

Trabajo de Fin de Grado - Economics Degree

Academic course 2016/2017

The role of trade fairs and exhibitions in the German economy



Student: Sarah Müller Miñana

Email: al258164@uji.es

Tutor: Célestino Suárez

Abstract

The German trade fair industry is a world leader. On 25 exhibition grounds, around 2.8 million square meters of hall space is available for the realization of national and international trade fairs. Of the eight largest exhibition grounds in the world, there are four in Germany. Trade fairs fulfil a variety of functions and are considered as particularly efficient, innovative and thematically diversified in international competition. As one of the most important marketing instruments, they are a driving force for international trade in goods and services and contribute to an intensification in competition as well as to growth and employment. Due to the high internationality of the German trade fairs and the huge impact on the framework on tourism, the overall economic effects are particularly pronounced.

JEL classification: C01, C02, C67, D57, E20, F20

Key words: Trade fair, Macroeconomic functions, Microeconomic functions, Socioeconomic effects

CONTENTS

1. INTRODUCTION	5
2. HISTORY AND EVOLUTION	5
3. FUNCTIONS OF TRADE FAIRS	6
3.1 MICROECONOMIC FUNCTIONS	7
3.1.1 Customer care and customer acquisition	7
3.1.2 Presentation of new products and services	9
3.1.3 Platforms for founders of new business	9
3.1.4 Image improvement and media effect	9
3.1.5 Benchmarking	9
3.1.6 Employee motivation and employee recruitment	10
3.1.7 Personal communication	10
3.1.8 Emotional branding	10
3.2 MACROECONOMIC FUNCTIONS	10
3.2.1 Economic promotion	10
3.2.2 Market formation and market cultivation	11
3.2.3 Creation of market transparency	11
3.2.4 Platforms for the German export	11
3.3 SOCIAL FUNCTIONS	11
3.3.1 Transfer of knowledge	11
3.3.2 Contacts between business and politics	12
3.3.3 International understanding	12
4. BUSINESS RATIOS	12
4.1 TURNOVER RATIO	12
4.2 EXHIBITOR INTENSENESS	14
4.3 VISITOR INTENSENESS	14
4.4 VISITORS DENSITY	14
5. MACROECONOMIC IMPACT OF DIRECT AND INDIRECT TRADE FAIR-INDUCED EXPENDITURE	15
5.1 DIRECT EFFECTS	15
5.1.1 Direct trade fair expenditures of exhibitors	15
5.1.2 Direct trade fair expenditures of visitors	16
5.1.3 Total direct trade fair-related expenses	16
5.2 INDIRECT EFFECTS	17

5.2.1	Method for quantification of indirect effects	17
5.2.2	Data basis	20
5.2.3	Production effects	21
5.2.4	Employment effects	22
5.2.5	Tax revenue	23
6.	THE GERMAN TRADE FAIR AND EXHIBITION INDUSTRY	23
6.1	IMPORTANT FAIRS	24
7.	MESSE DÜSSELDORF GMBH	26
7.1	SOCIO-ECONOMIC EFFECTS	27
7.1.1	Direct and indirect effects	29
7.2	SITE AND HALLS	30
7.3	MANAGEMENT AND SHAREHOLDERS	30
7.4	FOREIGN MARKETS	31
7.4.1	Central and Western Europe	31
7.4.2	Russia	32
7.4.3	China	32
7.4.4	India	32
7.4.5	Japan	32
7.4.6	North America	33
7.4.7	Southeast Asia	33
8.	CONCLUSION	33
A	APPENDIX I: Turnover ratio	35
B	APPENDIX II: Emails	35
C	APPENDIX III: Maps	36
D	APPENDIX IV: Dates and trade fairs in Düsseldorf 2017	38
E	APPENDIX V: Site and halls of Messe Düsseldorf	38
9.	REFERENCES	40

List of figures

Figure 1: Visitor behaviour	8
Figure 2: Evolution of the turnover ratio in the exhibition grounds 2004-2011	13
Figure 3: Evolution of the turnover ratio in the exhibition grounds 2011-2016	14
Figure 4: Direct trade fair- induced expenditure	16
Figure 5: Production effects	21
Figure 6: Employment effects	22
Figure 7: Evolution of socioeconomic effects during the period 2011-2016	28

List of tables

Table 1: Trade fair expenditures of exhibitors	15
Table 2: Trade fair expenditure of visitors	16
Table 3: Simplified supply table	18
Table 4: Simplified use table	19
Table 5: Symetric input-output table (product-product)	19
Table 6: Management of Messe Düsseldorf	31
Table 7: Shareholders Messe Düsseldorf	31

The role of trade fairs and exhibitions in the German economy

1. Introduction

The following work shows the economic importance of trade fairs and exhibitions in the German market, based on the analysis of macroeconomic and microeconomic factors.

To start with, it is analyzed the history and economic evolution of the trade fairs in Germany. Then the various economic and social functions are detailed.

