of internet to find suppliers of goods and services, IoT and Industry 4.0. Data protection remains without answers as the questionnaire failed. The skills responders said to be most important for a successful internationalization of their business, Administration of Website content, Updating of Website content, and digital marketing strategy are ranked (average 2,73; rank 8) (average 2,7; rank 9) in the middle field of interest whereas building a digital strategy is perceived to be important for a successful strategy and respondents were very interested in improving (average 3,59; rank 2). Respondents do not aspire to improve the three skills least developed Industry 4.0 and IoT as they score last in the question whether they are interested in further training regarding these topics. This makes sense as respondents do not regard these skills as essential for a successful internationalization strategy. On the other hand Cybersecurity, which is also ranked under the lowest three skills respondents said they master, they do wish to learn more about it as further training for

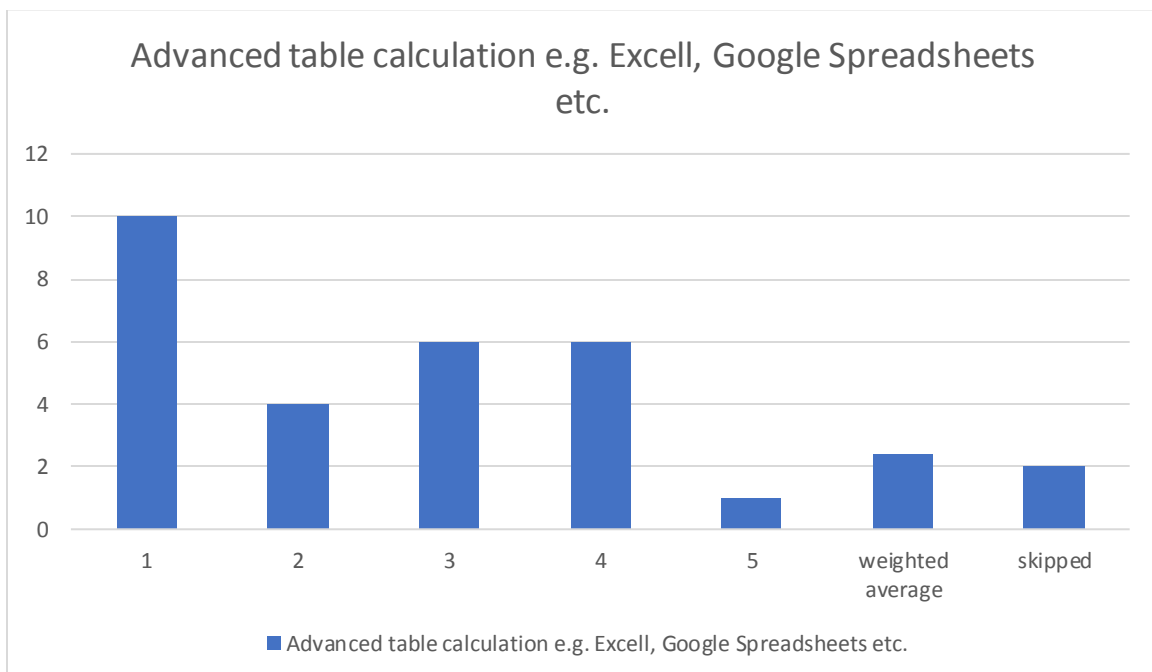
cyber security is ranked in the middle field of Question 28 “how important is following skill for a successful internationalization strategy” and on rank 4 with a 3,04 average of respondents saying they wish to improve by further training.



