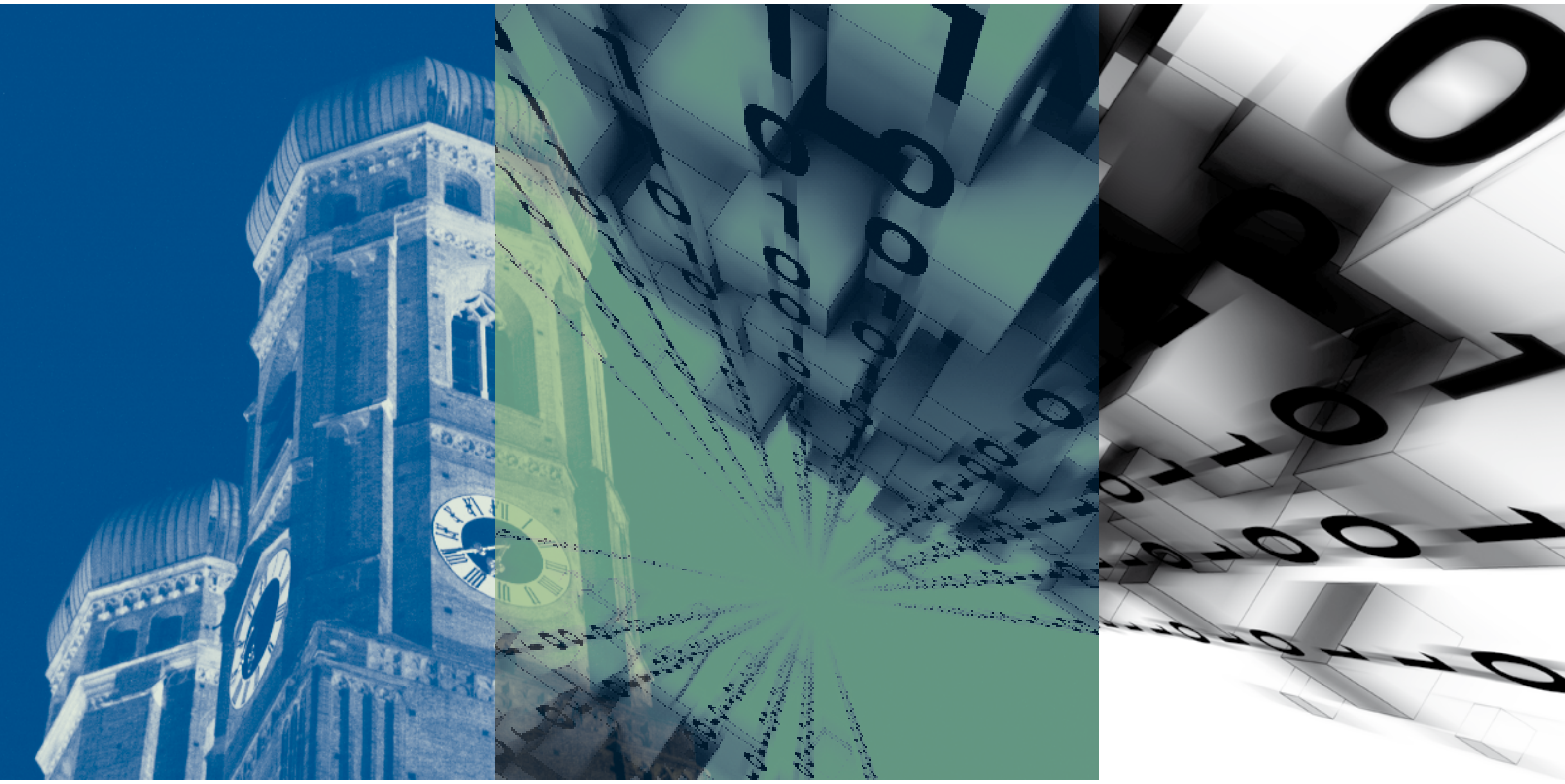
Location for Information, Communication and Media Munich 2010



Industrie- und Handelskammer für
München und Oberbayern

Landeshauptstadt
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Referat für Arbeit
und Wirtschaft


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Munich still is a top location of the media, information and communications (IC) industry. Sales declined slightly during the financial and economic crisis, but in the meantime businesses are looking ahead again with optimism. This is the conclusion of the fourth study presented here by the City of Munich and the Chamber of Industry and Commerce for Munich and Upper Bavaria to take a look at this industry.

The crisis years 2008 and 2009, which did not leave these key industries entirely unscathed either, fell within the period between the last study in 2007 and this latest study. However, the diverse mix of businesses in and around Munich stood the test of time during these economically difficult years. Together with the first, very positive, economic figures of 2011, this study confirms that, all in all, the IC and media industry in Munich weathered the economic decline of the past years quite well. The most important findings of the study are the following: the number of businesses in the IC and media sector continues to grow, even in years of economic crisis. At the end of 2010, a little more than 29,000 businesses were active in the IC and media industries in Greater Munich. That is an increase of a good 6%, or 1,700 businesses since 2007.

In the period from 2007 to 2009 the industry in and around Munich experienced a moderate reduction in turnover of 3.7%. The economic downturn did not affect all subsectors equally: while turnover in the field of transport layers/cable and network operators increased by 5.5%, advertising, market communication and research had to cope with a decline of 16.7%. At the end of 2010 companies are again looking with a significant degree of optimism into the future: almost 90% of them estimate the current economic situation in Germany as satisfactory or good. Also with respect to their own business developments, a large majority of information, communication and media companies in Munich are expecting positive growth rates or at least that their business will stay at the same level. If the employment figures of the current study are compared with those of the previous one, a drop by 6% to 371,000 is found. Companies have attempted to retain their permanently employed staff to a large extent, so that the fall was mainly at the expense of the freelance workers. As a result the trend observed over a long period of reducing the number of permanent employees in favour of freelancers in economically difficult times has been stopped. In spite of the crisis, the fall in the level of investments has been relatively moderate. With an investment volume of €6.6 billion (- 5%), companies have created good preconditions for preparing for the upturn in times of crisis and remaining competitive internationally. This confidence is expressed in the very high level of satisfaction of companies with Munich as a location. The companies appreciate not only the traditional location factors as being particularly positive features of Munich. A further aspect receiving approval is the activities of the city of Munich and the Chamber of Industry and Commerce for Munich and Upper Bavaria in promoting the economy. At the same time the companies recommend that these activities should be further expanded.

Dieter Reiter **Peter Driessen**

Perspective

WHow has the globally active information and communication industry and the media economy survived the worldwide financial crisis in the region of Munich? Who have been the winners and why? Have there been any losers? And what perspectives does the location offer? These are the questions posed by the information, communication and media study 2010 in order to draw the right conclusions for the future from the developments in the past. Since 1999 the Chamber of Industry and Commerce for Munich and Upper Bavaria and the Department for Employment and Business of the city of Munich have analysed the development of this sector, which is so important for the entire Munich region, for the fourth time. The information, communication and media industry is an important source of inspiration for new products and services and makes a significant economic contribution to the area around Munich. The Munich region is defined as the city and the administrative district of Munich, as well as the surrounding administrative districts of Dachau, Fürstenfeldbruck, Landsberg am Lech, Starnberg, Ebersberg, Erding and Freising. While the first study focused on the booming New Economy, the information and communication study of 2004 dealt with the consequences of the burst „Dotcom bubble" after the turn of the millennium. At the time a consolidation process was already beginning to emerge. The information, communication and media study of 2007 was characterised by rapidly growing digitisation and the loss of jobs in the largest information, communication and media companies of the region. The present study deals with a period which was also particularly disquieting for the information, communication and media industry. In 2008 the industry had to hold its ground in the German economic slowdown, with business declining in individual market segments. While the overall economy adjusted to stagnation for 2009, the economic crisis hit home. When a representative sample of all information, communication and media companies located in Munich was surveyed in the autumn of 2010, the situation in the sector had already eased.

The fact that the information, communication and media economy is a cross-sectional industry makes it particularly difficult to map individual areas or even products and services by means of classifications. In the following study we have concentrated on companies whose main commercial activities are focused on the following economic sectors:

- media (publishing, printers)
- advertising, market communication and research
- journalism, information services and agencies
- software, data and IT services, e-commerce
- transport level, cable and network operators
- parts and components
- terminal equipment and devices
- distribution

Technologies spanning various business sectors within the information, communication and media economy – with the keyword being "convergence" – as well as other business sectors, make it difficult to categorise the companies analysed with respect to certain branches of industry. But it is specifically from this intra- and inter-industry convergence that opportunities result which the companies at the information, communication and media location of Munich should not let escape.

Summary of the Most Important Results

Number of Companies: Stability in Times of Crisis

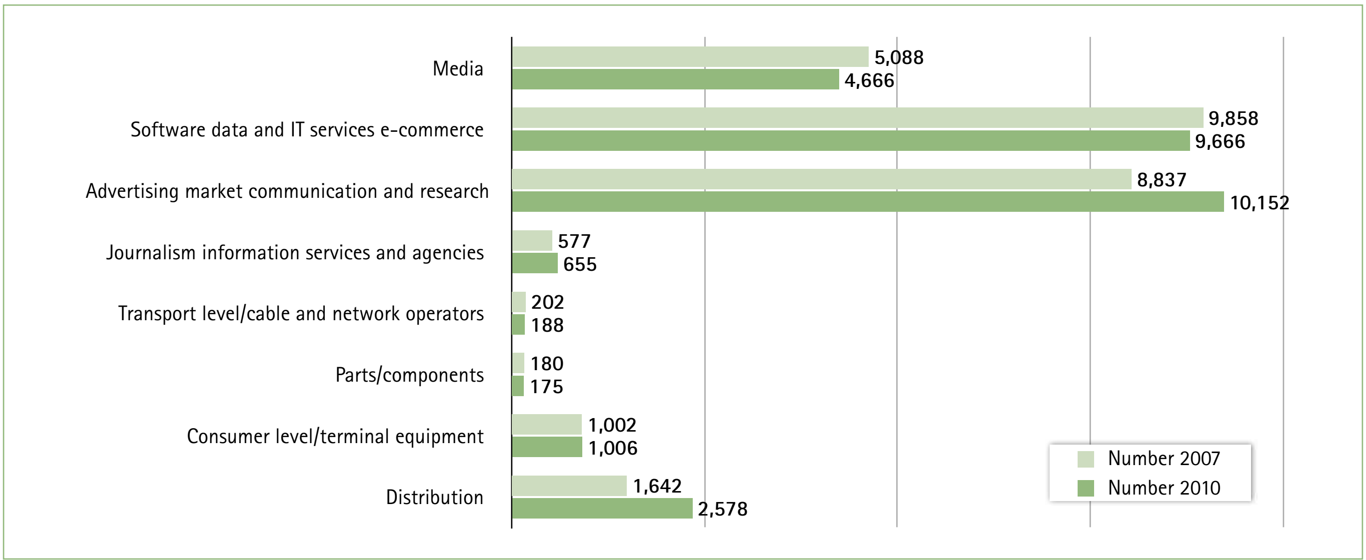
Although the financial and economic crisis of 2008 and 2009 put a brake on the growth momentum of the information, communication and media industry, it was nevertheless far less badly affected than the automobile industry or the financial services sector, for example. After all, the number of companies within the information, communication and media industry rose in the greater munich area by 6% compared to 2007 to around 29,000. This moderate growth was beneficial to the city and the administrative district of Munich, while the surrounding administrative districts stagnated at the level of the previous period.

Measured by the number of companies, the field of advertising, market communication and research - more than 80% of which is located within the city boundaries or in the administrative district of Munich - overtook the field of software, e-commerce, data and IT services compared to 2007. (Fig. 1) The media field forms the third-largest share of all companies working within the information, communication and media economy. It has however suffered losses in terms of other companies: here the printing industry has undergone the greatest setbacks. (Fig. 2)

The growth rates with which the information, communication and media sector used to shine in the past are now passé. Nevertheless, the fact that almost 20% of the companies in the greater munich area were founded after 2008 shows the high level of dynamism that is still present. The location stands out due to its healthy mixture of traditional

Industry	Industry City and Administrative District	Region	Total	City Share (in %)	Industry Share (in %)
Media	3,735	931	4,666	80%	16%
Software, data and IT services, e-commerce	6,875	2,791	9,666	71%	33%
Advertising, market communication and research	8,171	1,981	10,152	80%	35%
Journalism, information services and agencies	510	145	655	78%	2%
Transport level/cable and network operators	144	44	188	77%	1%
Parts/components	106	69	175	61%	1%
Consumer level/terminal equipment	688	318	1,006	68%	3%
Distribution	1,667	911	2,578	65%	9%
Total	21,896	7,190	29,086	75%	100%

Figure 1: The industry structure of the information, communication and media companies



** Comparability for 2007 and 2010 restricted due to change to industry classification*

Figure 2: Number of the companies in the information, communication and media industries

businesses – with one quarter founded before 1990, mostly large concerns – and a majority of companies and start-ups established in the decades around the turn of the millennium. (Fig. 3)

The youngest companies are those working in the field of transport layers/cable and network operators. This is where the proportion of newly established companies after the turn of the millennium is the greatest, followed by software, data and IT services and e-commerce. After 2008 these two areas display the highest start-up dynamism. Three quarters of the information, communication and media companies within planning region 14 are concentrated on the city and administrative district of Munich - this applies in particular to the large concerns and companies recorded in the Commercial Register. This leads to an even greater concentration of employees in the core area of the region, where 208,000 permanently employed workers (89%) generate 92% of the turnover. Almost 96% of the total investment amount of the industry is allotted to the state capital and the administrative district of Munich. (Fig. 4)