In addition, since the wear and tear of the exhibition ground is considered a relevant factor to measure the economic efficiency of the trade fairs, it has been made a study of the evolution of the turnover ratio of the German trade fairs during the period 2004-2016.

This report also reveals the most important trade fairs in Germany, taking as reference the number of visitors, the generated profits and the floor space.

Messe Düsseldorf is presented as an example, on which has been realized a socio-economic study, presenting the generated effects at a regional, national and global level. Furthermore, it is given a description of the company and the world markets in which it operates.

The objective of the present work is an economic analysis of the German trade fair and exhibition industry, showing the example of Messe Düsseldorf. In this way, it can be measured the global economic importance of the German exhibition industry, showing the effects that it generates on production, employment and tax revenue

This information has been obtained from various sources and from studies carried out by AUMA, moreover to the dialogue with Mr Hochheim, advisor in research of AUMA.

2. History and evolution

The fairs have been evolving in line with the rhythm of the development of trade and have acted at the same time, as driving engines for the economic and commercial activity.

The origin of trade fairs took place in European markets in the middle ages along with the long-distance trade; there, goods for the daily use were marketed and this led to the time-bound meetings of dealers in certain places.

The first region where these medieval markets took place was the Champagne region of France. In Germany, trade fairs began to appear in churches as a religious celebration.

National and regional exhibitions were established in the first half of the 19th century in many European countries. From 1851, world exhibitions emerged as a reflection of the technical, economic and cultural development of this period. On the initiative of industry in Germany, the "Permanent Exhibition Commission for German Industry" was founded in 1907 as the predecessor of today's AUMA. It's main function was making the national and international exhibition offer more transparent in order to enable the industry to make a more efficient decision about its trade fair participation. During the period of National socialism, the international trade fair industry of Germany was reduced because imports of foreign goods and internationality at German trade fairs were undesirable.

This situation changed after the Second World War, since the German exhibition and trade fair industry was no longer managed centrally. In 1947, an export fair was established in Hanover commanded by the British occupation power and then, Cologne and Frankfurt also restart their activities. In the case of Düsseldorf, The Northwest German exhibiting company GmbH, founded on 7 January 1947, established itself as the permanent exhibition society of the city and more than 70 years later, Düsseldorf's trade fair became one of the ten most important trade fair organizers and is represented as an international company in all the growth regions of the world.

Through the establishment in 1948 of an exhibitor's advisory committee in Hanover and the merger of industrial trade associations with the Federation of German Industries BDI in 1949, the AUMA was reestablished in the same year and assumed coordination tasks. From the 1950s, numerous trade fairs were established in West Germany. In the east of Germany, Leipziger Messe remained a central concern. After 1990, there were further exhibition areas with a regional significance.

According to the document without author, entitled "fundamentos de las ferias internacionales" (*fundamentos de las ferias internacionales*, 2011), trade fairs have become a key element for international exchanges. They provide a meeting point between the main entrepreneurs of each sector and give access to a platform for the establishment of contacts, launching projects, exchange and dissemination of information.

3. Functions of trade fairs

The German trade fair market is constantly under pressure. Both the competitors and the organizers of the trade fairs operate worldwide trying to win the European market.

Another point is that intensive globalization has increased competition among trade fair organizers. It should be noted that globalization have significantly increased the use of internet, so that the number of online transactions and company agreements went up, but trade fairs maintain special importance of face-to-face meetings. They struggle to capture the maximum attention of their customers. In this way, trade fairs fulfil specific business, but also macroeconomic and social functions.¹

3.1 Microeconomic functions

Trade fairs are multifunctional; they have by far and away the widest range of functions of all the marketing instruments.

Exhibitors and visitors can achieve its objectives through them. They serve the development and cultivation of customer relations, as well as the presentation of new products, technologies and services. In this way, they get the positioning of the entire company. They also increase the media effect of the exhibiting company, make possible benchmarking between competitors, serve the employee motivation and increase the employee recruitment. According to the article without author „Wirtschaftsfaktor Messe“ (Wirtschaftsfaktor Messe, 2017) trade fairs are the second most important marketing tool for companies after their own homepage.

“Above all, trade fairs make possible personal dialog between suppliers and buyers obtaining, in this way, an emotional response from customers”. (Kresse, H.; von Weizsäcker, Robert K.; Penzkofer, H., 2005)

Trade fairs increase the level of awareness of the own company and analyze the competitive situation. In this way, they function as a market research instrument, because they are test markets for new products.

At an early stage of opening a market, a trade fair can be helpful for young companies to get an overview of the competition, their presentation and their products. The expenditure of German exhibitors for their trade fair participations reflects the high level of importance attached to trade fairs. Around 40% of outgoings for business-to-business communication are, on average, devoted to trade fair participations. On average, German exhibitors spend around € 360,000 on trade fair participations in two years. Through this behavior, they made around eight participations in Germany and abroad.

3.1.1 Customer care and customer acquisition

Customer acquisition implies identify the processes and procedures to localize, qualify, and ensure the business of new customers. Companies and organizations consider the

¹ This section is based on the publication in 2013 „The German trade fair industry“ from AUMA (Association of the German trade fair industry).

cost of customer acquisition as an important measure in assessing how much value customers bring back to their businesses.