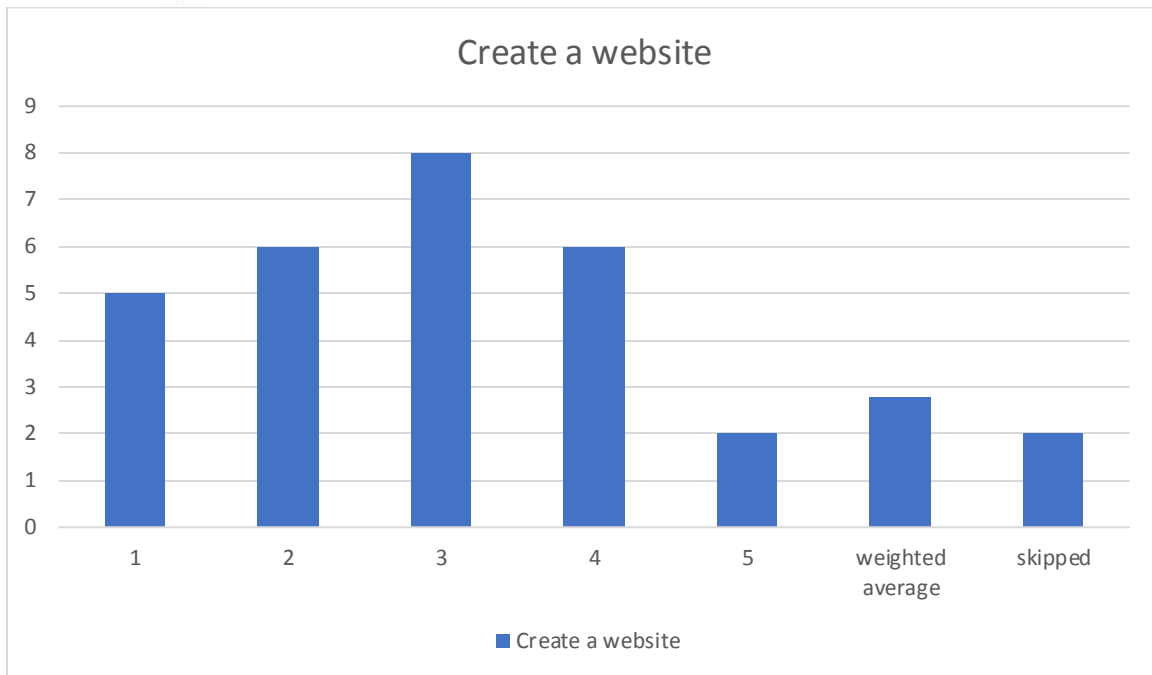
Number of respondents: 27



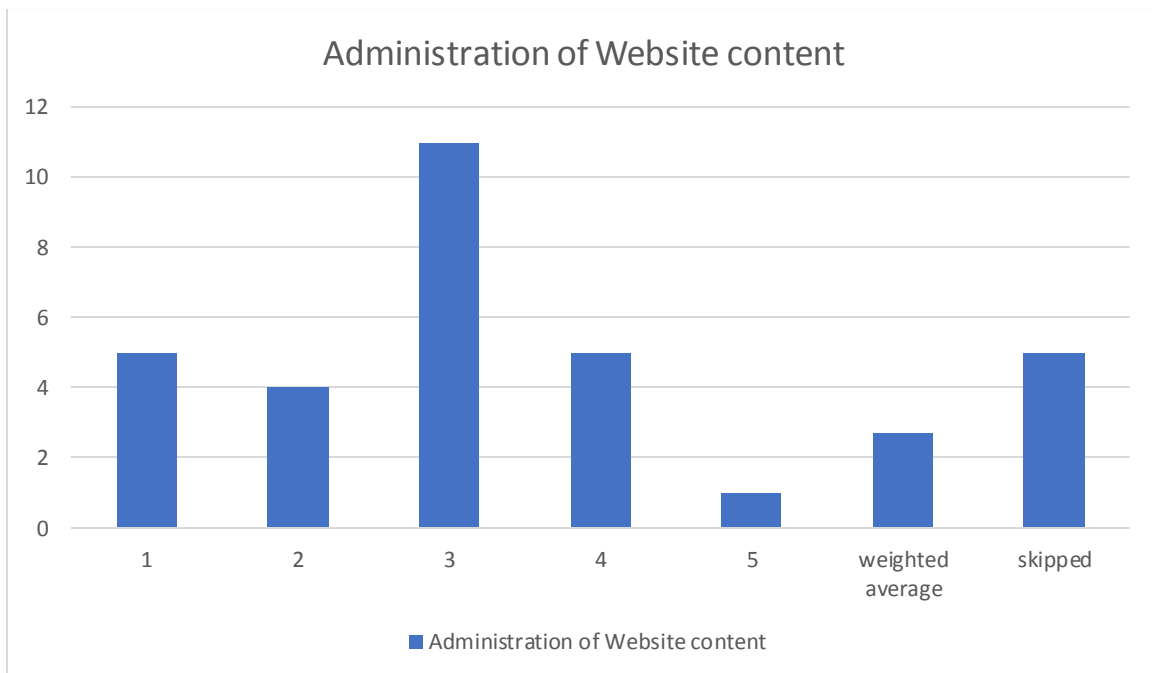
Total respondents: 27



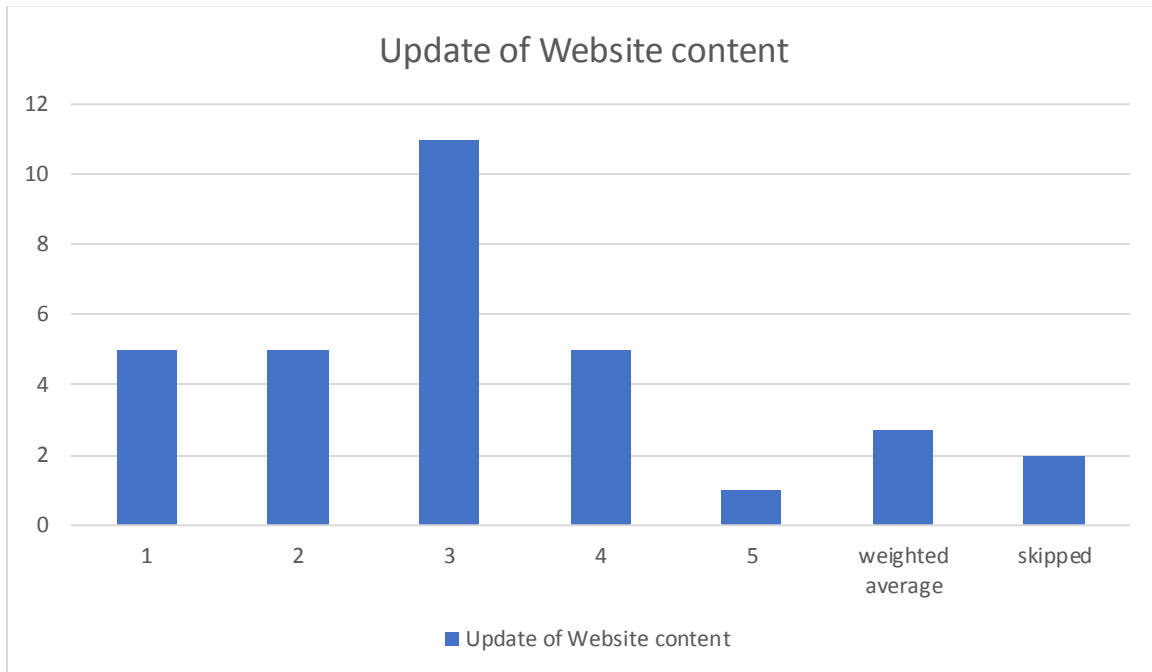
Total respondents: 27



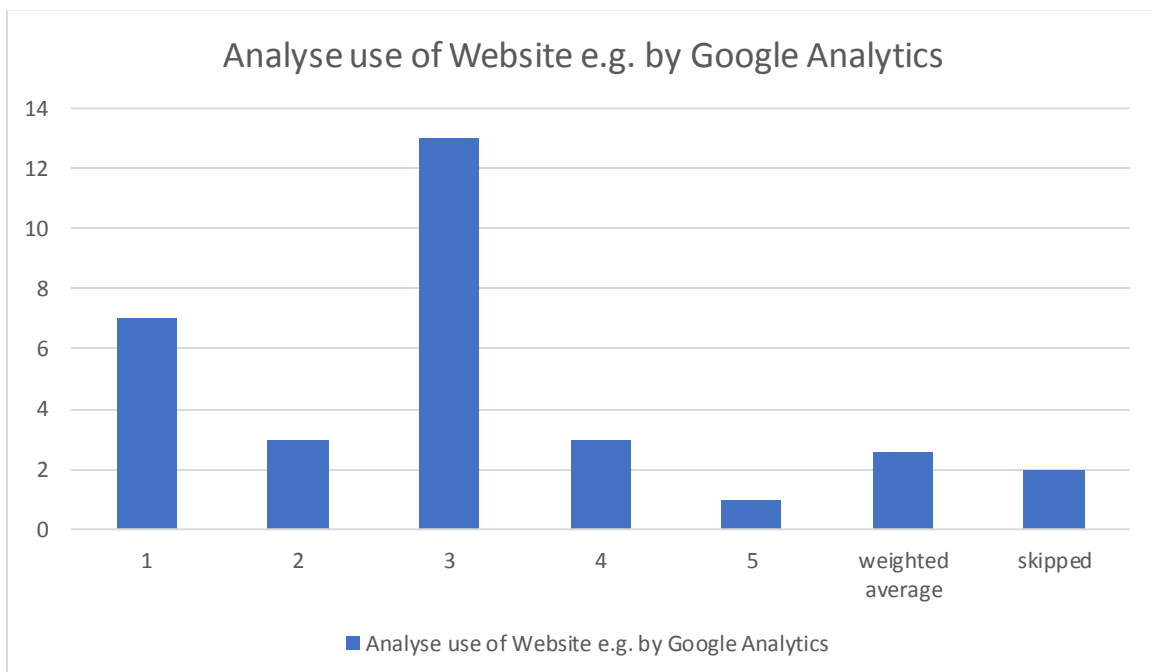