64 percent of the companies in the information, communication and media industry form the small businesses. This structure has not changed compared to 2007, although it has been reinforced in

Year of Foundation	Total Share
before 1949	3%
1950 to 1979	9%
1980 to 1989	13%
1990 to 1999	28%
2000 to 2007	28%
2008 and later	19%

Figure 3: Classification of the companies according to the year of foundation

	City and Administrative District of Munich		Munich Region		
	Number	Share	Number	Share	Total
Information, communication and media companies overall	21,895	75%	7,191	25%	**29,086**
Small businesses	13,521	73%	5,000	27%	**18,521**
Permanently employed staff	207,550	89%	25,000	11%	**232,550**
Turnover (in thousands of euros)	65,850,000	92%	5,485,000	8%	**71,335,000**
Investments (in thousands of euros)	6,312,000	96%	286,000	4%	**6,598,000**

Figure 4: Classification of the companies according to number, employees, turnover figures and investments, number of employees, turnover and investments rounded

	2010					2007	
	HR	**SB**	**Total**	**Share HR**	**Share SB**	**Share HR**	**Share SB**
Media	2,542	2,124	**4,666**	54%	46%	53%	47%
Software, data and IT services, e-commerce	3,684	5.982	**9,666**	38%	62%	33%	67%
Advertising, market communication and research	1,805	8,347	**10,152**	18%	82%	20%	80%
Journalism, information services and agencies	209	446	**655**	32%	68%	33%	67%
Transport level/cable and network operators	116	72	**188**	62%	38%	64%	36%
Parts/components	145	30	**175**	83%	17%	79%	21%
Consumer level/terminal equipment	920	86	**1,006**	91%	9%	88%	12%
Distribution	1,144	1,434	**2,578**	44%	56%	46%	54%
Total	10,565	18,521	**29,086**	36%	64%	36%	64%

Figure 5: Number of companies according to commercial register entry and secto

	better	no change	worse
very strong/strong influence	12%	20%	5%
moderate/little influence	17%	28%	5%
no influence	6%	7%	1%

Figure 6: Estimate of the influence of the financial crisis on the company in 2009 and expectations for business development in the survey year

terms of specific sectors: while the high share of small businesses in advertising, market communication and research has further increased to 82%, the share of small businesses in the field of consumer / terminal equipment has fallen below 10%. Small businesses make up 70% of all information, communication and media companies in the administrative districts around the city and administrative district of Munich. (Fig. 5)
Two thirds of all companies in the information, communication and media economy in the greater munich area felt the effects of the economic crisis. However, large concerns estimate the influence of the financial crisis on their company to be mainly small, with one fifth of the small businesses even recording no influence. The most strongly affected were medium-sized companies. For this group the procurement of capital with an increased market risk developed into a problem. They also assessed the business situation over the past three years as being correspondingly worse than large companies and small businesses. (Fig. 6)

Turnover: with Impetus out of the Financial and Economic Crisis

The global financial crisis grazed the information, communication and media industry, but affected less than other sectors of the economy at the Munich location. Some companies consider the crisis to be an opportunity.

"We have changed our strategy, we have changed our processes. Such a crisis has its advantages, but I would not like to go through something like that very often."

The positive turnover expectations of the last study were not achieved due to economic factors. Between 2006 and 2009 the dynamic information, communication and media economy at the Munich location had to cope with a fall in turnover of 3.7% to 71 billion euros. The global crisis on the financial markets ensured a rapid drop in orders received throughout the entire economy, although with varying intensity in the various sectors. The information, communication and media industry as a whole has become less dependent on the general economic situation due to the penetration of its products and services in all areas of business and society: the customers of the information, communication and media industry are spread across various business sectors, not all of which have undergone crises at the same time and to the same extent. Individual sectors of the information, communication and media economy are however significantly affected by cyclical fluctuations. The most dependent are the information, communication and media companies working in the services sector, which over half of the companies name as their customers, followed by trade (35%) and manufacturing (32%), although this plays a less significant role for small businesses.

As expected, the companies which supply parts/components find more than two thirds of their customers in manufacturing industry and are therefore more strongly dependent on cyclical fluctuations, for example in the automotive industry or mechanical engineering.

Customers from the trade sector determine in particular what happens in the advertising industry, in distribution and in the case of terminal equipment. (Fig. 7)

The crisis did not affect all areas with equal intensity:

Growth at M-net and Kabel Deutschland, as well as the previous investments in broadband networks, even provided the field of "transport level/ cable and network operators" with an increase in turnover of 5.5%.

On the other hand, after an increase in turnover of 12% between 2003 and 2006, the providers of software, e-commerce, data and IT services – the third strongest sector – had to cope

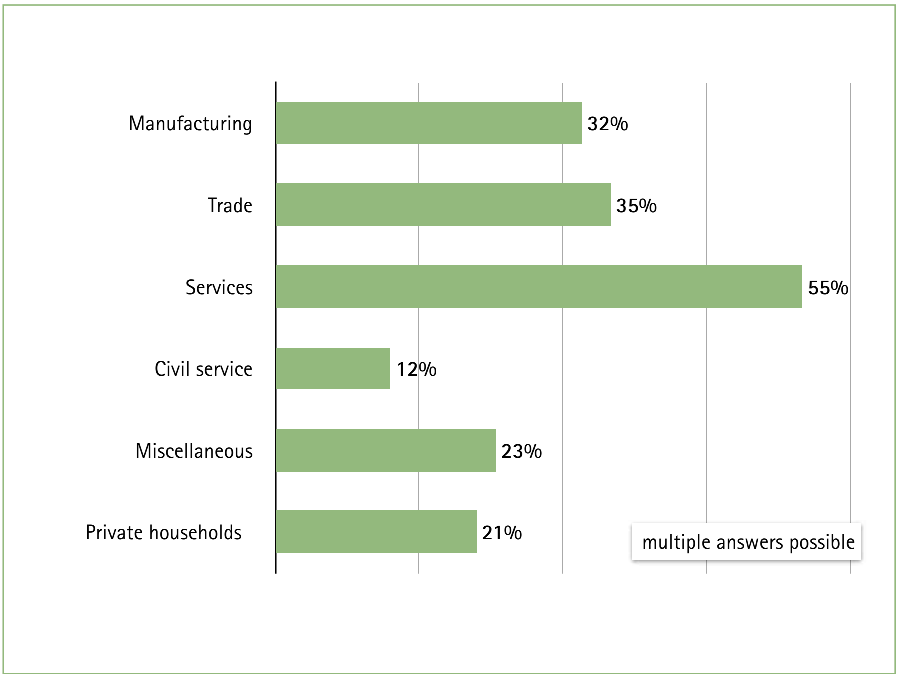


Figure 7: Customer structure (according to business sector affiliation) of the companies in the information and communication sector

with a fall in turnover of 5%. Part of the background to this is the reduced investment expenditure from the finance sector, which is a decisive field for the order situation from the services sector. However, there were certainly companies working in finance which resorted to the outsourcing of IT services: as a result of this it was possible for the software and IT services field to acquire orders which prevented an even greater fall in turnover.

The media industry makes up 27% of total turnover. The fall in turnover in this sector of 7.1% was reflected in the overall developments. The significant factors were the upheavals in the printing industry, which forced smaller printers in particular to give up their businesses. In times of economic crisis it is advertising where companies make their first savings, and as a result turnover in the advertising industry fell almost 17% to below the level of 2006, although the number of companies rose by 15% at the same time: as they are confident that the economy will quickly recover, employees who have been made redundant and freelancers without work try their hand at self-employment. (Fig. 8)

Rate of Investments Curbed

The investments of the information, communication and media industry in the greater munich area fell, although not as significantly as before 2006: investment activities dropped by 4.6%. A particularly drastic reduction in investment volumes was carried out by the manufacturers of parts/components, whereas cable and network operators were able to maintain their investment volumes at more or less the same level due to their full order books (Fig. 9).

Investments in research and development are important preconditions for new products and services, and consequently for economic growth.

On average the information and communication companies in Germany spend considerably more of their turnover - 7% - on research and development than the overall economy, where the figure is only 2.6%. Here the companies working in communication technology - at 12.6% of their turnover - are ahead of the software suppliers at 9%. The Munich region leads the field of innovation, as evidenced for example by the high share of all patents registered in the Munich region in the information and communication sector.

Research and development also form a foundation stone for the transfer of knowledge and technology in the media industry. Besides renowned universities and research facilities in the city and administrative district of Munich, there are also numerous knowledge institutions in the surrounding administrative districts which rightly give the metropolitan area its reputation as a "city of knowledge".

Nevertheless, the economic and financial crisis did not bypass the research and development activities in the information, communication and media location of Munich: the research and development share of turnover plummeted in 2009. In order to revive the innovation work in the information, communication and media industry the companies wish for additional motivation such as tax incentives for R&D.

"The subsidies policy is designed in such a way that frequently very large companies are preferred for large projects. The subsidies are distributed very unevenly and therefore also create funding structures."

At the end of 2010/beginning of 2011 it appears that the financial market crisis and the associated economic downturn have not been forgotten by the information, communication and media companies, but nevertheless largely overcome.

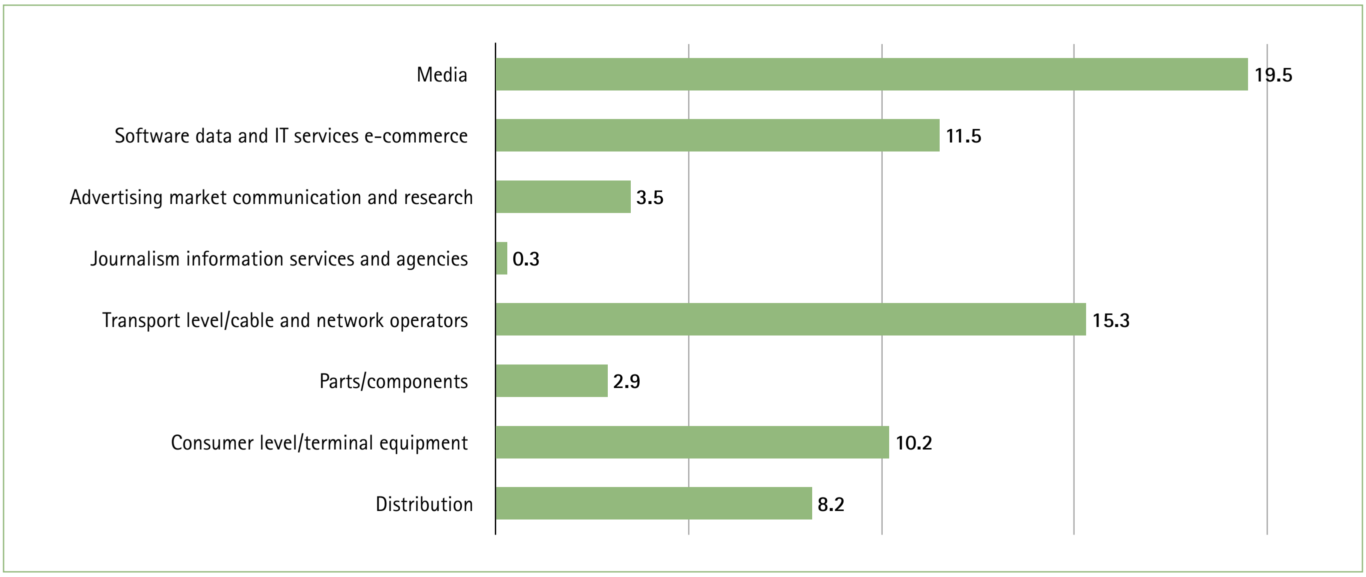


Figure 8: Turnover in the information and communication sectors (in billion euros, rounded)

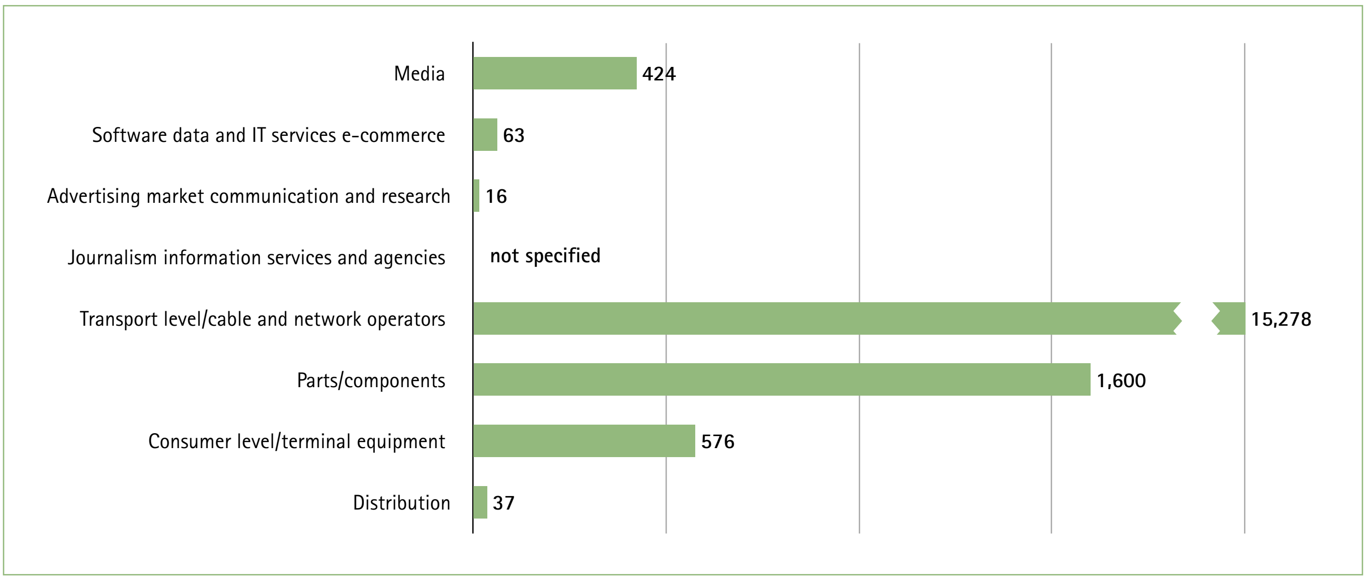


Figure 9: Investments per company (investments in thousands of euros)