In the economy, the development of long-term customer relationships is replacing short-term thinking in individual transactions. Such association in the sense of relation management can be achieved particularly effectively through trade fairs, with which the customers are tied through quality levels that have proved themselves over many years as with a branded product.

A direct customer contact is possible through trade fairs, because they offer an excellent communication platform. Thanks to this platform, national and international contact opportunities are possible, and this leads to the sales benefits for the exhibiting companies. In consequence, often new additional markets are opened.

A survey of 107 trade fairs in 2016 showed that trade fair visitors stay on average 1.6 days at national and international trade fairs in Germany, while foreign visitors stay over two days. This is a result performed by the FKM- Gesellschaft for the voluntary control of trade fairs and exhibitions. This implies that visitors use trade fairs very intensively to get to know new products and services or to prepare business dealings. Therefore, it makes sense that exhibitors are completely turned over customers and dedicate them the 100%, while in a current working day, on average, sellers spend between 15-20% of its time to his clients (Solá, 2003).

A recent study from AUMA (2015) on the behavior and structure of German trade fair visitors showed that 33% of the German trade fairs visitors were going the first time to the event, while foreign visitors a 42%. Almost every second foreign trade fair visitor is going for the first time; among the domestic visitors the figure is nearly one in three.

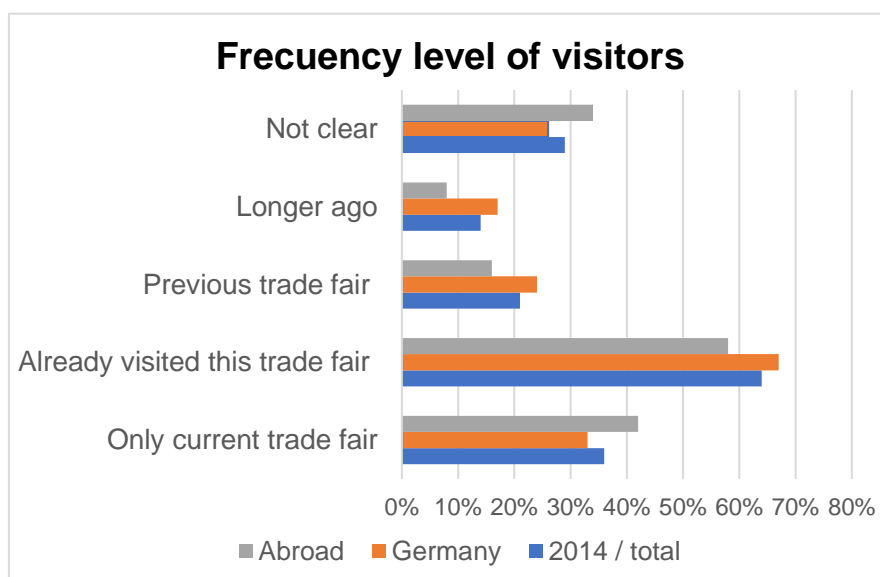


Figure 1: Visitor behaviour

Exhibitors, therefore, have excellent opportunities to win new customers by participating at a trade fair. In fact, the winning of new customers and the increase of the awareness of companies and products (93% and 96%) are the most important objectives for the exhibitors.

3.1.2 Presentation of new products and services

Through their temporal and spatial fixation, trade fairs are perceived as events that make the multitude of different category trends and innovations visible, especially by the proximity of the corresponding competitors.

The Federal Ministry of Economics and Energy (BMWi) created in 2016 a program to promote the participation of smaller and medium-sized companies. The objective of this program was to commercialize the products and new processed developments from these companies through trade fairs, because their innovations captivate more interest in the spotlight of a trade fair than in other places. (Programm zur Förderung der Teilnahme junger innovativer Unternehmen an internationalen Leitmessen in Deutschland, 2016). Nearly 90% of the exhibitors at German trade fairs want to present innovations.

3.1.3 Platforms for founders of new business

Trade fairs present a lot of opportunities for new-founded enterprises. They are an ideal place for the public presentation of their products and their enterprise. In this way, they can contact directly to potential customers, distributors and service partners.

3.1.4 Image improvement and media effect

A company, regardless of their sector, needs a good idea and be able to present it not only to his costumers, but also to potential consumers.

Consequently, the article without author "la importancia de la comunicacion corporativa en ferias y congresos" remarks the importance of a set of concepts and ideas in order to succeed. The elaboration of an advertising campaign, accompanied by an adequate media strategy, is essential to fulfill the communication objectives of the exhibition, towards the previously defined target audience, with a view to attracting their attention and promoting their attendance. Audiovisual elements such as projections, videos or animations must follow a brand strategy and be used in the stand of a trade fair to generate interest among the visitors.

Moreover, trade fairs are events with high media impact, so the daily and trade press use it for intensive sector reporting.