Total respondents: 27



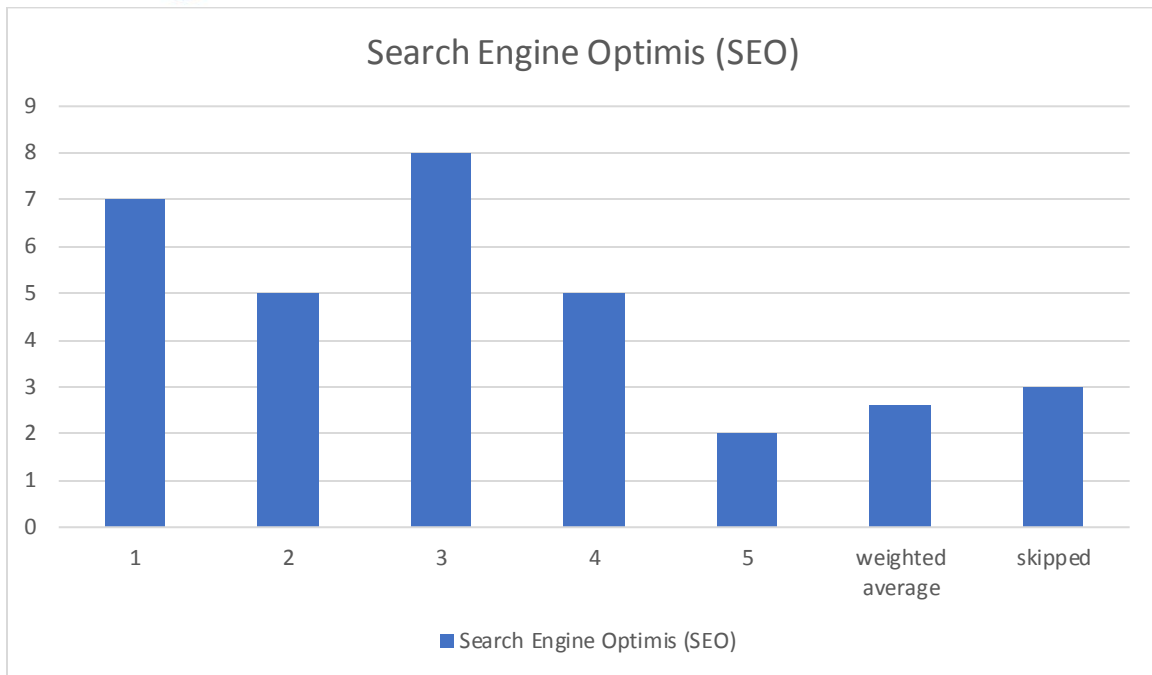
Total respondents: 26



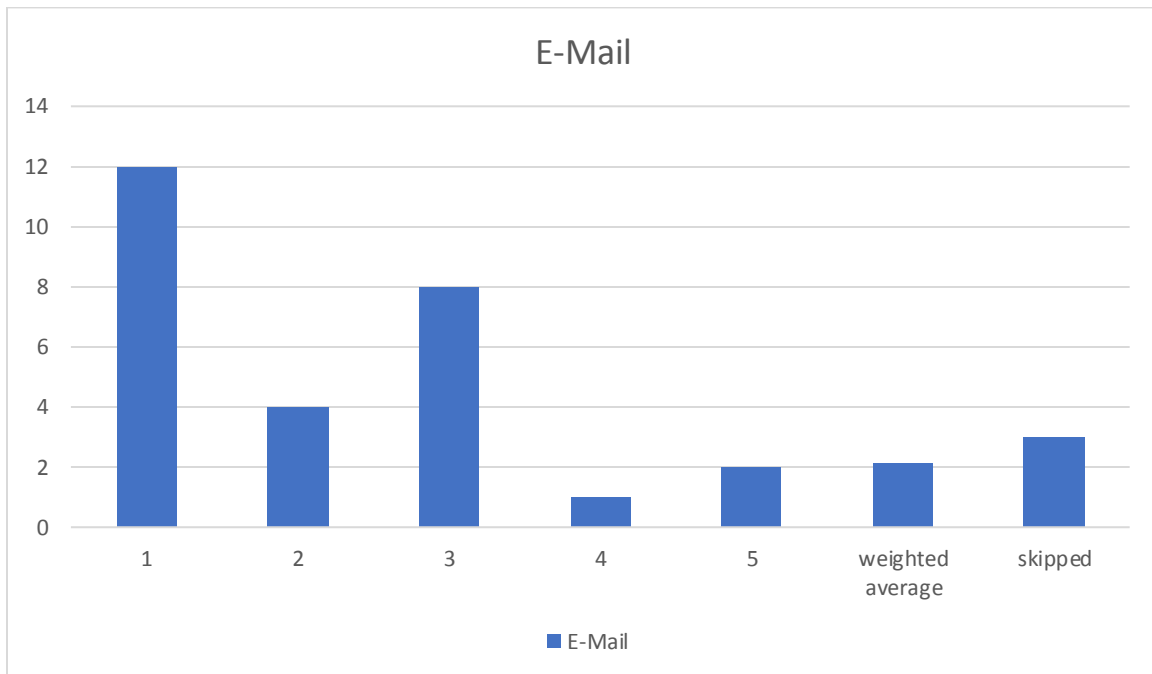
Total r:27



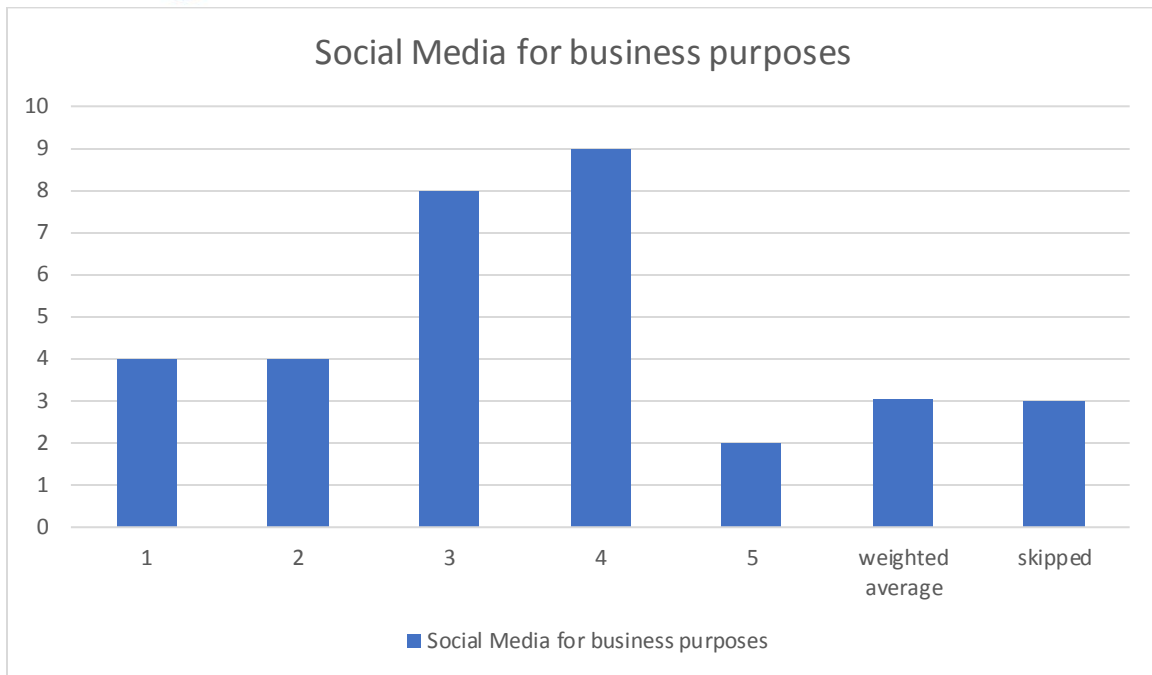
Total r 27