	CR	SB	Total
good	37%	33%	36%
satisfactory	52%	54%	53%
poor	10%	13%	11%

Figure 10: Assessment of the general current economic situation in Germany

	1999	2003	2006	2009
Media	49,000	58,000	62,000	57,000
Software, data and IT services, e-commerce	47,500	54,000	55,000	54,600
Advertising, market communication and research	26,600	28,700	29,800	28,000
Journalism, information services and agencies	1,100	1,490	1,500	1,450
Transport level/cable and network operators	25,000	19,000	19,700	20,000
Parts/components	13,200	18,600	15,700	13,500
Consumer level/terminal equipment	70,300	64,700	47,000	43,000
Distribution	7,800	7750	10000	15,000
Total	240,500	252,240	240,700	232,550

Figure 11: Employees liable for social insurance contributions in the information and communication-sector since 1999 (values rounded)

When surveyed about their economic prospects, 36% assess the situation as good and 11% still as for, compared to 7% in 2007. The large concerns are feeling the upturn more strongly, while small businesses still tend to be careful in their assessments. (Fig. 10)

Employment: Permanent Employees Were Largely Retained

The information, communication and media economy in the Munich region employs approximately 371,000 people (including 12,000 apprentices), i.e. around 25,000 people fewer than stated for 2006. The trend towards reducing the number of permanently employed staff in favour of freelancers has stopped. Short-term working among the permanent employees offered the opportunity of retaining skilled employees in spite of the economic slowdown. At the same time the companies terminated the services of increasing numbers of freelancers, who in some cases earned their living by establishing small businesses. (Fig. 11)

The theme of the shortage of skilled workers, which had been pushed into the background for a short time due to the financial crisis, has long made itself felt again. The attractiveness of Munich as a place to live also makes working in Munich attractive, but pushes the already high salary levels up even further. In many cases the search is also on for qualifications for which there is no standardised apprenticeship.

"One difficulty is that we need completely new professions – but we do not have these. We train these professions on the job, so to speak, but there are no actual courses for them or other fundamental training routes."

The need for employees, in particular academics with technical expertise, e.g. in publishing, and at the same time with specific IT skills, is indeed huge because there are no apprenticeships or courses with these combinations, or where such courses do exist they are only slowly producing graduates for the employment market.

"At the LMU in Munich there is a chair of media technology which on the one hand has an affinity to books, but on the other hand represents computer science and economics. For us this combination is going in the right direction."

Business Situation: Quietly Confident

The assessments of the current economic situation in Germany and their own business situation at the Munich

location differ greatly from one another. The larger a company, the better it assesses its own situation: 86% of the large concerns assess their own business situation as good, but only 36% of small businesses. (Fig. 12)

The fact that overall the information, communication and media economy at the Munich location is looking confidently into the future explicitly shows its positive expectations for the next few years. (Fig. 13)

The further the horizon, the more reticent are the companies in their assessment of business developments. Companies estimate their business developments in three to five years worse than in two years, in particu-

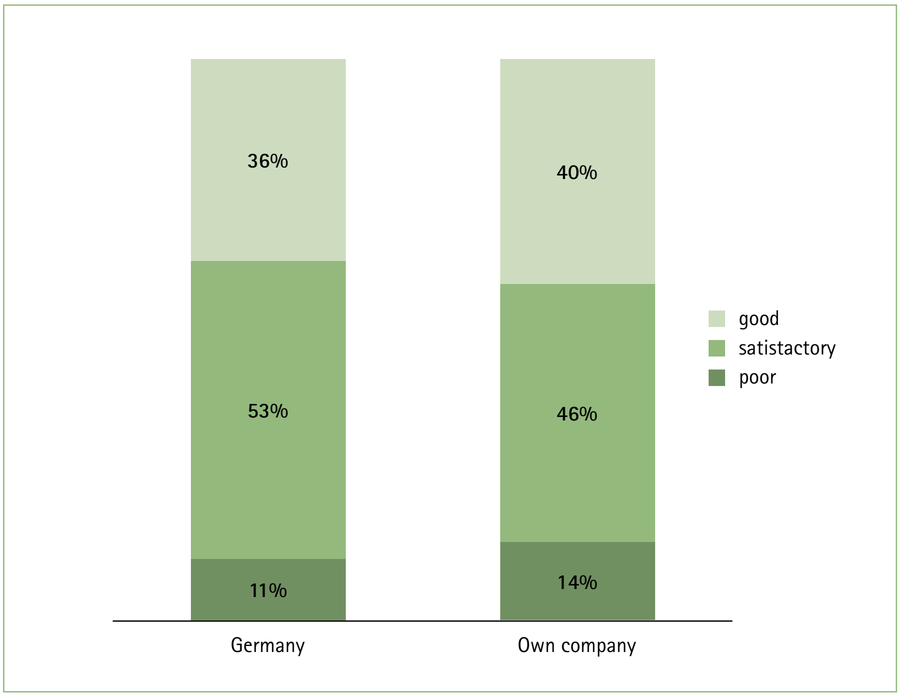


Figure 12: Assessment of the current economic situation

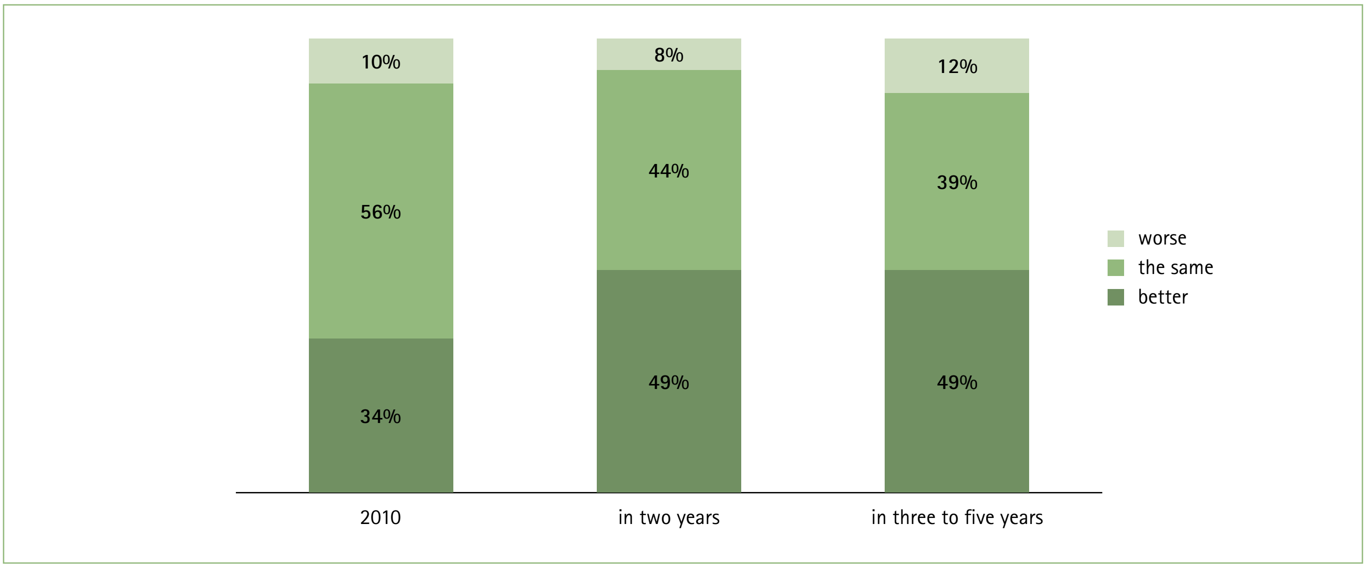


Figure 13: Expectations concerning business developments in the year of the survey and for the future

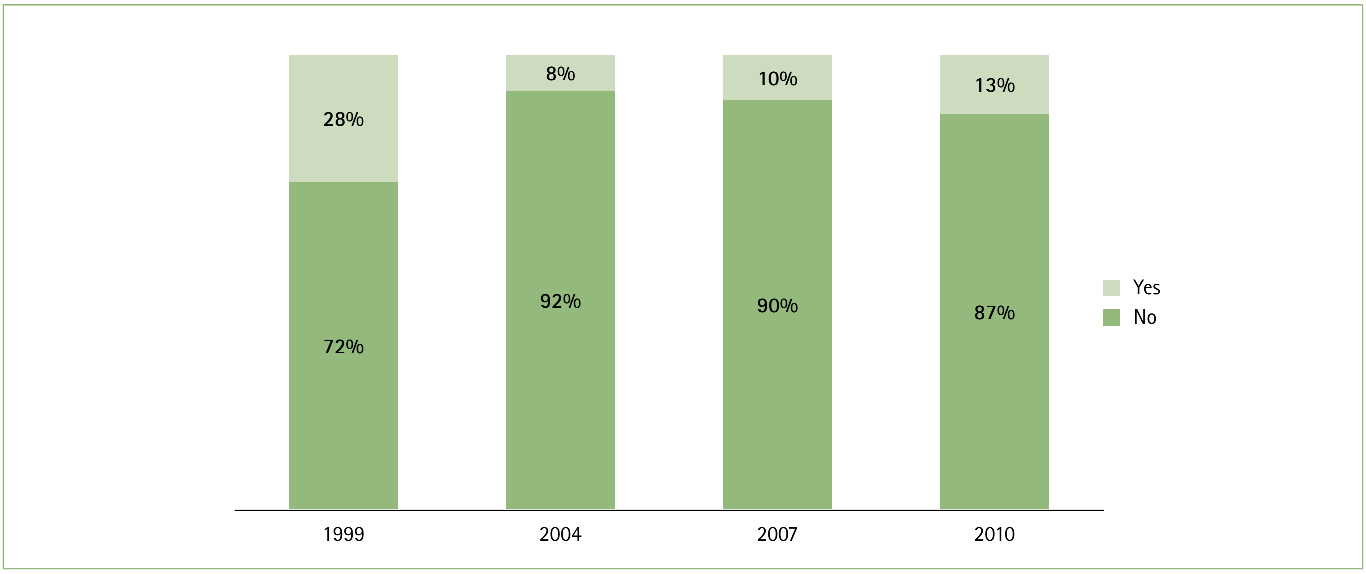


Figure 14: Planned entry into new business segments

lar the media industry and the field of transport level/cable and network operators: expected upheavals and increasingly shorter product cycles in a sector which repeatedly overtakes itself cause caution to be exercised with respect to expectations.

The plans to enter new business segments have been rising continually up to 13% since 2004. The outstanding spirit of optimism at the turn of the millennium, when 28 percent of the companies in intended to enter new business segments, is not reached. (Fig. 14)

Among the large concerns there is a different picture here: almost half of the large concerns are planning to enter new business segments. "For us it is a great challenge to keep our finger on the pulse and change along with these new developments."

The media industry and the field of transport level/cable and network operators are at the cutting edge here.

Globalisation

96% of the companies in the greater munich area are domestic companies. Among large concerns this proportion is (71%). Companies with a foreign parent mainly concentrate at the Munich location on parts/components, terminal equipment, cable/ network operation and distribution.

Due to the global business policy of the information, communication and media economy, it is difficult to determine its export figures. Although this fact applied originally to the production of hardware and the requisite components and structural elements, as well as end devices used in the telecommunication and entertainment industry, it now applies to all sectors of the information, communication and media economy.

"In Germany and also at the Munich location we are exclusively a maintenance and sales organisation. Production is carried out at other central points, depending on cost and logistic aspects. Development as such is carried out in America."

The global networking and increasing level of education of skilled employees in the low-wage countries is accelerating the outsourcing of the higher-value phases of the value-added chain.

The question of outsourcing in a globally active company does not arise: the various activities - from management and administration through research and development to production and marketing control - are located at the appropriate subsidiary companies according to the cost/benefit ratio – whereby the location of Munich evidently continues to score highly.

The enormous capital flows which move around the world as a result are not discernible in the statements of the companies surveyed as part of the present study.

"Although we only work in Germany, we are a foreign company. Our shareholders are not all German. This also means that the revenues which are generated here are transferred abroad. We do not export any products or services, but we do export capital."

Detailed Analysis of the Individual Sectors of the Information, Communication and Media Sector in Munich

Media Sector Growing Digitally

The media economy has experience of crises. During the economic turbulences of 2001 to 2003 income from advertising fell and companies made significant job cuts and cost reductions. As a result of their economic stability they were able in the following years to tackle the challenges of technical change and invest in the development and expansion of new business segments. When the financial and economic crisis in 2009 again caused falls in turnover in the print media, the digital offers made up for these losses, at least in part.

"We are therefore undergoing transformation and reinventing ourselves every 10 years – and at the moment we are undergoing the greatest transformation – towards print to online."