3.1.5 Benchmarking

Benchmarking is a technique which consists in taking as reference the key qualities of other companies and adapts them to the company itself by adding improvements. The

proximity to the companies to each other on trade fairs, create a unique competitive situation. This is the reason why benchmarking has become the principal instrument between competitors on trade fairs.

3.1.6 Employee motivation and employee recruitment

A recent study (Bueno, 2015) establishes that employee motivation has become an indispensable task for businesses. To achieve a committed team and an appropriate atmosphere it is necessary moving away from the working environment the feeling of frustration and giving way to incentives. On this basis, trade fairs, which present a challenge in terms of logistics and planning, stand for get a high degree of motivation to all members of the company for the achievement of their objectives. They make possible the direct contact with customers and the study of the competitive environment. Furthermore, this leads to meet potential employees and the exhibitors can get immediately a first impression of the person in order to decide if it should become part of the company.

3.1.7 Personal communication

Trade fairs are markets full of commercial transactions. They reflect the best source of information of the sector introducing a center to exchange interests, opinions and tendencies. This creates confidence and sustainability between business partners (Muñiz, 2014).

3.1.8 Emotional branding

In today's consumer society, a different marketing approach is being considered. Marketing communication and advertising stop focusing on the product to meet the feelings of the consumer. In this way, trade fairs offer the best possible scenario to implement this instrument. Exhibitor's key of success consists in directing their efforts to establish an emotional connection between the product and the consumer (Merca2.0, 2011).

3.2 Macroeconomic functions

In the publication "the Economic Impact of Trade Fairs on the economy of the district of Bogotá" (Fedesarrollo, Zuleta, Jaramillo, 2005) it is shown that in addition to the microeconomic functions, trade fairs have a multiplying effect on the economies of the city's which they exhibit, promoting urban and regional development through investments in infrastructure and fairgrounds, on the first side, and by expenses generated though the exhibitors, visitors, organizers and ancillary services companies, on the other side.

3.2.1 Economic promotion

Trade fairs have a positive economic impact on the city, region and country in which they take place. As it will be seen in this report, the overall production and employment effects

as well as the tax revenue of trade fairs are enormous. They provide significant impetus for production and employment at regional and national levels.

3.2.2 Market formation and market cultivation

Supply and demand come together during trade fairs. They operate as a Market simulation platform and coordinate the interest of industry and trade.

3.2.3 Creation of market transparency

A market can be defined as transparent if all participants have the maximum information about the conditions of the same, being able to take their decisions in an appropriate way. This information must be clear, complete and truthful, being accessible to all those involved in the market. Therefore, the efficiency of a market will depend mostly on the facility to obtain such information and its cost.

Trade fairs present the perfect scenario for market transparency because consumers have the opportunity to observe the product ranges of a sector making direct comparisons and communicate with each other solving immediately their doubts.

3.2.4 Platforms for the German export

A representative study by TNS Emnid on behalf of AUMA among 500 exhibitors who used the foreign trade program of the Federal Ministry of Economics in 2009, confirmed that the participation of Germany in foreign trade fairs secure and strength the export to a considerable extent. Almost 41% of the companies in the survey increased or secured their exports by participating in foreign trade fairs, for both medium and large companies.

The diversification and opening to other new markets outside the European Union in 2010 and 2011 were also asked. In this way, 42% of participants named at least one country or a world region. The highest percentages corresponded to Russia and China (9%), India (8%), Brazil (6%), US (4%) followed by Turkey and Arab countries (3%).

Trade fairs are used by almost three-quarters of the exhibitors to entry into new markets and 84% of those, wanted to increase or maintain their commitment to markets outside the EU.

In this way, participation in trade fairs is one of the main reasons for the success of medium and small companies, which is the essential part of the German economy.

3.3 Social functions

3.3.1 Transfer of knowledge

Trade fairs and congresses function as a transmission mechanism of knowledge, where the best information can be exchanged. According to the OECD (1996), knowledge is considered as the driver of productivity and economic growth, leading to a new focus on

the role of information, technology and learning in economic performance. In this way, information has become an essential resource, leading to the “Knowledge-based economy” as we know it today.

On trade fairs, a lot of different companies come together and present their main product range of one or more industry sectors. In this context, the necessary information can be determined so that the trade fair organizer can function as a broker of knowledge (Zielinski, 2011)

3.3.2 Contacts between business and politics

Trade fairs increase the interest of the political institutions for a sector of industry and offer a communication platform where exhibitors, business partners, venue owners, media people and politicians had the possibility to hold their meetings and discuss financial, economic and social policy issues, since they have a positive regional impact.

3.3.3 International understanding

According to Dr. Walter H.C. Lewis, a Dutch astrophysicist and former professor of physics at the Massachusetts Institute of Technology, "International Understanding is the ability to observe critically and objectively and appraise the human conduct everywhere to each other, irrespective of the culture to which they may belong".

In this context, trade fairs offer the possibility to exchange international relations and have an important positive influence on the relationship between nations. They function as “Marketplaces of international understanding”.