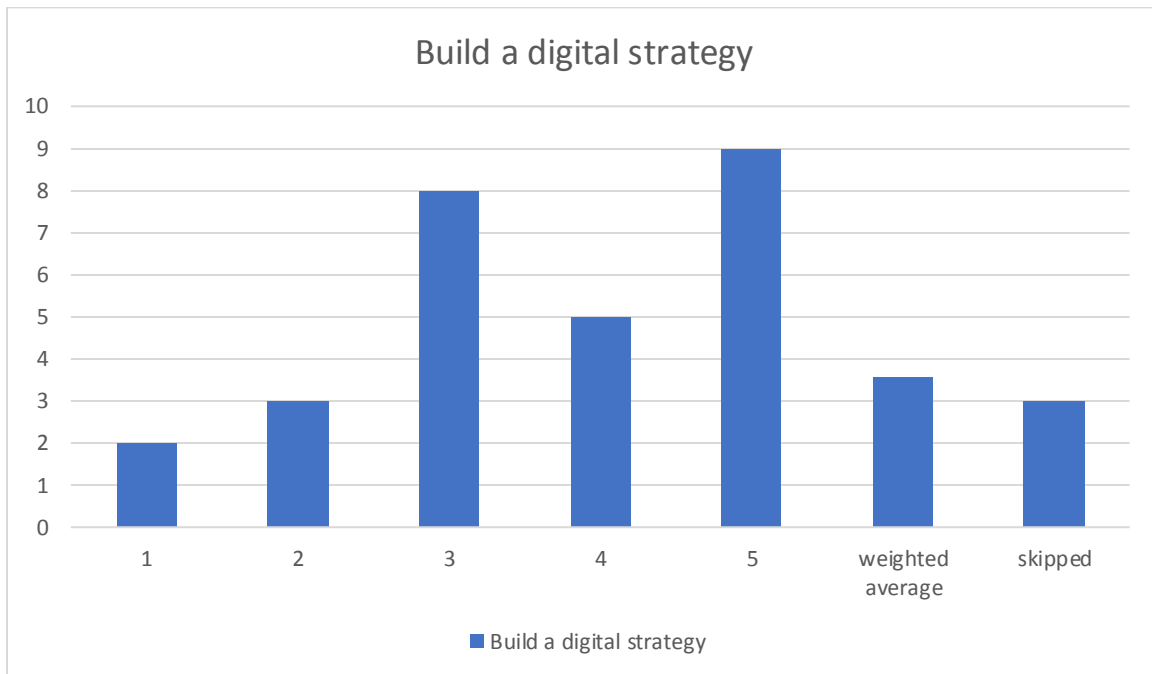
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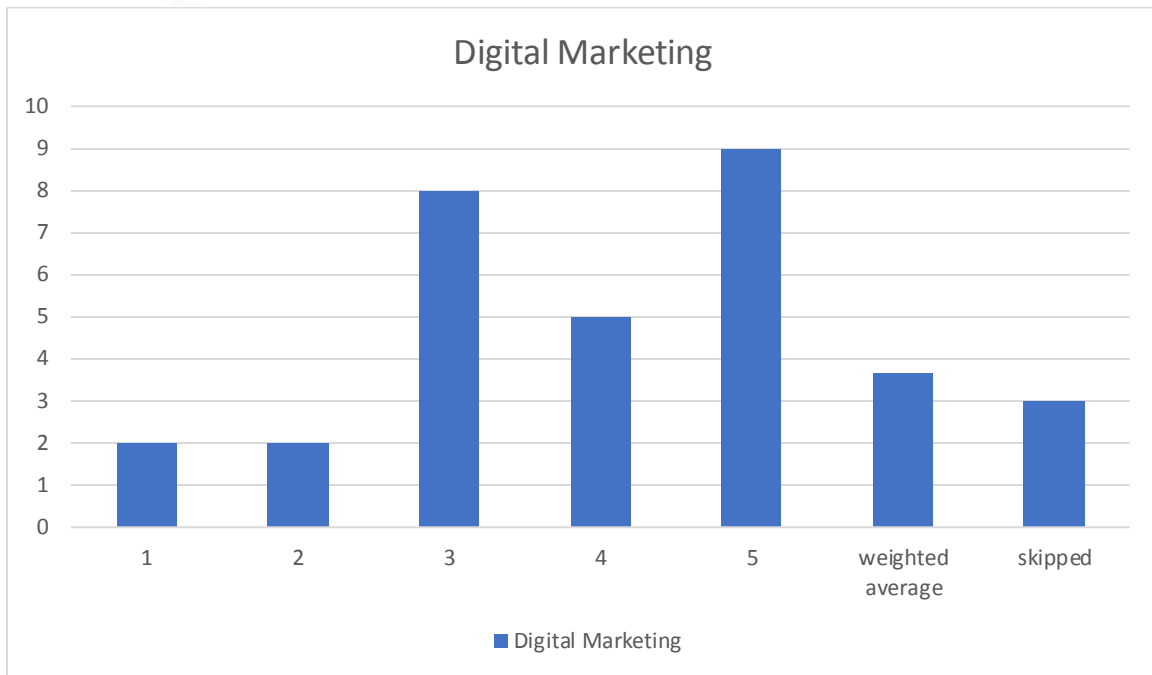
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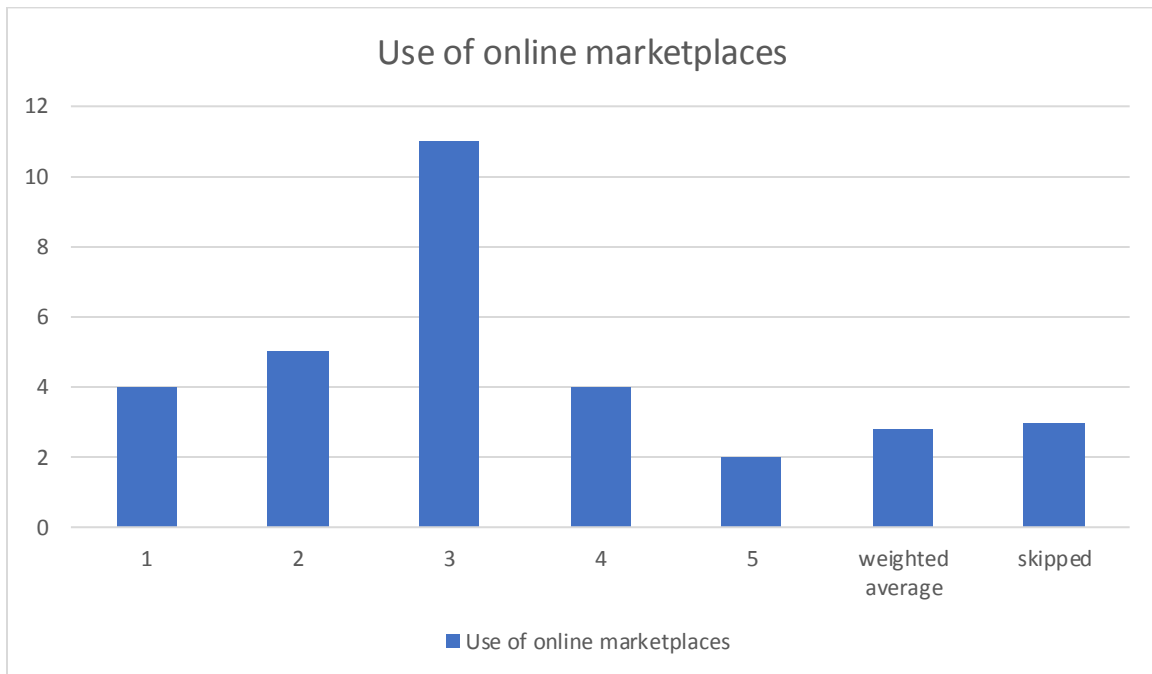