Nevertheless some companies - above all small ones - were eliminated from the market during the crisis years. Accordingly, the number of media companies has fallen slightly since 2007 from around 5,000 to 4,666. As a result the proportion of media companies among all companies in the information, communication and media economy during the period under investigation is now 16%, compared to 19% in 2007. Even so, the sector continues to make a greater contribution towards overall economic power than all other sectors: 27% of the total turnover is generated by the media field, and with 57,000 people the media economy still has the most employees of the entire information, communication and media industry.

The media sector has a long tradition. Only 13% of the companies were founded in 2008 and later. The fact that in the crisis it was mainly small media companies which suffered is likely to dampen the start-up dynamics.

In statistical terms the media sector combines very heterogeneous markets which react very differently to general economic fluctuations. First and foremost there is still the market of the traditional media (print and electronic media), as well as the market for all types of digital offers, and last but not least the printing industry with its own history. Also within the print media there are two markets which have to be considered separately in order to adequately describe the current situation and the future development of the sector: the book market on the one hand and the magazine market on the other. **The book market** is a market with clear customer structures which functions according to known rules of the game and whose development, even in view of digitisation, is assessed by the market participants as being relatively easy to foresee overall. As a result the book market was less affected by the downturns in the economy since the beginning of the new century than the other media fields, but also develops less dynamism in the upswing phases.

For the immediate future the publishing houses are optimistic. They are all pushing forward with digitisation and expecting the electronic book to achieve a market share of 5 to 10% in the coming years. However, over the long term the book market is liable to stagnate.

"The book market is a difficult market, as on the one hand the population is continually shrinking and the educated

middle classes are tending to shrink even faster than the average for the population; so there are fewer and fewer readers. On the other hand part of the time which is spent on other media is taken away from reading time. It is an important task for us to acquaint children with the process of reading. They are always sitting in front of their gaming console or television set."

At all events the industry is expecting reading behaviour to change. There are however more optimistic voices which consider the competition for reading from other media to be less serious.

"An alternative form of reading will come about over the course of time. On the other hand concerns associated with competition from other media – Internet, television - for the book are rather low. Anyone who has an affinity to the Internet also reads."

Unlike the book market the newspaper and magazine market depends to a great extent on the business cycles in the advertising industry. If income from advertising declines, the publishing houses suffer major falls in turnover. This has been demonstrated once again by the financial and economic crisis of the past few years. It is also drastically portrayed in the business report of a large media company:

"The financial and economic crisis also affected the media industry. In Germany the consequences were clearly felt. The revenues of the media providers declined dramatically in 2009, with the turnover of the magazine publishers falling accordingly."

And future market developments also receive a cautious assessment by one of the largest media groups in Germany: "The overall situation remains fragile and reaching the level of before the economic crisis will take years."

At one of the largest magazine publishers – and this is very likely to be symptomatic of the entire magazine market – the contribution of magazine sales to the overall profit in the field of magazines was more important than income from advertising in 2009.

Consumer publications and trade journals display a similar picture, both for their domestic and foreign business. The collapses in turnover among the specialist publishers were between 15 and 30%. The publishing houses are not expecting the situation to improve before the spring of 2011 at the earliest.

The newspaper and magazine publishers are placing great hopes in their digital products. They are investing in this very dynamic growth market and attempting to establish sustainable business models.

"One development is digitisation. This brings with it the attempts by our company to position itself as broadly as possible – i.e. being represented on as many distribution platforms as possible. That would then be cable, satellite, IP-TV or the online field."

In the view of the specialist publishers, digitisation is the driver of almost all market changes. Demographic change will continue to accelerate the growth of digitisation, as the reading and information behaviour of young people who have grown up with the Internet differs significantly from that of the older generations.

The growth in digitisation might even be stronger if there were no lack of suitable skilled employees. The search is on for employees with the rare combination of product knowledge in the media field and a profound computer science background. The result is the creation of completely new professions which are not currently to be found in sufficient numbers on the market.

"For the media location of Munich in particular it would be important to firmly establish these subjects at the universities. I believe that new professions will have to be created."

In contrast, the companies from the traditional printing field in Munich can draw on plentiful resources when filling new positions. Very often they recruit from their own ranks, i.e. trainees who have studied humanities and who can be found at all publishers are awarded a permanent contract of employment.

The long-term crisis in the printing industry continues. This part of the media sector is marked by overcapacities, price erosion and falls in demand. Accordingly, the current business situation in the printing industry is described as unsatisfactory, which is in line with the Ifo business test. Nevertheless, business expectations for the coming six months are more positive than in the previous year, as companies can at least see rising turnover in foreign business. The mood in the media economy at the time of the survey can be read off using the responses to the questions concerning the current business situation and expectations for the future. All of the replies show that the media economy is careful in its assessment of future developments (Fig. 15).

If one considers the replies concerning development in 2 years or in 3 to 5 years, the caution concerning the assessment of their own economic situation is expressed even more clearly. Only 36% and 39% of the members of the media economy state that the situation of their company would improve, with these figures averaging 50% for the other sectors (Fig. 16).

Accordingly, only 12% of the companies in the media industry are expecting an increase in employees who are liable for social insurance contributions in the near future.

	2004	2007	2010
good	12%	41%	30%
satisfactory	54%	51%	52%
poor	34%	8%	18%

Figure 15: Assessment of the current business situation of media companies in comparison to the last two studies

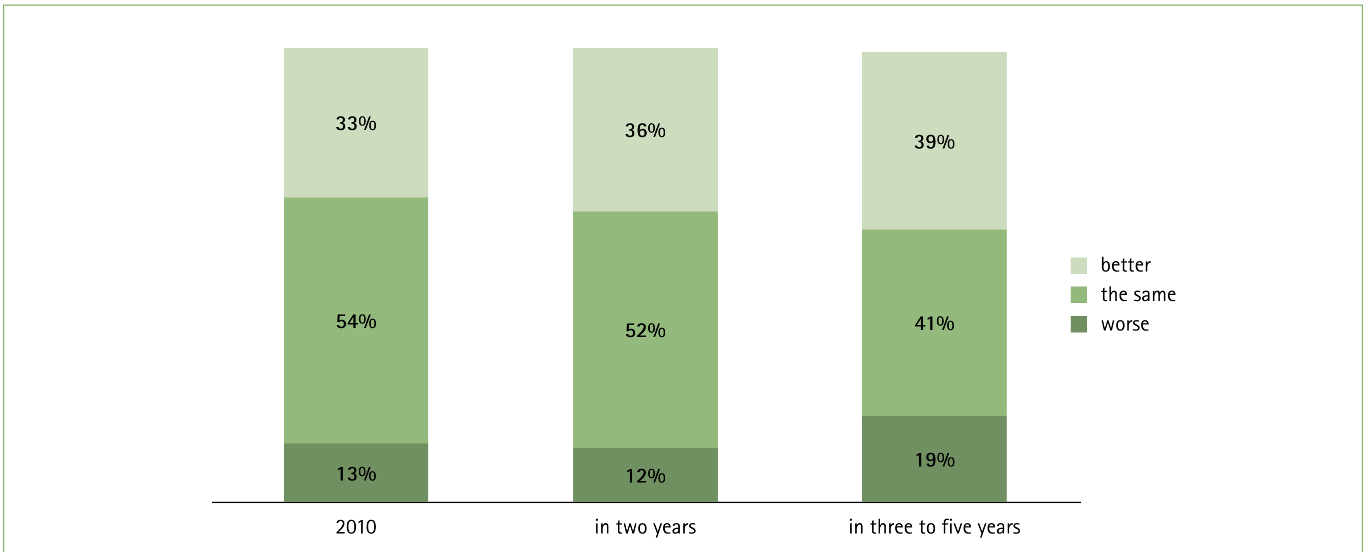


Figure 16: Expectations on business development in the year of the survey and for the future in the media industry

Advertising, Market Communication and Research: Crisis-related Restructuring

With an increase of around 1,300 companies, the field of advertising, market communication and research has moved to the top of the number of the companies in the information, communication and media economy (35% of all companies in the information, communication and media economy). These are very small businesses with an average of 3 employees, or 1 employee in the case of the smallest businesses, which with a share of over 80% of all companies play a crucial role in shaping the structure of this sector. In contrast, there has been a concentration process going on in market research as a partial segment of this sector over the past few years which has greatly reduced the number of small, scientifically oriented companies.

The traditionally strong dependence of the advertising industry on economic factors is shown in the major collapse in turnover (minus 17%). In times of crisis savings in the advertising budget are a preferred means of rapidly reducing costs, so that major falls in the automotive industry, in the trade sector or among financial service providers led to declining turnover.

"The budgets during the crisis were of course tighter and the crisis had an impact on all companies worldwide and everyone had to save, which is of course always reflected immediately in the advertising budgets." (Fig. 17)

As expected there were staff cuts, although these were relatively moderate among the permanent employees: even before the crisis in the financial markets the sector had been using the services of a network of freelancers which – as one man businesses – could not reduce their staff levels during the crisis, but nevertheless had to cope with revenue losses. Digitisation is now a permanent feature of the advertising industry:

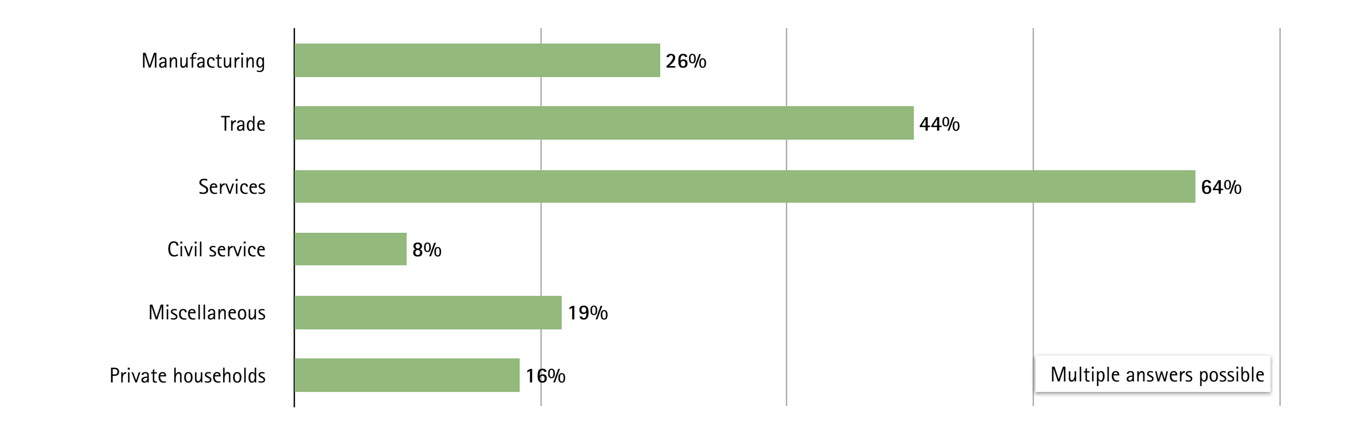


Figure 17: Customer structure (according to business sector affiliation) of the companies in the advertising industry

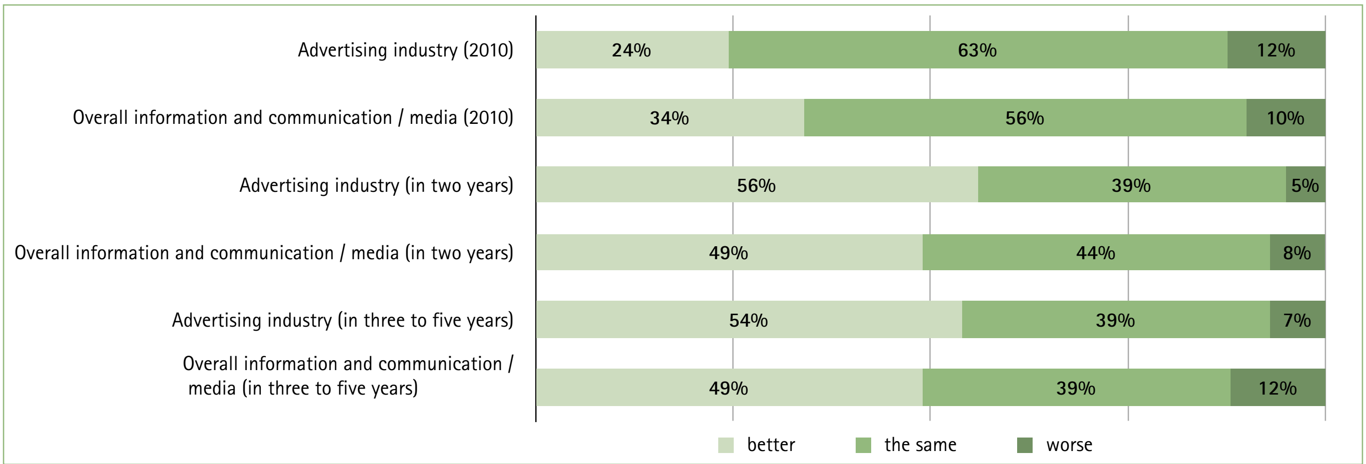


Figure 18: Expectations of the advertising industry concerning business developments in the year of the survey and for the future in comparison with the overall information, communication and media industry

online advertising does of course belong to the marketing mix of the companies, and the advertising industry has long adapted to it. A new trend is gaining ground: strongly regionalised advertising on Smartphones and tablet PCs which the mobile end-user calls up according to his or her requirements and location. The advertising industry is evidently very adaptable, as the assessment of business developments for 2010 is already marked by cautious optimism. For the next two years the companies working in advertising, market communication and research are expecting a far more positive development than the media industry, for example. (Fig. 18)

Software, Data and IT Services, E-Commerce: New Development Prospects Creating Optimism

If in 2007 the software industry was the most strongly represented sub-sector in terms of the number of companies within the information, communication and media sector, it has lost its top position in the meantime to the advertising industry. Currently the field of software, data and IT services as well as e-commerce comprises 9,666 companies, corresponding to a decline in the number of companies by 1.9%.