4. Business ratios

4.1 Turnover ratio

According to the German institute for economic research (1985) (Deutsches Institut für Wirtschaftsforschung) it is very important the wear and tear on exhibition grounds. This can be calculated with the turnover ratio, through the following formula:

Turnover ratio = Rented space / available gross area

The measurement of the turnover ratio makes it possible to quantify business efficiency and offers a direct comparison of the performance of several trade fair companies (Nittbaur, 2001).

In accordance with Felix von Grega (2013), the company's profile has always been a relevant factor for competitors, but the exhibition grounds have become a key element for the differentiation strategy. Trade fair organisations compete in order to attract exhibitors, visitors and private organizations. Felix von Grega (2003) analyses in his work

the turnover ratio in German exhibition grounds for the period 2001 - 2010. The result obtained showed a negative growth. The trend function presented a R^2 of 63.7%, indicating a -0.15-negative growth on the turnover ratio². This meant that the hall capacity grew faster than exhibitors demand, so that increase in hall capacity did not keep pace with the market demand. As reported by Carsten Dierig (2006), oversupply on exhibition space intensify competition, leading to a predatory competition. "There is too much new space built up," said Stepp Heckmann, trade fair manager of Hanover. In order to fill the surplus of available floor space, they simply try to buy an established event instead of developing and developing new topics.

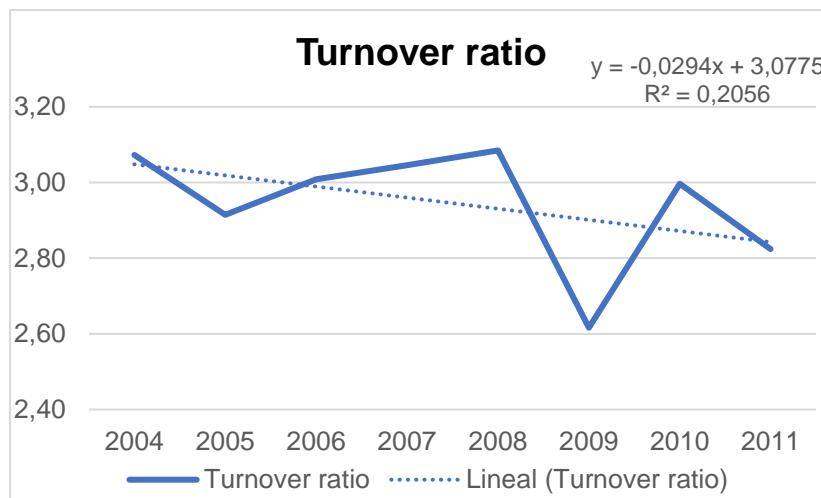


Figure 2: Evolution of the turnover ratio in the exhibition grounds 2004-2011

Figure 2 presents the evolution of the turnover ratio for the period 2004-2011. It shows that the trend line continues presenting a negative growth, although lower than that obtained for the period 2001-2010. In this case, the R squared of 20% indicates that the turnover ratio is - 0.03.

The same study³ has been carried out for the period 2011-2016 in figure 3⁴. It can be observed that for this period the trend has changed, showing an upward trend. So, can be concluded that the turnover ratio has improved over time, being 0.02 for the period 2011-2016 and that the available exhibition area grows at a similar rate to the demand (measured through the rented space).

² Function resulting from his analysis: $y = -0.1512x + 309.88$.

³ The figures used for the study can be found in Appendix I.

⁴ Figure 2 and 3 are a self- elaboration based on AUMA.

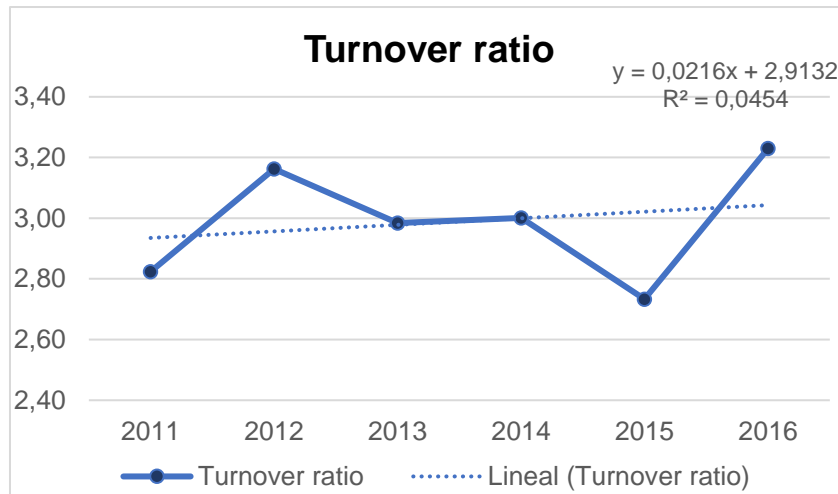


Figure 3: Evolution of the turnover ratio in the exhibition grounds 2011-2016

4.2 Exhibitor intenseness

Another indicator for area use can be calculated by the number of exhibitors. Trade fairs try to gather the maximum number of exhibitors and visitors at the same time in the same place and one of its functions is to present a representative image of the offer. In this context, exhibitors are interested in the opportunity to sell and promote themselves on a fixed area. This correlation is expressed by the following formula:

Exhibitor intensity = Number of exhibitors / rented stand area

The reciprocal value of this size also provides information on the average stand area.