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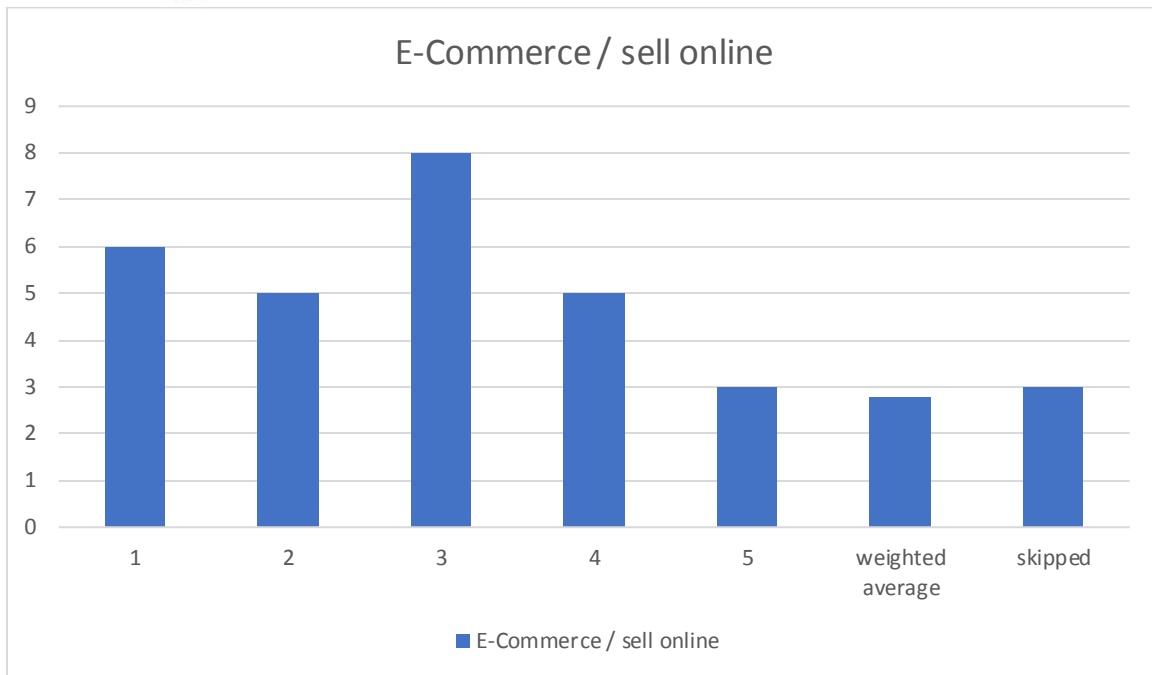
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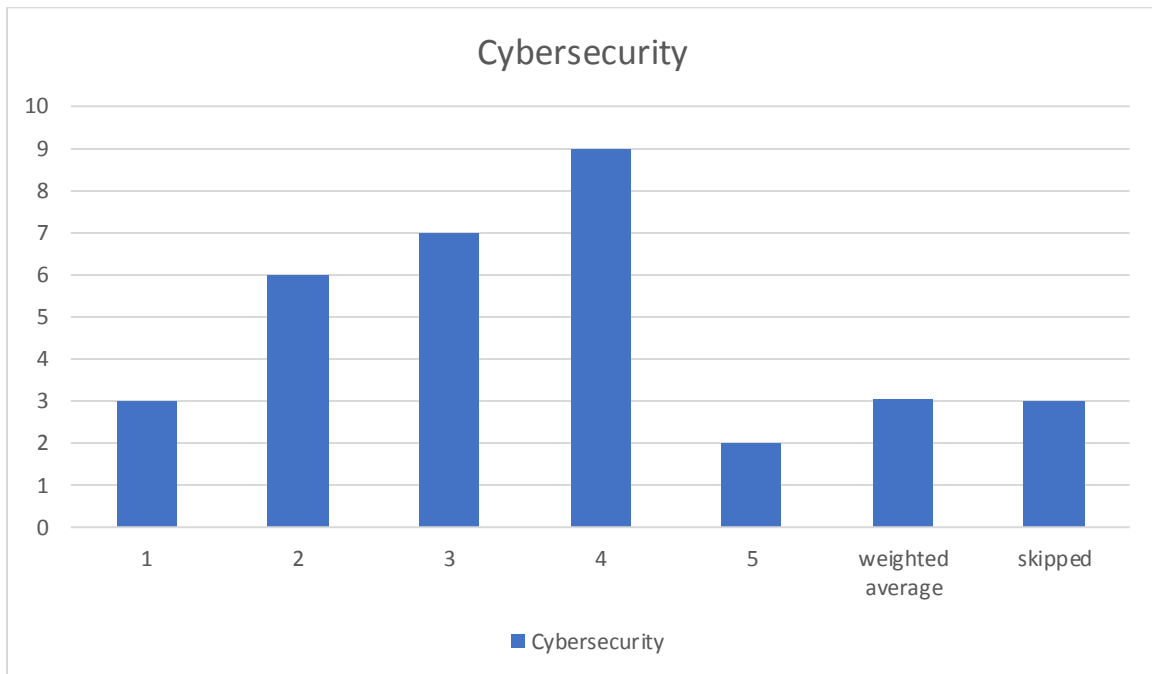
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Total r 26