1999	7,164
2004	8,254
2007	9,858
2010	9,666

Figure 19: Development in the numbers of companies in the software, data and IT services and e-commerce sector

The sector remains very dynamic: one quarter of the companies – both small businesses and medium-sized companies – were only founded in 2008 or later. (Fig. 19)

With an average of six employees per company the sector is characterised by smaller companies. The sector is led by large companies, although these often have foreign owners. The importance of the software industry for the information and communication location of Munich remains high: 23% of all permanent employees in the information, communication and media industry are employed here, 16% of the turnover is generated here. (Fig. 20)

In contrast to the trend in the overall information and communication sector, the software industry has only experienced a slight fall of almost 1% in its permanently employed staff since 2006. The reduction in employees has been at the expense of the smaller companies, with almost all large concerns working in the software industry having been able to report an increase in the number of employees.

As was the case in the 2007 study, the sector 2010 is complaining of a lack of skilled employees. 29% of entrepreneurs state that they have problems with recruiting personnel, in particular in the technical field. However, the time of the career changers in the software industry appears to be over, with the search currently on for highly qualified and specialised applicants with a university qualification. Although large software companies train and educate their employees, the lack of skilled employees is being keenly felt:

"We have having great difficulty finding employees. In some cases we are not able to carry out projects for this reason."

As far as business developments are concerned in the next two or in the next three to five years, there is still a good deal of optimism in the software industry. 57% of the companies are convinced that their businesses will run better in the next three to five years than today. This exceeds the assessments of all of the other sectors. (Fig. 21)

The spirit of optimism is associated with the latest trends in the industry, which are ensuring dynamic development: the rapid spread of Smartphones – according to BITKOM, sales of Smartphones in Germany increased by 47% in 2010 compared to 2009 – the increasing trend towards outsourcing in-house IT and the use of IT services in real time via data networks (cloud computing) are providing new challenges and opportunities for development in the software and IT services field.

"Many customers no longer wish to have their own large servers, but use our platform instead."

This affects not only software development, but also the sales and value-added channels (licences and maintenance agreements). The turn away from software as a product towards "Software as a Service (SaaS)" sets the provider of software and IT services the challenge of changing its products and services over to cloud computing within a short time.

Embedded systems are also some of the most important cross-sectional technologies of the 21st century. These embedded systems have now become an important driving force of innovation. The companies behind these are often some of the „hidden champions" of German industry. Today the vast majority of all chips are installed in embedded systems so that they can usually be integrated invisibly into devices, machines or plants.

At the Munich location the automobile industry is one of the largest customers, followed by aerospace technology. In the future sustained high growth rates can also be expected here, as well as increasing demand for highly qualified employees with skills across various disciplines.

Transport Level/Cable and Network Operators Benefiting from Nationwide Requirement for Fast Data Transmission

The cable and network operator market is characterised by very hard competition. Accordingly, the number of companies has fallen by 7.2 percent to 188. The main companies concerned are the smaller ones. The larger market participants have been able to increase their turnover and also employ new staff. The total turnover of the sector rose by almost 6 % in comparison to 2006 with stable employment figures. (Fig. 22)

The investments remained at the same level as the last study: the financial crisis delayed investments in the glass fibre field. Due to the expected positive business developments for the future, this bottleneck is likely to disappear: 38% of the cable and network operators in Munich are planning to increase their investment volumes, with the same number planning to continue investing at their current levels.

"It is no longer a question of developing a uniform infrastructure, but rather several infrastructures which you can buy into on the basis of long-term contracts. That provides planning reliability for the players on the telecommunication market."

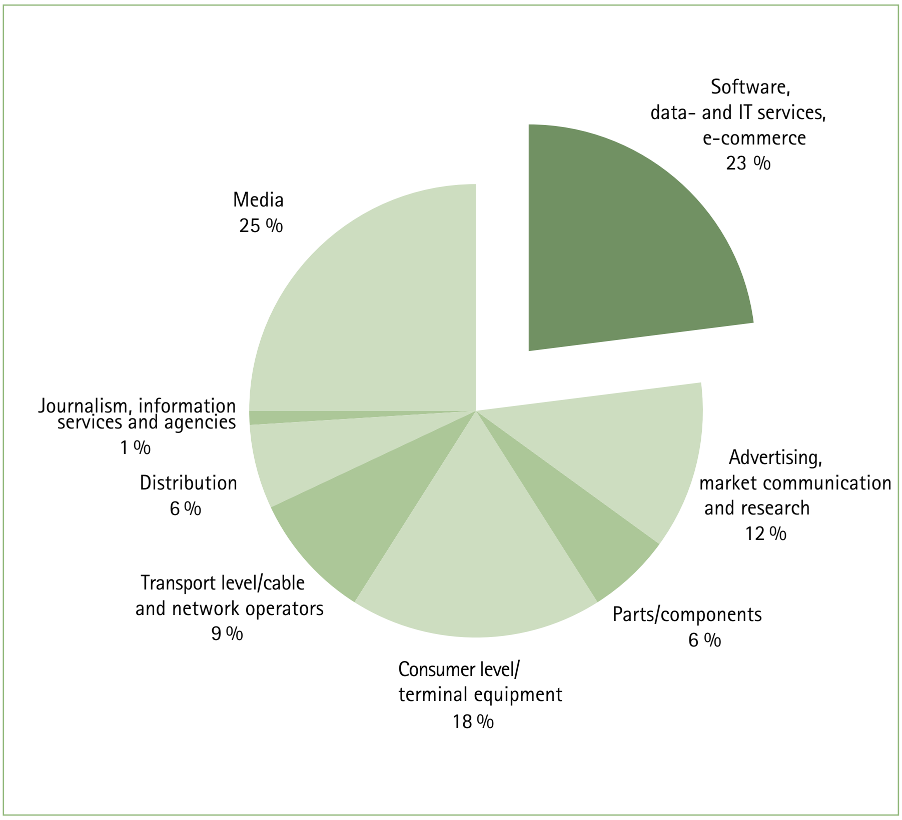


Figure 20: Proportion of employees from the individual subsectors in the overall information, communication and media industry

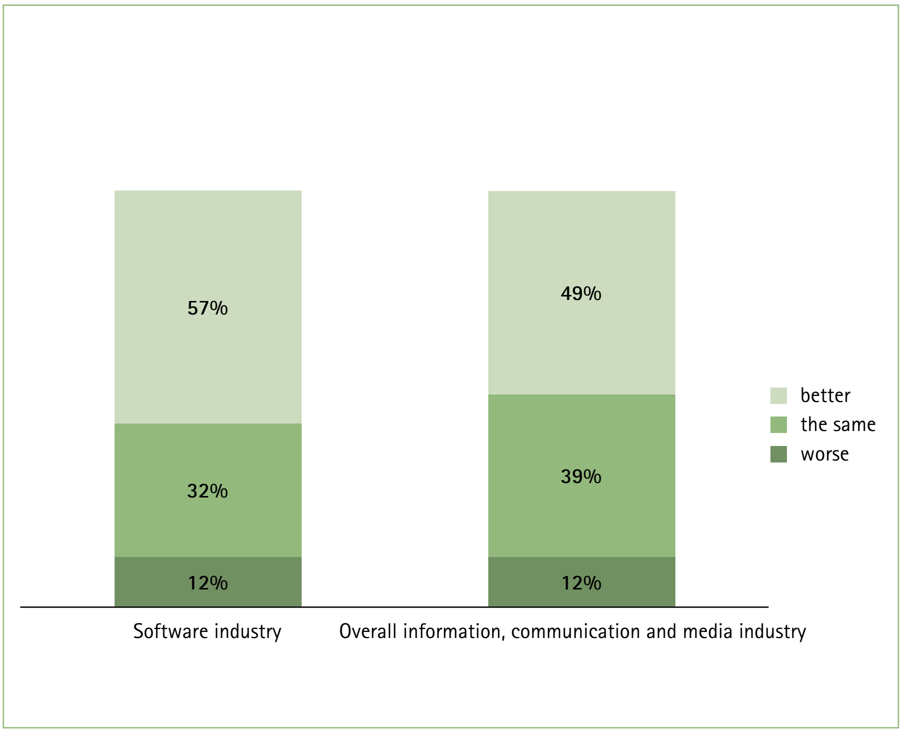


Figure 21: Expectations of the software industry concerning business developments in the next three to five years

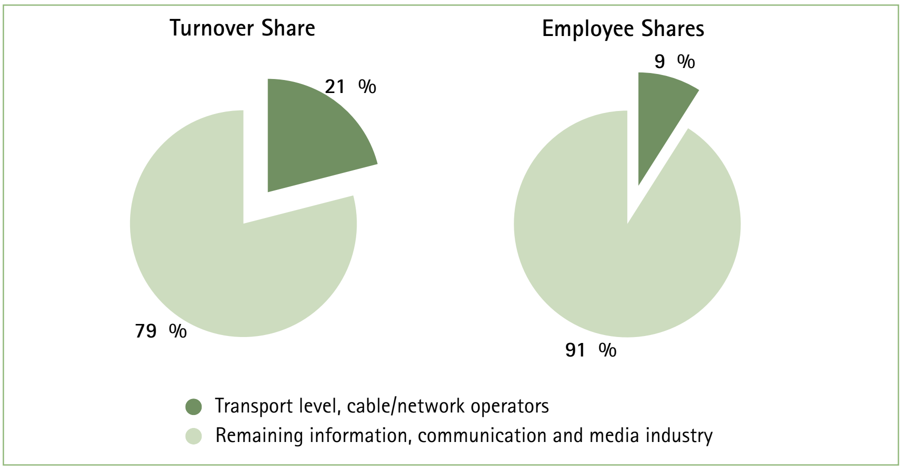


Figure 22: Turnover and employee shares in the transport level/cable and network operators subsector

The rising demand for fast data transport, particularly in the mobile field (Smartphones, mobile computers) or home networking, cloud computing, smart energy grids and other data-intensive developments requires increasingly powerful networks and transmission standards. For example, the development of LTE as a replacement for UMTS is setting new standards and posing new challenges for the sector.

"We are moving from the world of copper to the world of glass fibre because voice communication is playing less and less of a role, while that of data communication is increasing all the time."

The cable and network operators in the greater munich area are in a very positive mood. The flourishing sector is characterised by large concerns which are subsidiaries of foreign groups and investing heavily in the location.

Customer-specific Solutions as a Niche in the Globalised Market for Parts and Components

The international market for parts and components is dominated by a few groups which act as global players. In Germany the sector is predominantly concentrated on the Munich region. On the one hand the Siemens spin-offs Infineon and Epcos can be found here, as well as establishments of important international manufacturers on the other. However, these are mainly sales organisations as well as research and development locations, while manufacturing is increasingly being carried out in Asian or Eastern European low-wage countries. Furthermore, the sector has undergone a structural change over the past few years. One example is Infineon, which at the Munich location concentrates on administration and development and has sold its mobile phone network business to Intel. This has not resulted directly in any significant effect on unemployment.

Due to the high degree to which they depend on exports, the manufacturers of parts and components are generally very susceptible to fluctuations. Particularly in the semiconductor industry, which represents the main focus of the sector in the region, this volatility is especially pronounced. In the past few years the intensity of the competition has also increased further, which on the one hand has resulted in a continual drop in prices, and increased pressure to innovate on the other. The resulting increased pressure to consolidate has been further exacerbated by the financial crisis, which is also reflected in the 3.0% drop in the number of companies working in the Munich region.

"Globalisation is an opportunity – and we have to be part of it. For smaller firms there is only the niche strategy and otherwise we have to be large and global in order to enjoy these cost effects such as countries like India or China do."

The global demand for parts and components slumped in 2009 as a consequence of the financial and economic crisis, so that consequently production capacities were reduced all over the world. Particularly due to its dependence on the manufacturing sector, the parts industry was particularly badly affected by the level of the financial and economic crisis. In the Munich region turnover fell in 2009 in comparison to 2006 by 19.9% to €2.8 billion. As a result, 4.0% of the total turnover of the information, communication and media industry in the Munich region relates to parts and components (after 4.8% in 2006).

The number of permanently employed workers dropped by 14.0% to 13,500 and has therefore been declining continuously since 2001. This development is also reflected in the assessment of the companies: 63% of the companies surveyed state that the business situation has deteriorated over the last three years. (Fig. 23)

In spite of the economic crisis and the increasing intensity of the competition, the companies surveyed see themselves as being well-equipped for future developments. Also in the medium term the

companies consider their perspectives to be good: 55% expect an improvement in the next three to five years. The optimism is also reflected in the employment plans. Over one third of the parts manufacturers are expecting an increase in employees who are liable for social insurance contributions employees in the next six months. (Fig. 24)
The most important advantages of the Munich region for a company location have traditionally been the high qualification levels of the employees, the good infrastructure and the quality of the research facilities. Furthermore, the companies have at their disposal a high degree of creative innovation, as well as good international positioning. Accordingly, 83% of the companies are satisfied or very satisfied with the Munich region as a location for their company.