4.3 Visitor intenseness

Trade fairs make possible the connection with potential customers in a short time. As a result, the number of visitors become an essential factor and the visitor intenseness can be calculated as follows:

Visitor intensity = Number of visitors / rented stand area

This calculation is of great interest in terms of comparing similar events.

4.4 Visitors density

Another indicator, which in this case has nothing to do with space wear, but is of importance for organizers and exhibitors, is the relationship between visitors and exhibitors, which is given by the following formula:

Visitor density = Visitors / exhibitors

5. Macroeconomic impact of direct and indirect trade fair-induced expenditure

The following section is based on the study of the Center of Economic Studies (CES) in Munich on behalf of the Association of the German Trade Fair Industry (2009)⁵. The most recent data correspond to the period of 2005-2008.

5.1 Direct effects

5.1.1 Direct trade fair expenditures of exhibitors

The operational expenses that are considered relevant, from the point of view of a company, are those directly related to the planning, preparation, implementation and follow-up of the participation of the individual trade fair. These are used to determine the total expense related to the exhibitors.

The calculations for an average trade fair year have resulted in a total expenditure of around € 7.79 billion. The expenses per exhibitor and trade fair participation are on average over € 23,500. Based on the total value of exhibitor's expenses, the largest share is spent on stand construction costs, including services, (30.8%), on stand rental, including ancillary costs, (20.7%) and on internal staff (16.3%). The expenditure of the exhibitors separately per type of expenditure is shown in "table 1".

Table 1: Trade fair expenditures of exhibitors

Expenditure types	In billion €
Accommodation and food	0.98
Purchases, leisure, entertainment	0.21
Travel expenses (including local transport)	0.80
Stand construction, assembly, transport, insurance, cleaning, security, other services etc.	2.40
Stand rental (Inc. Allocation)	1.61
Corporate staff costs for the preparation, implementation and follow-up of trade fair participations	1.27
Other expenses (for example advertising, hospitality)	0.52
Total expenses of exhibitors	7.79
Expenses per exhibitor (in thousands of €)	23.5

⁵ The results correspond to an average trade fair year for the period 2005-2008. These are the most recent figures available. The ifo institute Munich is currently working on the update of these data and it is planned to be published in November this year. This information has been provided by Hendrik Hochheim, advisor in research at the institute of the German trade fairs. The screenshot of the email received from Mr Hochheim can be found in Appendix II.

5.1.2 Direct trade fair expenditures of visitors

The calculations for an average trade fair year have resulted in a total expenditure by visitor of around € 3.83 billion. The expenses per visitor are on average € 144. Based on the total value of visitor expenses, the largest share is spent on travel costs (29%). Spending on overnight stays is € 880 million (23%) and € 800 million (20.9%) correspond to the catering industry. The retail sector also benefited greatly from visitor spending with € 530 million (13.8%). For the trade fair entry € 290 million were counted. Gastronomy, transport companies and hotels are the biggest beneficiaries of visitor spending. The expenditure of the visitors separately per type of expenditure is shown “table 2”.

Table 2: Trade fair expenditure of visitors

Expenditure types	In billion €
Overnight stay	0.88
Travel cost (long-distance)	0.86
Travel expenses at the trade fair	0.25
Gastronomy (own use, catering)	0.8
Entertainment, leisure	0.15
Purchases, services	0.53
Trade fair entry (including catalogues)	0.29
Other expenses	0.07
Total expenses of visitors	3.83
Expenses per visitor (in €)	144