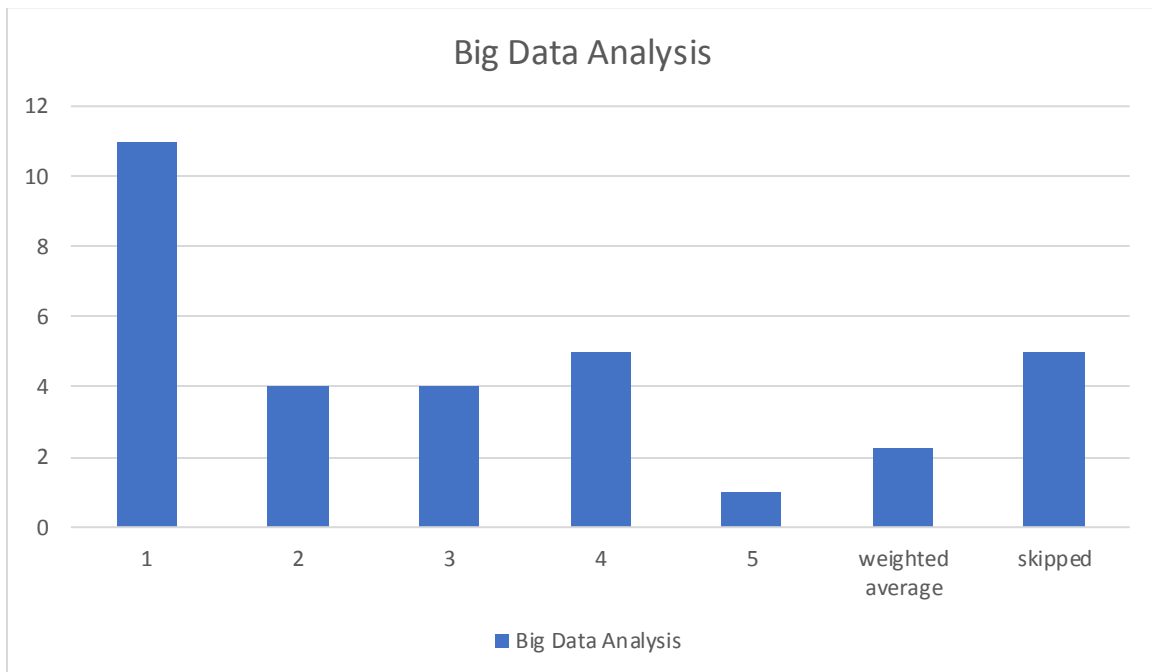
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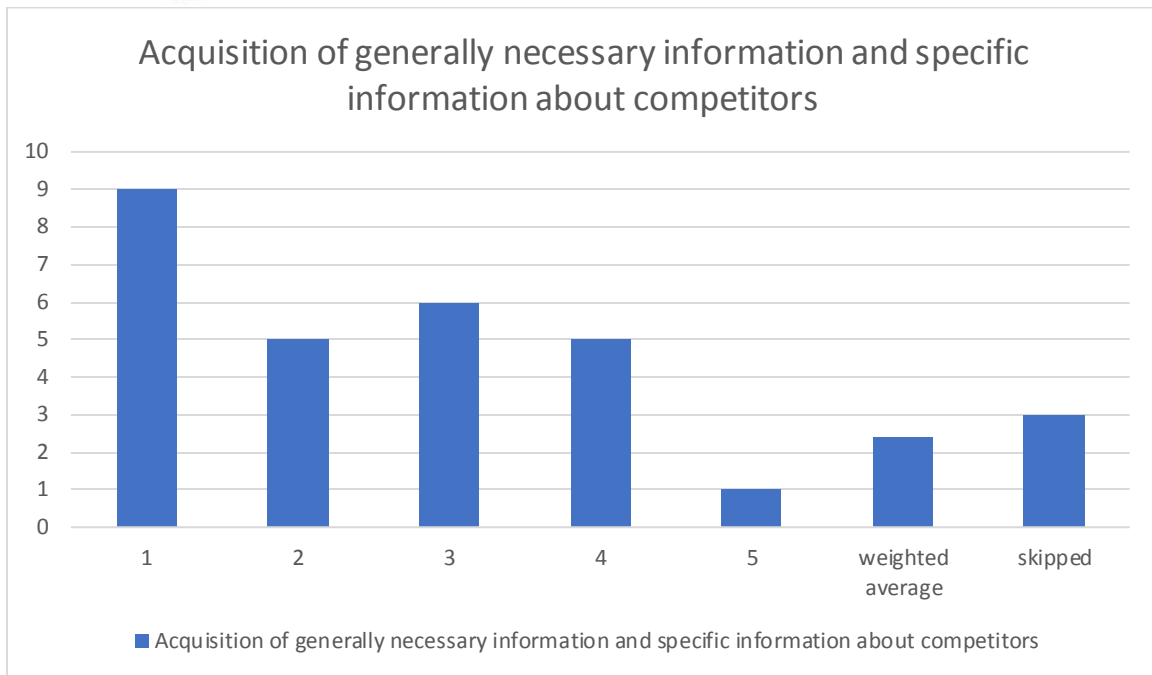
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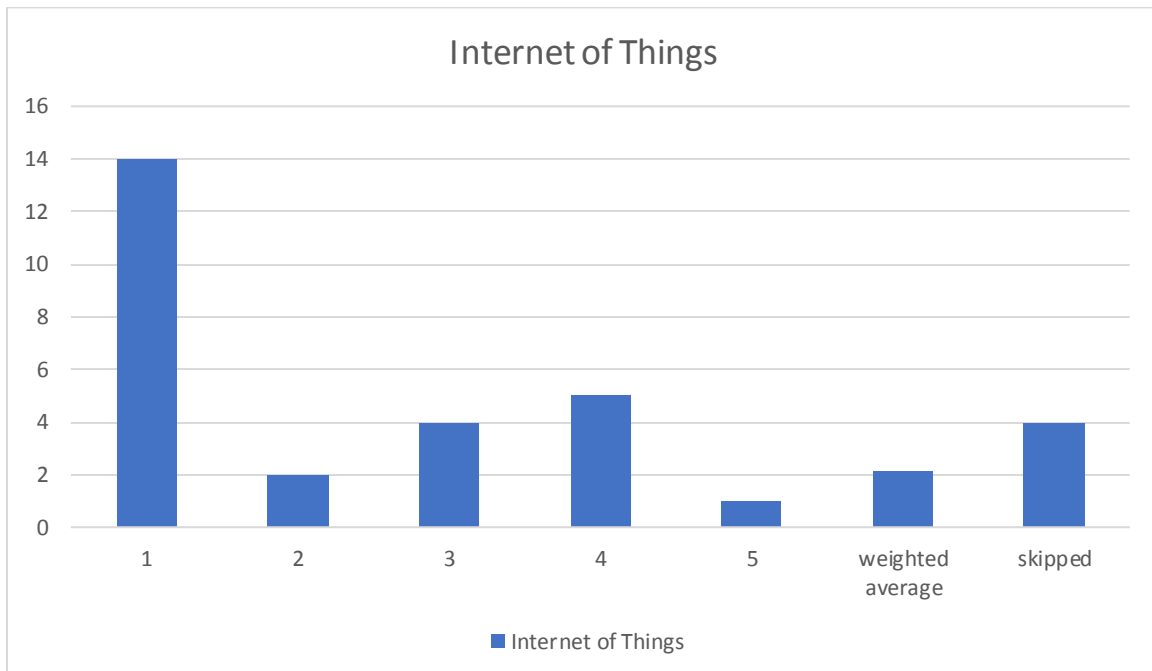
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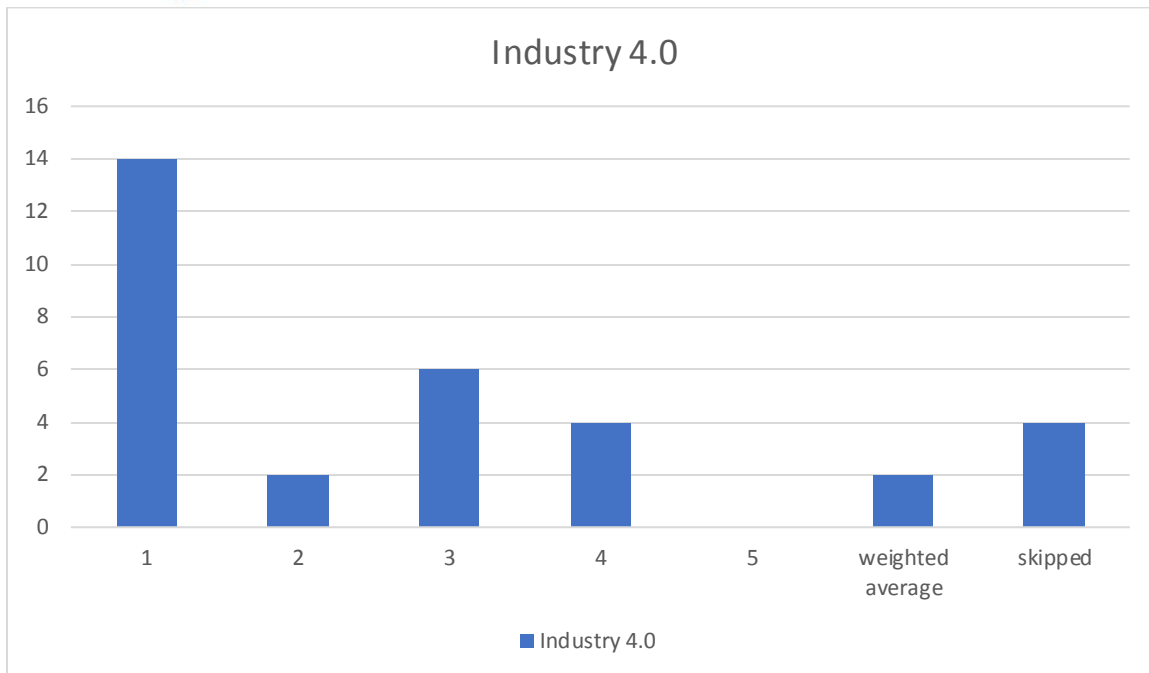
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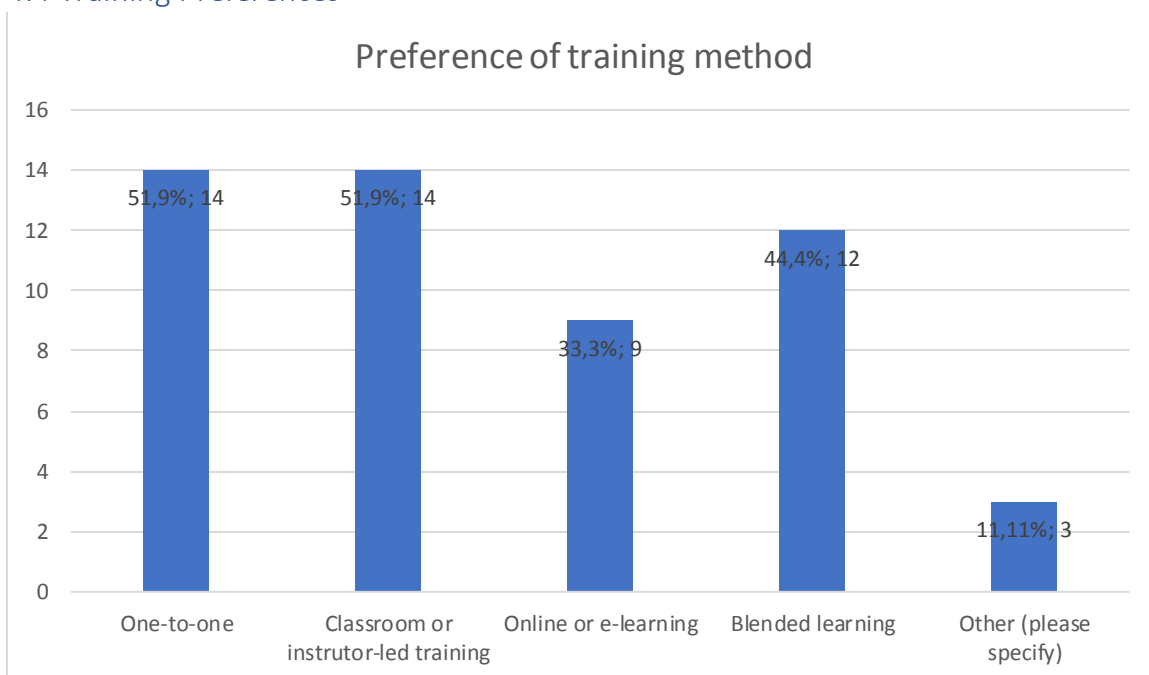