In the future the industry can be expected to become increasingly important worldwide, but competition - particularly from China - can also be expected to become more intense. At the same time the requirements placed on energy consumption, reliability and the integrability (e.g. Internet capability, faster data transmission) of electronic structural elements will continue to rise, which will also be associated with an increase in development costs. However, only one quarter of the companies are actually planning to add to their investment volumes.

In order to maintain production in Germany, German manufacturers are taking advantage of the opportunities offered by targeted market positioning and direct collaboration with customers even at the development stage. The aim is for demand and production to be as closely interlinked as possible in the future in order to enable long-term planning. A distinction between customer and sector-specific product offers provides medium-sized companies in particular with opportunities for occupying specific niches.

Increasingly Shorter Product Cycles for Terminal Equipment and Devices

Office computers, telephone systems, radio and traditional consumer electronics, which had long been the bestseller on the shelves, were replaced at the beginning of the millennium by MP3 players, digital cameras, flat screen televisions and notebooks.

The enormous price competition has not however permitted any increases in turnover or positive employment effects in the Munich region. The production of terminal equipment and end devices is aligned globally for cost reasons and Munich cannot compete with Asian production costs as a production location for mass-produced goods.

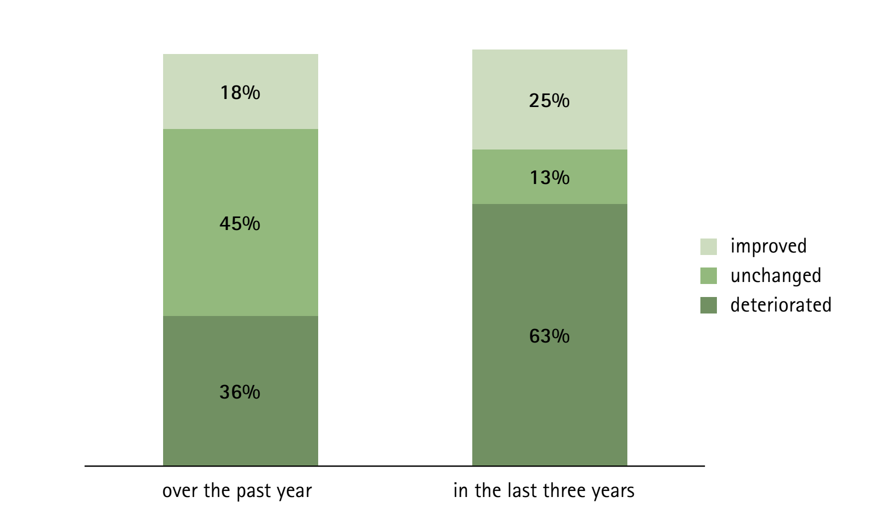


Figure 23: Development in the business situation over the past year and in the last three years in the parts/components industry

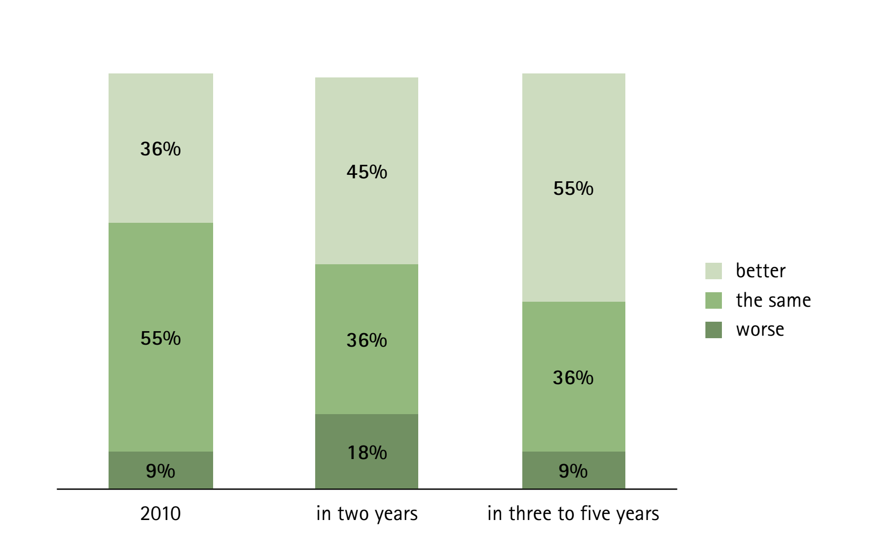


Figure 24: Expectations concerning business development in the year of the survey and for the future in the parts/components industry

The situation is different with respect to the manufacturers of terminal equipment and end devices in the Business-to-Business segment (B2B): in this sector there are several expanding and internationally renowned companies in the Munich region working in the development and production of innovative and state-of-the-art computer systems - for example control elements for industrial automation. These are supplemented by OEMs (Original Equipment Manufacturers) which produce hardware for other companies that is then installed and sold by a system integrator or complete system provider. Such specialised companies concentrate on the development and manufacture of high-quality peripheral devices with small and medium series production requirements which it would not be worthwhile producing themselves on the customer's premises. The central competitive advantage of these manufacturers is the significant reduction in product launch and delivery times.

The market for embedded computer technologies is today one of the world's strongest growth markets – and it is specifically in this field that some companies from the Munich region are world leaders. Such computer systems not only make everyday life easier, but can above all be used anywhere as special industrial solutions: from automated manufacturing facilities through modern navigation systems to telecommunication equipment.

It was therefore possible to stop the weight loss in the devices and equipment industry within the information, communication and media economy up to 2007. The number of companies stabilised at 1,006, the fall in turnover slowed with a minus of 9% to 10.2 billion euros and investments no longer fell as dramatically as in the middle of the last decade. However, the preceding and further transfer of production abroad was not without its conse-

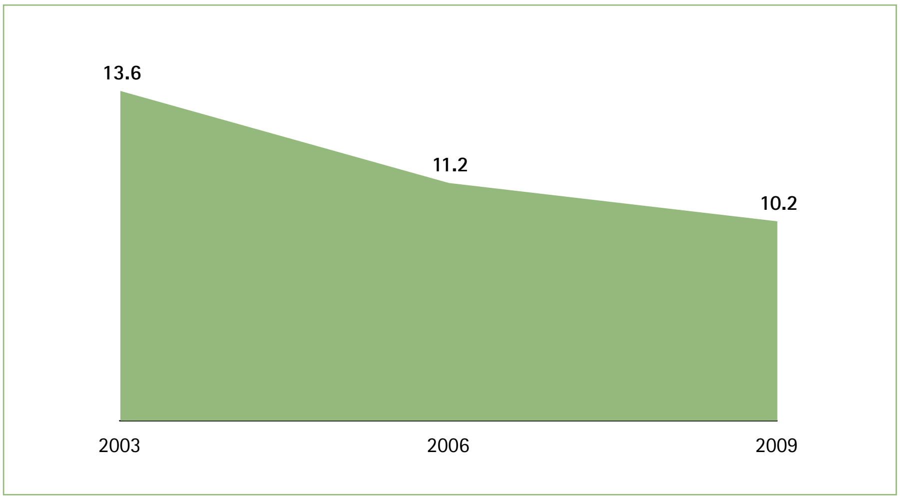


Figure 25: Development in the turnover figures in the field of terminal equipment (rounded, in billion euros)

quences for the location: the number of employees liable for social insurance contributions continued to decrease. The pressure on prices, for example on the PC market, coupled with crisis-related IT cost savings on the part of the companies from which the demand comes, resulted in drastic staff cuts, e.g. 700 employees at Fujitsu (formerly Fujitsu-Siemens) in 2009. (Fig. 25)

Now the companies are looking positively - almost euphorically - to the future. In the Consumer Electronics segment the industry is hoping for a market worth billions from technical innovations such as home networking in Germany. However, consumers are still hesitant, as the ability to access data, pictures, music and television programmes from everywhere at home, and even light and heating control units when they are out and about, is still believed by many to be a utopian vision of the future: even though home networking via consumer electronics has long made its way unnoticed into many households. People are evidently not so price-sensitive are the consumers of Smartphones and tablet PCs – although this only applies to the trendsetters, in particular if they follow a globally stringent product and marketing strategy: *"Price policy is not a strategy for us, it is of no importance."*

The surveyed companies from the devices and terminal equipment sector in the greater munich area assessed their own business situation as optimistic, at least much better than the economic situation of Germany as a whole. Exactly half are expecting an improvement in the situation for 2010, and even 63% for the next two years. However, an improvement in the business situation in the next three to five years is only assumed by half again. Although the companies are expecting sizeable turnover directly from the new product cycle of the Smartphones, tablet PCs and Internet television sets, this will have to be generated quickly in the next two years while they are already having to invest in the next innovative products. (Fig. 26)

For the manufacturers of end devices and terminal equipment in the B2B segment the prospects are good: products of rapidly increasing complexity and sophistication, as well as applications requiring intensive consulting, make a global network of sales and technical support centres essential. For this reason the development of sustainable customer relations with respect to innovation, product quality and technical support play an important role in the success of the manufacturers of terminal equipment and end devices.

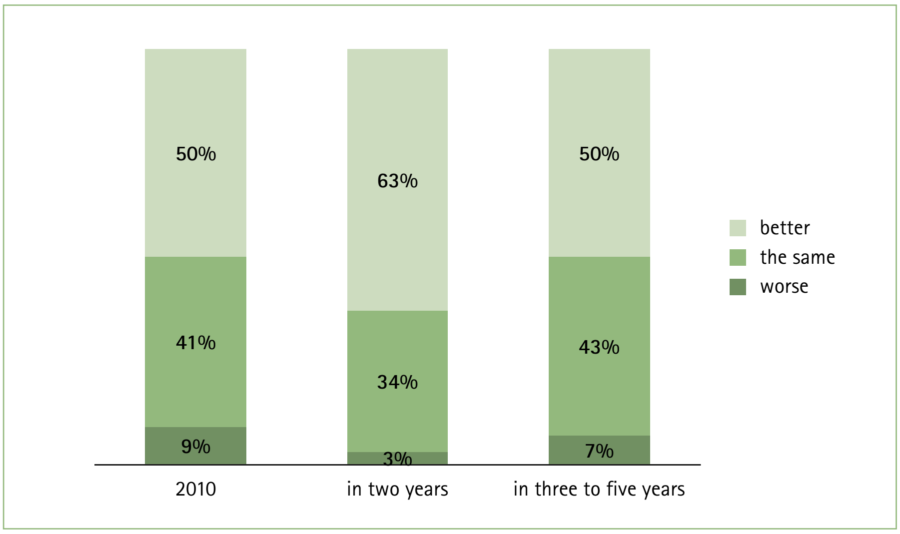


Figure 26: Expectations with respect to business developments in the year of the survey and for the future in the field of terminal equipment

Distribution: from Sales to the Globally Active Solutions Provider

Commercial agents and wholesalers of goods in the IT, telecommunication technology and consumer electronics fields, as well as software or also licences, often set up near suppliers and customers. For example, 2,578 distributors in the greater munich area with a turnover of 8.2 billion euros contribute 11.5% of the total turnover of the information, communication and media industry. Unfortunately a comparison with the combined key data from the last studies is not possible. Due to the change to the classification of the industries (NACE codes), more companies were added in 2008. These additional companies, for example the newly included companies working as commercial agents for office machines, data processing equipment and peripheral devices or as wholesalers of electronic parts and telecommunication devices, have contributed - in purely statistical terms - to employee and turnover increases in distribution, and have even compensated for the declining turnover of individual „old" distribution sectors.

Distribution is suffering from price competition with falling margins. It is therefore attempting to achieve more complex value-added chains: beyond mere stock keeping, logistics and the distribution of goods to the trade or end consumer, the sector is also offering system support and IT advice. Although this development is not new, it is intensifying among the small and medium-sized companies, which up to now have not been able to offer the entire range of services.

"You can simply get everything from us, and you can get it with a single order!" reports a company working in broadline distribution. Besides an extensive product portfolio, delivery reliability and speed by means of a proficient logistics service are decisive success factors in a market in which company mergers fuel the concentration process and therefore the price competition.

In the greater munich area the sector has survived the financial market crisis almost unharmed and is looking optimistically into the future: consumption among end consumers has been shown to be crisis-proof and has scarcely diminished, while the investment backlog in IT services has been dispersing significantly.

Distribution on the employment market is now in competition with IT services: companies are searching for marketing staff with IT skills which can be used internationally. As the IT sector generally pays higher salaries, the distribution sector has to invest more in further training. And in spite of pressure on prices it has to operate in attractive locations: *"Well, the cost of living is horrendous and the salaries are higher than anywhere else in the state [...], but people simply love living in Munich."*

A further challenge is the online trade: on the one hand online traders take over the role of distributors as suppliers to specialist retailers, while on the other hand traditional distribution companies can enter the direct end-customer business with an online shop, so that the two marketing models are not longer so clearly distinguishable from one another.

Munich Remains Attractive as a Location even in Times of Crisis

Satisfaction with the Location Remains at a High Level

The Munich region is and remains a top address for the companies working in the information, communication and media economy. Even in times of revenue declines and global financial crisis they are still satisfied (54%) or even very satisfied (40%) with the Munich location. The share of very satisfied companies today is even higher than that during the boom year of 1999. (Fig. 27)

The undisputed main reason for the high level of satisfaction with the location is the cultural and leisure time facilities, with which over 55% of the surveyed companies are very satisfied. When asked about the strengths of the Munich location, many refer to the image and the cultural offerings of the city, as well as the surrounding nature and the various leisure time facilities in the region.