5.1.3 Total direct trade fair-related expenses

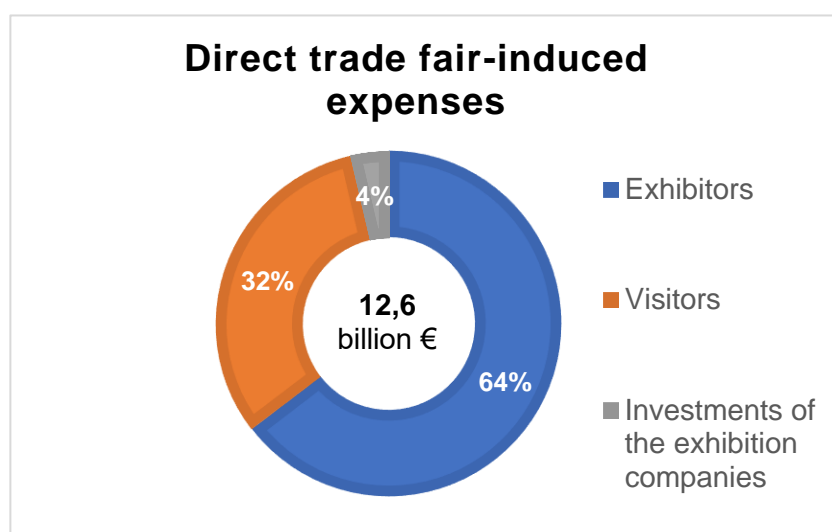


Figure 4: Direct trade fair- induced expenditure

In an average trade fair year (period 2005 to 2008), the expenditure level of exhibitors was € 7.79 billion. Visitor spending had a value of € 3.83 billion. Including the investments made by the exhibition organizers (€ 0.44 billion), this results in a total amount of € 12.06 billion (see Figure 4). Accordingly, on average just under two-thirds of all expenditure is attributable to the exhibiting companies.

5.2 Indirect effects

The direct expenditures are only a part of the economic impacts. The direct expenditures of visitors, exhibitors and trade fair organizers have a wide range of effects on the economy. They influence the gross value added, led by demand to production and thus also to employment and to imports in different branches of industry.

The process is the following. The direct production effect leads to demand-driven intermediate production and continue at all production stages. Apart from the production-related effects, there are still income effects, since production leads to income for households, which creates additional demand. This increased demand for end-users also results in an additional pre-production in all production stages. This results in a chain of economic impacts across all economic sectors and to first type of secondary effects. The second type of secondary effects to consider results from income, generated as a result of direct demand and of the first type of indirect effects. After deduction of taxes and social contributions, the resulting disposable income and the social transfers, will be re-expended depending on the respective savings rate (Penzkofer, 2002).

5.2.1 Method for quantification of indirect effects

The indirect effects were determined through the economic input-output model developed by the economist Wassily Leontief (1906 - 1999). It is an adaptation of the neoclassical theory of general equilibrium to the empirical study of the quantitative interdependence between interrelated economic activities. In other words, it shows the relationship between outputs of an industry and inputs of another. Under the term input is meant the intermediate consumption, that is, goods that are consumed, processed or converted during production. In addition, the use of factors of production, labor, and capital are also categorized as inputs.

On the other hand, as output is meant the value of goods produced. Goods include goods and services.

This model describes the flow of goods and services between the different sectors of the national economy during a fixed period of time. It is composed by the supply table and the use table at current prices and prices of the previous year. The supply and use tables are matrices with the values of the operations of goods and services referred to the

national economy, broken down by type of product and branch of activity. These tables show the structure of the production costs and of the primary income generated in the production process, on the one hand, and the flows of goods and services produced within the national economy and the flows of goods and services exchanged between the national economy and the rest of the world, on the other.

The supply table describes the internal processes of production and operations of goods and services of the economy in detail. The columns represent the branch of activity and the rows the products. "Table 3" illustrates a simplified version. On the other hand, the use table includes the use of goods and services, according to the product and to the type of use. The use listed in the columns are the intermediate consumption by product and by industry, the exports, the final consumption expenditure of households, of public administrations and NPISHs⁶, and the gross capital formation. In the columns on intermediate consumption by branch of activity, the table shows the value-added components, which are the remuneration of employees, other taxes on production minus production subsidies and the net mixed income, net operating surplus and consumption of fixed capital. "Table 4" shows a simplified version.

The supply table and the use table constitute the basis of the input-output model. This one is supplemented with symmetric input-output tables derived from the two tables cited above, through hypotheses or the use of additional data. The symmetric input-output table is a matrix that shows the balance of supply and its uses by dividing product by product, or branch of activity by branch of activity, for production, intermediate consumption and final uses. This symmetric input-output table is represented in "Table 5".

Table 3: **Simplified supply table**

Offer		Branches of activity	Rest of the world	Total
		1	2	3
Products	1	Production by product and by branch of activity	Imports by product	Total offer per product
Total	2	Total production by branch of activity	Total imports	Total offer

⁶ Nonprofit institutions serving households

Table 4: **Simplified use table**

Uses		Industries	Rest of the world	Final consumption expenditure	Gross capital formation	Total
		1	2	3	4	5
Products	1	Intermediate consumption by product and by industry	Exports	Final consumption expenditure	Gross capital formation	Total uses by product
Value added components	2	Value added by component and by industry				
Total	3	Total inputs by industry				

Table 5: **Symmetric input-output table (product-product)**

Use		Industries	Rest of the world	Final consumption expenditure	Gross capital formation	Total
		1	2	3	4	5
Products (or branches)	1	Intermediate consumption	Exports	Final consumption expenditure	Gross capital formation	Total uses by product
Value added components	2	Value added by component and by industry				
Production	3	Production				
Rest of the world	4	Imports				
Total	5	Total offer per product				

In this way, the input-output calculation aims to provide a detailed description of productive and qualitative interdependencies within a national economy, including the flow of goods between the national economy and the rest of the world. The main focus of the analysis is the movement of goods in the production process.

So, the indirect effects were determined through the input-output calculation (Equation 1) extracted from the input-output table.