Total r 26



Total r 26

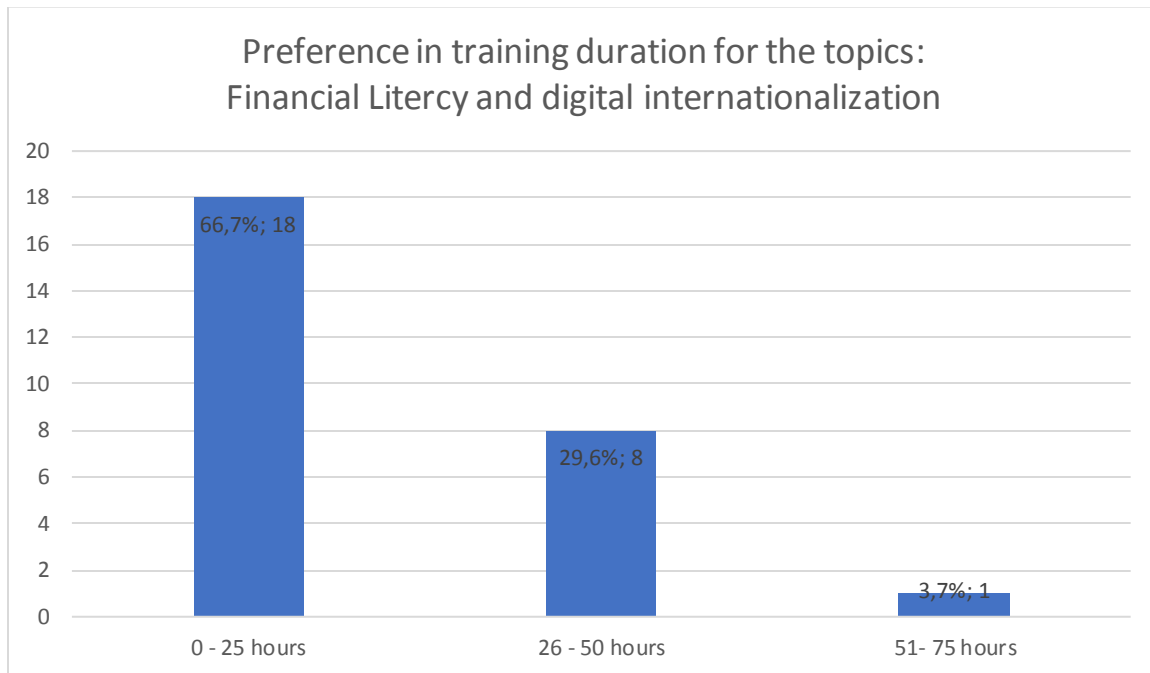
4.4 Training Preferences



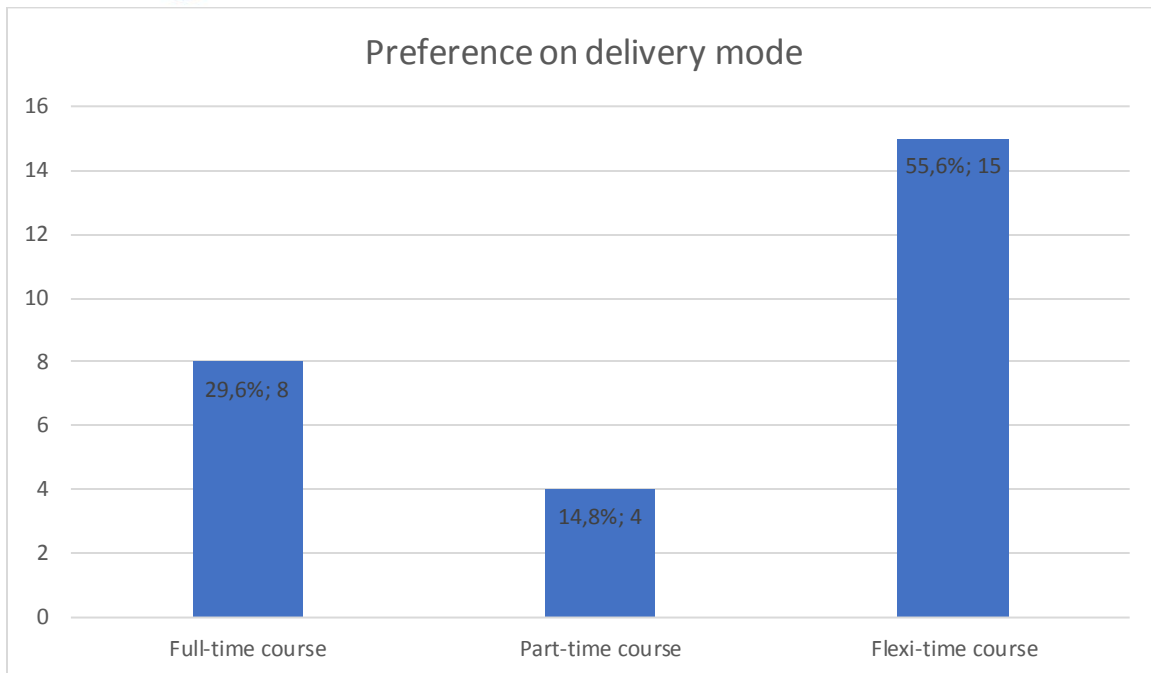
The respondents were asked to indicate their training method preference – they were able to select more than one answer. Due to that fact, the two people who skipped this question are not part of the percentage presented in the graphic. Of the 27 respondents who answered this question, 14 (51,9%) would prefer one-to-one training and consultation on the topics. Also 14 (51,9%) are open for a classical classroom or instructor-led training. About one-third of respondents (n=9; 33,3%)