"The location has major advantages with respect to the general flair of the city and culture – new employees look forward to coming to Munich."

"Munich appeared to be the ideal location, and it still is today: because the recreational value is very high."

The classical location advantages such as the high density of universities and research facilities, coupled with network activities, co-operations and the availability of company-related services, make the Munich location very attractive. Specifically, the com-

	1999	2004	2007	2010
very satisfied with the Munich location	38%	26%	37%	40%

Figure 27: Satisfaction with the Munich region over the course of time

panies also refer to the good quality of training and innovation clusters. *"On the one hand proximity to the customer is possible here. There are also universities which offer study courses whose graduates we need."*

The popularity of the city and its surroundings binds the employees to the companies located here in spite of the frequent complaints about the high living costs, thereby preventing expensive employee turnover.

"The Munich location is also a means of retaining employees and preventing employee turnover."

One further important aspect which makes the Munich location stand out is its safety. Safety plays an important role, especially for companies which work on the global stage and which have had different experience: "Munich has plenty to offer employees and it is safe."

Additionally, the traditional factors such as traffic infrastructure, the concentration of companies from the same industries and proximity to the customers and suppliers are positively assessed at the Munich location.

"Furthermore, Munich has good transport connections; it is easy to reach the airport."

"Most colleagues use local public transport, we also have these company tickets, which works great. An increasing number come by bike."

One aspect of the Munich location which is still criticised is the high location costs: high rents for offices and commercial properties, the high level of personnel costs and high taxes and duties. (Fig. 28)

"[...] living space is always a topic - the costs and trying to find somewhere. The quality of life in Munich is great, but living space remains a problem and the employees are moving further and further out into the countryside with the corresponding travel times."

	very satisfied	satisfied	less satisfied	dissatisfied
Cultural and leisure time facilities	55%	40%	4%	1%
Networking activities and cooperations	24%	65%	10%	1%
Range of qualified employees available	15%	56%	22%	7%
Availability of company-related service providers	23%	67%	9%	1%
Possibility of contacts with universities and other research facilities	22%	61%	12%	4%
Transport connections	47%	43%	8%	2%
Concentration of companies in the same industry	13%	66%	18%	3%
Proximity to suppliers / subcontractors	20%	68%	9%	3%
Customer proximity	26%	62%	10%	1%
Range of commercial premises and offices available	22%	56%	17%	5%
Trade tax and municipal taxes	3%	32%	43%	22%
Office / commercial rents	2%	27%	45%	26%
Level of personnel costs	1%	34%	46%	19%

Figure 28: Assessment of various location factors

The generally high cost of living as well as insufficient childcare opportunities are nominated by the companies as being the weakness of the Munich region. *"I lose my best female employees if there are no childcare facilities."*

Larger companies are able to react to this by setting up their own day care centres for children. *"We had problems to retain good female employees with small children due to the lack of childcare places. So we helped ourselves by setting up a kindergarten run by the company itself."*

"We have very many women at the company and the infrastructure is crucial. We need day nurseries and day care centres for children, as otherwise the mothers cannot work."

Although life in the Munich area appears to be particularly expensive and working women with children have difficulty finding good childcare, hardly any company working in the information, communication and media economy is considering changing its location and moving away from Munich – a sign that for the companies the advantages of Munich more than outweigh the disadvantages of the location. If in 2007 90 percent of all information, communication and media companies stated they would be retaining their Munich location, this figure has risen in 2010 to almost 92 percent. In spite of the above-mentioned problems, the Munich location has become more attractive in the past few years for the information, communication and media economy.

Support Required

The majority of the companies expect very specific support measures on the part of the Chamber of Industry and Commerce and the promotion of trade and industry by local authorities, and are pleased take advantage of these. Offers such as company visits, advice on setting up businesses, further training opportunities as well as themed events and talks are received positively by more than half of those surveyed. 57% of the surveyed companies would like to see more advice provided concerning subsidies, with grants for setting up companies being specifically mentioned. There is an equally strong desire - at 46% - for an increase in the "standardised contact person" for administrative procedures. One aspect which is considered to be less important is co-operative advertising, which 12% of the surveyed companies would reduce. The main offers taken advantage of by small businesses is company visits, followed by the further training offerings and location consulting. In contrast, advice on subsidies and setting up business has been obtained by considerably fewer small businesses.

Company visits are also the main service taken advantage of by the larger companies, followed by the arrangement of contacts with universities and research facilities, co-operative advertising and support with networking.

The companies working in the diverse information, communication and media economy are often integrated into industry-specific networks. There the entrepreneurs are provided with suitable information and support, but less input on trends across various business sectors. This offers the city of Munich and the Chamber of Industry and Commerce the opportunity to increase convergence in the information, communication and media landscape and by this means actively supervise this crucial sector at the Munich location. (Fig. 29)

	appropriate	expand	reduce
Advice on setting up business	57%	38%	5%
Advice on subsidies	39%	57%	4%
Letting of commercial premises / location consulting	53%	39%	8%
Single point of contact	51%	46%	3%
Arrangement of contacts with research and science / technology transfer	60%	36%	5%
Support with networking	56%	39%	4%
Co-operative advertising (e.g. joint trade fair presentations)	53%	35%	12%
Company visits	64%	26%	11%
Further training opportunities / trainings	59%	37%	3%
Themed events / talks on the sector	57%	37%	6%

Figure 29: Assessment of the offers of the Chamber of Industry and Commerce for Munich and Upper Bavaria and the Council for Economic Development of the city of Munich

Appendix

A Basis of the Analysis

A.1 Data Basis

The basis of the data for the present study is all of the tradespersons working in the information and communication fields in the Munich region who were registered with the Chamber of Industry and Commerce in October 2010. The term „trade" is understood to mean a

- self-employed,
- authorised,
- profit-oriented and
- long-term

activity in the economic field. For the information and communication field it is relevant that the freelance professions are not included in the tradespersons and therefore no freelancers are taken into account in the survey. Within the group of tradespersons there is a breakdown into Commercial Register companies and small businesses. An entry in the Commercial Register is obligatory for commercially active companies if the size of their business exceeds a certain order of magnitude. Even if the small businesses are often one-man firms, they are subsumed in the study for the purposes of simplification under the term "companies". The following subsection provides information on the exact definition of the information and communication sector, as well as an allocation to industries.

A.2 Allocation to Industries

The sector classification on which this analysis is based records companies or self-employed people whose main field of activity lies within the field of information and communication technology, as well as the media industry.

Specifically, the following fields were analysed:

- Media, in particular publishers, printers, processors of sound, image and data carriers, film and video producers, broadcasters, manufacturers of radio and television programmes

- Software companies, data and IT services as well as e-commerce, with the focus of activity in the field of data processing and databases, as well as the maintenance of data processing equipment

- Companies working in advertising, market communication and research which comprise firms from the fields of advertising, PR consulting, market and opinion research as well as market communication (e.g. call centres)

- Journalism, information services and agencies, to which artist management agencies, theatre and concert organisers, event agencies as well as correspondence and news agencies belong

- Companies from the field of transport layers, such as cable and network operators

- Manufacturers of parts and components, particularly manufacturers of electronic structural elements, printed circuit boards, switch cabinets and glass fibre cables

- Companies at the consumer level which serve end customers through the production of devices and equipment used in telecommunication technology, consumer electronics and data processing

- Distribution companies, concentrated on commercial agencies and wholesalers. The retail trade was not included in this study.

The identification of the companies in the respective industries is carried out in accordance with the NACE code registered with the Chamber of Industry and Commerce. The NACE codes are an international system for classifying branches of industry. In 2008 the classification was updated on the basis of an international reference classification as part of the further international harmonisation of economic classifications. In the selection of the codes the branches of industry were mostly taken over from the last study and supplemented by a few additional branches of industry.

Specifically, the companies included in the present study are subdivided according to the following individual industries of the NACE codes from 2008:

Media

18.1	**Production of Printed Matter**
18.11.0	Newspaper printing
18.12	Printing not classified elsewhere
18.12.00	Surface printing (offset printing)
18.12.02	Screen printing
18.12.03	Gravure printing
18.12.04	Digital printing
18.13	Printing and media preparation
18.13.00	Printer's copy producers
18.13.01	Digital prepress
18.13.02	Digital text and image processing
18.14	Binding of printed matter and associated services
82.19.00	Photocopying operations/copying, copy shops

18.2	**Copying of recorded sound, image and data carriers**
20.59.00	Production of photochemical products
26.80.0	Production of magnetic and optical data carriers
26.80.00	Production of data carriers (e.g. credit, telephone cards)
46.14.30	Production of image and sound carriers
74.20	Photography and photographic laboratories
74.20.1	Photography
74.20.10	Aerial photography
74.20.2	Photographic laboratories
74.20.20	Production of holograms

58.1	**Publishing of books and magazines, other publishing**
58.11	Publishing of books
58.11.0	Publishing of books
58.12.0	Publishing of address books and directories
58.13	Publishing of newspapers
58.14	Publishing of magazines
58.19	Other publishing (without software)
58.19.00	Compilation of documentation (excluding technical documentation)
58.21,0	Publishing of computer games

59.1	**Production of films and television programmes, their rental and sales, cinema**
59.11	Production of films, video films and television programmes
59.12	Postproduction and other film techniques
59.13	Film rental and sales (excluding video rental stores)
59.14.0	Cinemas

59.2	**Recording studios, production of radio reports, publishing of recorded sound carriers**
59.20.1	Recording studios and production of radio reports
59.20.2	Publishing of recorded sound carriers
59.20.3	Publishing of music supplies

60.1	Radio broadcasters
60.20.0	Television broadcasters

Software, Data and IT Services, E-commerce

62.0	**Provision of information technology services**
62.01	Programming activities
62.01.1	Development and programming of Internet presentations
62.01.9	Miscellaneous software development
62.01.10	Software development for multimedia applications
62.01.11	Software development for Internet programs
62.02	Provision of consulting services in the field of information technology
62.02.00	Software developer
62.03	Operation of data processing equipment for third parties
62.03.00	Electronic archiving / microfilming
62.09	Provision of other information technology services
62.09.00	Awarding of domains (issuing of Internet addresses)

63.1	**Data-processing, hosting and associated activities, web portals**
63.11.	Data-processing, hosting and associated processes
63.11.00	Data collection services
63.11.01	Web hosting, web servers services
63.11.02	Databases
63.12	Web portals

95.1	**Repair of data-processing and telecommunication devices**
95.11	Repair of data-processing equipment and peripheral devices
95.12.0	Repair of telecommunication devices
95.21.0	Repair of consumer electronic devices

Advertising, Market Communication and Research

62.01.12	Design of multimedia applications (CD, video, films, disk)
62.01.13	Design of Internet offers (homepage design)
70.21.0	Public relations consulting

73.1	**Advertising**
73.11.	Advertising agencies
73.11.00	Advertising consultancy
73.11.02	Commercial art
73.11.03	Design of film and photographic advertising
73.11.04	Planning and execution of advertising campaigns, outdoor advertising
73.11.05	Planning and execution of aerial advertising
73.11.06	Distribution and delivery of advertising material or samples
73.11.07	Ad agency
73.11.08	Promotion, Propagandists
73.11.09	Direct marketing, planning, execution
73.12	Marketing and placement of advertising time and space

73.20	Market and opinion research
74.10.2	Graphics and communication design
74.10.20	Communication design, media design
74.10.21	Graphics / photographic design

82.19.01	Fax polling service, voice polling service
82.19.03	Mailing, enveloping, letter shop

82.20 Call centres
82.20.0 Call centre
82.20.00 Telephone marketing

Journalism, Information Services and Agencies

63.9 Provision of miscellaneous information services
63.91 Correspondence and news agencies
63.91.00 Image archiving services
63.91.01 Press services and agencies
63.91.02 Media agency, media consulting
63.91.03 Picture agency
63.99 Provision of miscellaneous information services not classified elsewhere

74.90.01 Artist management agencies / artist consulting
74.90.01.6 Artist management agencies

90.02.00 Services in the field of event technology
90.02.01 Sound technicians
90.03.5 Self-employed journalists, press photographers
90.04.1 Theatre and concert organisers

Transport Level/Cable and Network Operators

42.22.0 Cable network engineering
42.22.00 Telecommunications engineering
43.21.03 Installation of antenna systems
61.10.0 Wired telecommunication
61.20.0 Wireless telecommunication
61.30.0 Satellite telecommunication
61.90.1 Internet service providers
61.90.9 Miscellaneous telecommunications not classified elsewhere

Parts/Components

26.1 Production of electronic structural elements and printed circuit boards
26.11 Production of electronic structural elements
26.11.9 Production of miscellaneous electronic structural elements
26.12.0 Production of populated printed circuit boards
27.12.00 Production of switch cabinets, panels, arrays etc.
27.31.0 Production of glass fibre cables

Consumer Level/Terminal Equipment

26.20 Production of data processing equipment and peripheral devices

26.3 Production of devices and equipment for telecommunication technology
26.30.01 Production of telephones, mobile phones

26.4 Production of consumer electronic devices

26.7 Production of optical and photographic instruments and devices

28.23.0 Production of office machines (except data processing equipment and peripheral devices)

32.40.04 Production of electronic games: video, chess, slot machines, pinball machines

33.20.00 Installation of communication Systems

71.12.25 Engineering firm for EDP devices and system development

Distribution

46.14.3 Commercial agency for consumer electronic devices
46.14.5 Commercial agency for office machines, data processing equipment, peripheral devices
46.14.50 Commercial agency for data processing equipment, peripheral units
46.18.1 Commercial agency for precision photographic and optical products
46.18.31 Commercial agency for computer games
46.18.7 Commercial agency for books, newspapers, magazines, music supplies and miscellaneous
46.43 Wholesale trade in photographic and optical products, electronic household equipment
46.43.1 Wholesale trade in photographic and optical products
46.43.3 Wholesale trade in consumer electronic devices
46.43.30 Wholesale trade in recorded image and sound carriers
46.49.42 Wholesale trade in books, magazines, newspapers and music supplies

46.51 Wholesale trade in data processing equipment, peripheral devices and software
46.51.00 Wholesale trade in data processing equipment, peripheral units
46.51.01 Wholesale trade in software
46.52.0 Wholesale trade in electronic parts

	and telecommunication devices
46.52.00	Wholesale trade in electronic parts, measuring, testing and control devices
46.52.01	Wholesale trade in communication systems and technology
46.66.0	Wholesale trade in miscellaneous office machines and equipment
46.69.35	Wholesale trade in cables, wires, switches, electric motors, transformers
77.22.0	Video rental stores
77.33.0	Rental of office machines, data processing devices and equipment
77.39.06	Consumer Electronics rental
77.39.09	Hire and rental of lighting equipment, sound systems

A.3 Random Sampling

The number of randomly sampled companies for the written survey totalled 6,500; of these, 2,500 companies are entered in the Commercial Register and 4,000 companies are not (small businesses). Furthermore, in consultation with the customers 106 large concerns working in the information, communication and media industry from the Munich region were selected according to their size and importance. From these, a subgroup of 27 large concerns was also surveyed as part of oral interviews.

The large concerns and their subsidiaries were removed from the survey basis of the Chamber of Industry and Commerce database and were not included in the random sampling process. From the remaining basis eight superordinate economic groups were formed and then differentiated within these economic groups according to their commercial register entry. From the resulting 16 random sample cells a stratified random sample was drawn with the aim of filling each cell sufficiently. Individual cells in which either the number of cases of the population is low or where experience from earlier studies has shown that a low return rate is to be expected, were overridden.

B Data Acquisition

B.1 Collection Method

The 6,500 randomly selected companies were sent the questionnaire, a letter signed by the Chief Executive of the Department of Labour and Economic Development of the city of Munich, Dieter Reiter, and the Chief Executive Officer of the Chamber of Industry and Commerce for Munich and Upper Bavaria, Peter Driessen, as well as a stamped addressed envelope. One innovation with respect to the last study was the fact that the companies had the opportunity to complete questionnaires on the Internet. To this purpose a link and a personal access password was contained in the letter.

It was possible to check the replies in the previously defined random sampling cells as the questionnaires were numbered. The details provided by the companies on the questionnaires and the addresses of the companies were however stored separately from one another and not associated with one another, so that the anonymity of the companies was maintained.

In order to increase the number of questionnaires returned, a follow-up campaign was started on the telephone shortly before the expiry of the official deadline for returning the questionnaire. In addition, an attempt was made to contact all companies by e-mail or telephone from which up to this time no answer had been received. As part of the e-mail and telephone number search, a comparison was made between the name and address of the firm and the address databases of various Internet sites (www.telefonbuch.de, www.dasoertliche.de, www.gelbeseiten.de, www.google.de). This made it possible to find out the telephone number or e-mail address of around 4,000 companies, while it was not possible to find any telephone number for around 2,500 companies in the stated data sources. This is due on the one hand to the fact that not all firms - above all not all small one-man firms - have an entry in the telephone book of Deutsche Telekom or other providers, while on the other hand it has to be assumed that the datasets of the Chamber of Industry and Commerce cannot be completely up-to-date in view of the high degree of dynamism in the information, communication and media industry, particularly as the companies are not obliged to notify address or telephone number changes or the discontinuation of their business activities to the Chamber of Commerce and Industry.

Finally, all companies from which no questionnaire had been returned and for which it was possible to find out a telephone number but no e-mail address, were contacted as part of the follow-up campaign. During a short discussion these were again requested to take part in the survey. Furthermore, an offer was also made to the companies to send the link to the questionnaire once more by e-mail or to carry out the questionnaire in a telephone interview.

At the same time an e-mail reminder was sent to those companies for which it had been possible to find out an e-mail address. This reminder contained a repeat reference to the fact of how important participation was and the companies were again asked to take part. At the same time they received their personal link to the online questionnaire.

After a period of seven to 14 days they were sent a second reminder with a renewed request to participate in the survey if they had not already done so. The companies from which no reply had been received two days after the dispatch of the reminder were contacted by telephone and requested to participate. They were given the opportunity to again receive the link to the online questionnaire by e-mail or take part in a telephone interview.

Selected random sample cells were again contacted shortly before the end of the period both by telephone and with a third reminder by e-mail.

B.2 Adjustment of the Data Pool

After the end of the data acquisition period the initial sample was cleaned up. If any of the following occurred as a result of a postal delivery, a telephone call or detailed research, these companies were removed from the initial sample:

- Firm expired/insolvent
- Firm's address unknown
- Theme not relevant, as no connection to the information and communication or media field
- Company moved away from the target region

In addition, the initial sample was reduced by 10% of the companies entered in the Commercial Register and by 35% of the small businesses, as in spite of detailed research it was not possible to find a telephone number or any other indication of their existence.

After the initial sample had been adjusted, this resulted in the 29,086 companies on which this study is based.

B.3 The Estimation Procedure

The basis of the projection of the collected figures to all information and communication companies in the Munich region was the mean values collected for each of the 16 different random sample cells according to sector and commercial register entry. In the case of cells where the number of returned questionnaires was too small, rolling mean values were calculated with the previous survey. Moreover, all values were weighted according to the actual number of companies, sector, regional differences and form of company. The results for the large concerns were considered separately and not included in the calculation for this method. For the adjusted data pool - with the 106 large concerns being excluded - as well as for those companies which - although they had taken part in the survey - did not provide any details on the corresponding question, the weighted average values that had been collected were projected over the total number of companies .

The results for the large concerns were determined separately. Of the 106 large concerns, 27 took part in the survey. For the companies which were not surveyed, secondary statistics, external market studies as well as current turnover, investment and employee figures published by the companies themselves were used. On the basis of the results of the survey and these research results, an estimate was carried out for the large concerns that did not take part.

From the sum total of the methods used for the respective random sampling cells it was possible to determine an overall estimation of turnover, investment volumes and the number of employees for Munich and the region.

Landeshauptstadt München

IHK Industrie- und Handelskammer für München und Oberbayern

The Information, Communication and Media Economy in the Munich Region

Guarantee: The information you provide will of course be processed in compliance with all provisions of the Federal Data Protection Act. All information will only be evaluated and published in a summarised form. The identification of individual companies is not possible.

Question 1: How satisfied are you in general with the Munich region as a location for your company?

very satisfied ☐ satisfied ☐ less satisfied ☐ not at all satisfied ☐

A Details of your company

Question A1: When was your company founded?

Founding year: ☐

Question A2: In which of the following fields does your company work?

multiple answers are possible

Media
- Publishing ☐
- Printing industry ☐
- Sound, image and data carriers ☐
- Photography ☐
- Film and video production ☐

Software / Data and IT Services / E-Commerce
- Online services, e-commerce (B2B, B2C, B2G, Web 2.0) ☐
- Software ☐
- Data and IT service, services and consulting ☐

Advertising / Market Communication and Research
- Advertising / market communication ☐
- Market research ☐
- Telecommunication services (call centre / service provider) ☐

Journalism
- Journalism / information services / agencies ☐

Transport Level
- Cable and network operator ☐

Parts / Components / Assembling
- Production of electronic structural elements ☐

Consumer Level / Remote Terminal
- Consumer electronics ☐
- Information technology hardware ☐
- Telecommunication and devices / communicatons engineering devices ☐

Distribution
- Wholesale trade / -commercial agency (z.B. office machines / software / hardware) ☐
- Rental (e.g. film rental) ☐

Question A3: To which industries do the customers of your business mainly belong?

multiple answers are possible

- Manufacturing ☐ namely ______
- Trade ☐ namely ______
- Services ☐ namely ______
- Civil service ☐ namely ______
- Miscellaneous ☐ namely ______
- Private households ☐

Question A4: Are you planning to enter new business segments in the fields of information, communication and media in the near future?

yes ☐ If so: planned business segments:: ______

no ☐ ______

Question A5: Is your business a domestic company or a foreign company in which the business policy is mainly determined in another country?

domestic company ☐ foreign company ☐

B Employment

Question B1: How do you assess the development in the number of employees who are liable for social insurance contributions in your company in the Munich region over the next six months?

growth ☐ no change ☐ reduction ☐

Question B2: How many employees who were liable for social insurance contributions did your company have in the Munich region at the end of 2009?

Number of employees ______

Number of part-time employees ______

Number of apprentices ______

Question B3: How many employees who were liable for social insurance contributions did your company have in the region of Munich...?

At the end of 2005 ______

At the end of 2006 ______

At the end of 2007 ______

At the end of 2008 ______

Question B4: How many freelance workers did your company employ in the region of Munich on average in 2009?

Number - yearly average ______

Of these, on a project basis ______

Question B5: Do you have problems recruiting personnel?

yes ☐ If so: in which professions? technical ☐ non-technical ☐

no ☐

C Business Development

Question C1: How do you generally assess today's economic situation of Germany?

good ☐ satisfactory ☐ poor ☐

Question C2: How do you assess the current business situation of your company?

good ☐ satisfactory ☐ poor ☐

Question C3: How do assess your future business developments?

	2010	in two years	in three to five years
better	☐	☐	☐
no change	☐	☐	☐
worse	☐	☐	☐

Question C4: How will your planned investment volumes change in comparison to the previous year...?

increase ☐

more or less the same ☐

reduction ☐

no investments planned ☐

Question C5: How has your business situation developed in the past?

	last year	over the last three years
improved	☐	☐
no change	☐	☐
deteriorated	☐	☐

Question C6: Please assess the influence of the financial crisis on your company in 2009

very strong influence ☐
strong influence ☐
moderate influence ☐
small influence ☐
no influence ☐

Question C7: How high was the investment volume of your company in the Munich region in 2009?

approx. (in euros) ☐

Question C8: How high do you estimate the total turnover of your company (excluding turnover tax) in the Munich region in the 2009 business year?

approx. (in euros) ☐

Question C9: How high was the expenditure of your company on the research and development in 2009?

approx. (in euros) ☐

D Exports / Internationalisation

Question D1: Does your company also export goods and / or services abroad?

yes ☐ ***continue with question D2***
no ☐ ***continue with question D4***

Question D2: How high was the share of exports last year in the overall turnover of your company (excluding turnover tax)?

☐ %

Question D3: In terms of your total export volume, what are the three most important countries to which your company currently exports?

1. ______________________________
2. ______________________________
3. ______________________________

Question D4: Are you planning to move your company or part of it to other areas of Germany or abroad?

yes ☐ If so: Move within Germany ☐ Move abroad ☐
no ☐

Landeshauptstadt München

IHK Industrie- und Handelskammer für München und Oberbayern

E Questions on the Location

Question E1: How satisfied are you with the following location factors in the Munich region at present?

	very satisfied	satisfied	less satisfied	dissatisfied
Networking activities and cooperations	☐	☐	☐	☐
Transport connection	☐	☐	☐	☐
Availability of commercial premises and offices	☐	☐	☐	☐
Availability of qualified employees	☐	☐	☐	☐
Concentration of companies in the same industry	☐	☐	☐	☐
Proximity to suppliers / subcontractors	☐	☐	☐	☐
Availability of services companies working closely with	☐	☐	☐	☐
Proximity to customers	☐	☐	☐	☐
Contact opportunities with universities and other research facilities	☐	☐	☐	☐
Cultural and leisure time facilities	☐	☐	☐	☐
Trade tax and municipal taxes	☐	☐	☐	☐
Office / commercial rents	☐	☐	☐	☐
Level of personnel costs	☐	☐	☐	☐

Question E2: What do you consider to be the particular strenghts of the Munich region as a location for the information, communication technology and media sector?

____

____

Question E3: And what do you consider to be the weaknesses of the Munich region as a location for the information, communication technology and media sector?

____

____

Question E4: How do you assess the following offers of the Chamber of Industry and Commerce for Munich and Upper Bavaria and the promotion of trade and industry of the state capital of Munich? In your view, are these appropriate or should they be expanded or reduced in order to strengthen Munich as a business location? Which of the offers are interesting for your company itself?

	suitable	expand	reduce	deal with it myself
Advice on setting business	☐	☐	☐	☐
Advice on subsidies	☐	☐	☐	☐
Placement of business premises / location advice	☐	☐	☐	☐
Single point of contact	☐	☐	☐	☐
Arrangement of contacts with research and science / technology transfer	☐	☐	☐	☐
Support with networking	☐	☐	☐	☐
Co-operative advertising (e.g. joint trade fair appearances)	☐	☐	☐	☐
Company visits	☐	☐	☐	☐
Further training opportunities / trainings	☐	☐	☐	☐
Themed event / talks on the industry	☐	☐	☐	☐
Miscellaneous ________________	☐	☐	☐	☐

Thank you for your co-operation!

If you have any questions please contact the Chamber of Industry and Commerce, Mr Bernhard Kux, Tel.: +49 (0)89-5116-705 or the city of Munich, Ms Eva Puckner, Tel.: +49 (0)89-233-21290

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