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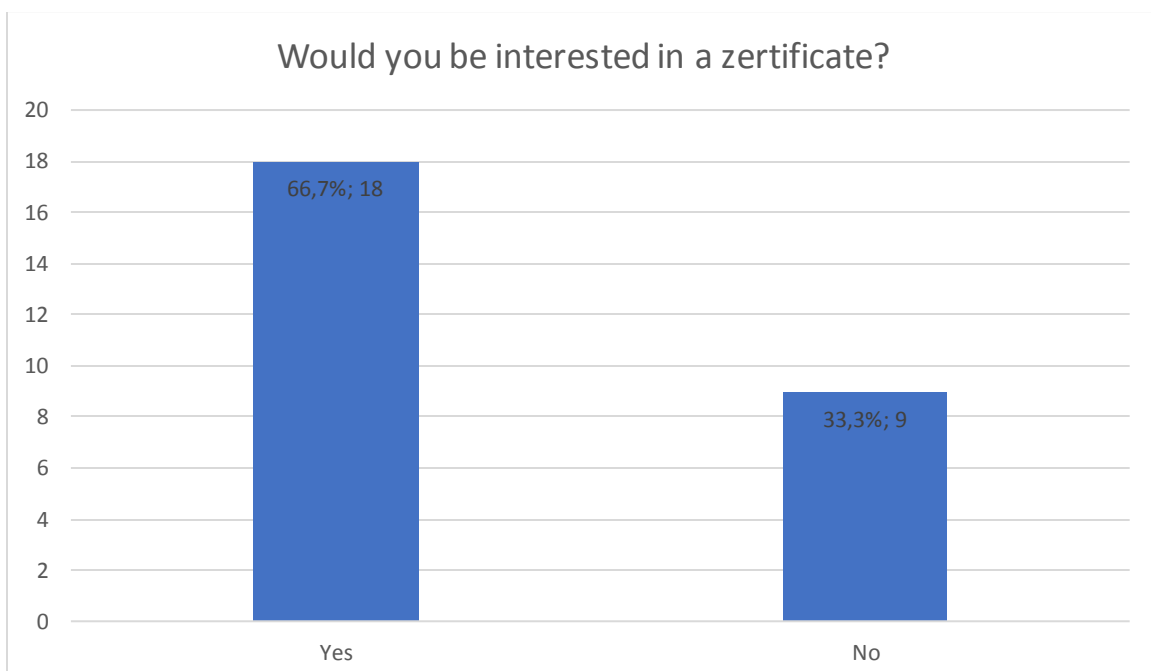
would prefer online courses or e-learning. 12 people (44,4%) are open for so called “blended learning”, a mixture of online and presence-based learning. Three respondents (11,11%) presented other ideas, like peer to peer learning and video classes.



Most respondents (n=18; 66,7%) would prefer the courses to be rather short (0 – 25 hours). About 30% (n=8) would be happy with courses that lasted for 26 – 50 hours. Only one respondent (3,7%) would prefer longer courses of about 51- 75 hours.

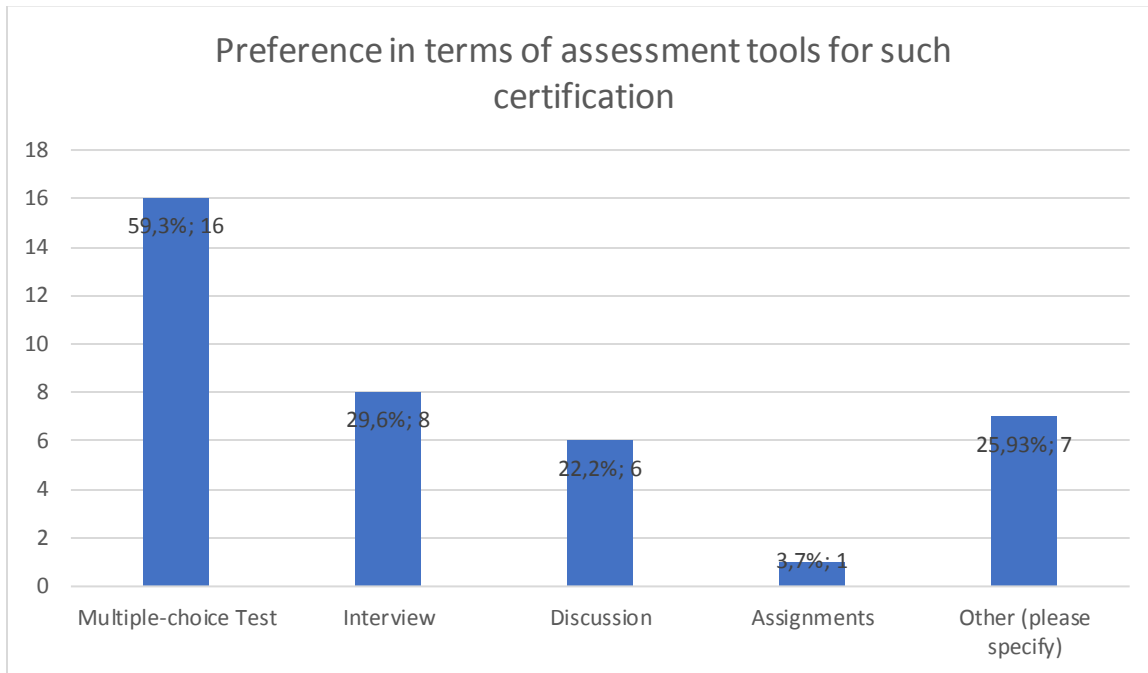


Most of the respondents (n=15; 55,6%) would prefer a flexi-time course, whereas eight respondents (29,6%) would like a full-time course and only about 15% (n=4) a part time course.



Two thirds of respondents (n=18, 66,7%) would like to receive a certificate upon completion of the course. 9 respondents (33,3%) stated that they would not be interested in receiving a certificate.

Interestingly, mostly younger respondents answered that they would like to receive a certificate, whereas respondents from higher age groups did not indicate that they would like to receive a certificate. This could be explained by the fact that in Germany for any kind of job or funding application, the educational background of the applicants is rather important, and a proof of certain qualifications usually has to be presented alongside with the application. As especially younger people often do not have too much experience to rely on, they would welcome those certificates.



For the question which form of assessment they would prefer if the course was to be offered as a certified course, again multiple answers were possible. The majority (n=16; 59,3%) of respondents would prefer a multiple-choice exam. Eight (29,6%) are in favor of conducting interviews in which the knowledge of the participants is tested. About 22% (n=5) would like to have a discussion as form of examination. Just one respondent (3,7%) was in favor of completing an assignment as a form of written exam.

Just like in some questions before, respondents were also given the opportunity to present other ideas to us. Seven (25,9%) respondents came up with suggestions including not to have an exam at all, a hand in project or a combination of written and oral exam in the form of a business case.

Even though four respondents expressed the wish not to have any exam at all, it is highly unlikely that a certificate could be presented to the participants without some form of examination.



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5. DIFME Expert Survey Results

5.1 Highlights of SME Interviews

5.2 SME Survey Results

6. Conclusion and Recommendations

6.1 Summary

6.2 Anomalies

6.3 Topics Emerging from the Study

6.4 Implications for Methodology emerging from the study