(1) Input Output Model: $X = (I - A)^{-1} Y$

X:	Production
A:	Matrix of input coefficients
I:	Unit Matrix
$(I - A)^{-1}$:	Leontief inverse
Y:	Demand, here: Trade fair-induced expenditure

The following calculation (Equation 2) quantifies the employment effects using sectoral labor coefficients.

(2) Employment effects: $XB = AKD (I - A)^{-1} Y$

XB:	Employment
AKD:	Diagonal Matrix of the working coefficients

Due to the inclusion of income effects (secondary type of secondary effects) the input-output model must be supplemented by the marginal household consumption structure and the consumption rate for the primary inputs.

5.2.2 Data basis

The expenses of exhibitors, visitors and trade fair organizers (investments), the indirect input-output-table for the indirect effects, and the specific employment coefficients were needed for the calculations of the economic effects. For the quantification of this indirect effects and labor coefficients, the most recent input-output table (2005)⁷ of the Federal Statistical Office has been used. The expenditures of exhibitors, visitors and trade fair organizers were allocated to the economic sectors according to the expenditure components.

⁷ Assuming that the input structures of the input-output table from 2005 are also valid for the year 2005 to 2008, there are no restrictions for the production calculations.

The personnel costs of the exhibitors were included in the calculations of private consumption less taxes, social insurance expenditures and savings. In the case of the trade fair organizers, only the investments were included in the expenditure, since stand rental, entrance fees, etc., were already included among the exhibitors and visitors.

5.2.3 Production effects

Trade fairs provide annually production effects of € 23.5 billion in the German economy and generate simultaneously an employment effect of 226,000 full-time jobs. (Stoeck, N. and Von Grega, F., 2009). In addition to their role as sales instrument, they have a considerable significance as an instrument for business development.

Referred to the period 2005 to 2008, this trade fair-induced production volume represents over 0.5% of the total production value of all industries in Germany.

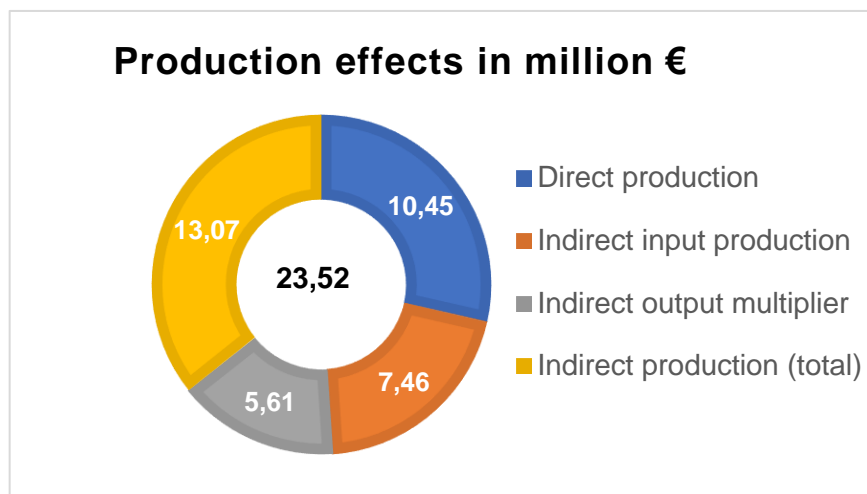


Figure 5: Production effects

Exhibitors and visitors spend around 12 billion euros annually on their trade fair activities in Germany. The total of indirect production is composed of the sum of indirect input production (7.46 billion euros) and indirect output multiplier (5.61 billion euros), which together form the total indirect production (13.07 billion euros). The overall production effects, composed by direct production (10,45 billion euros) and indirect production (13,07 billion euros), reach € 23.5 billion.

The 5,61 billion euro of the indirect production that correspond to the indirect output multiplier, originate from additional private consumption and about 44% of the production effects are due to direct costs.

Regarding the total production effects, the service sector, including accommodation and catering, represent 45%, over 36% correspond to the manufacturing sector and 16% for

trade and transport. Trade fair participants play an important role. Over 11% of the production effects result from the accommodation and catering area and the production of the trade fairs in this sector is mainly based on trade fair organizers direct expenses. As far as we can see, the trade and transport sector as well as the manufacturing sector are strongly benefiting from the indirect multiplier effects.

The total production effects are determined on the basis of these results. First of all, exhibitors contribute with € 15,25 billion about 65% to the production effects and on the other hand, visitors generate a production volume of 7, 25 billion € and investments of € 1, 02 billion contributing over 4% to the production effects.

5.2.4 Employment effects

Trade fairs are one of the most important instruments in business to business communication for German industries. According to the study by the CESifo Group Munich for the period 2005-2008, more than 226.300 jobs are secured for an average trade year. This results in more than 100.000 full-time jobs with currently around 59,000 active trade fairs in the business-to-business segment. Around 54% of this 226.300 jobs correspond to the service sector, followed by the trade and transport sector with 24% and finally to the manufacturing sector correspond 22%.

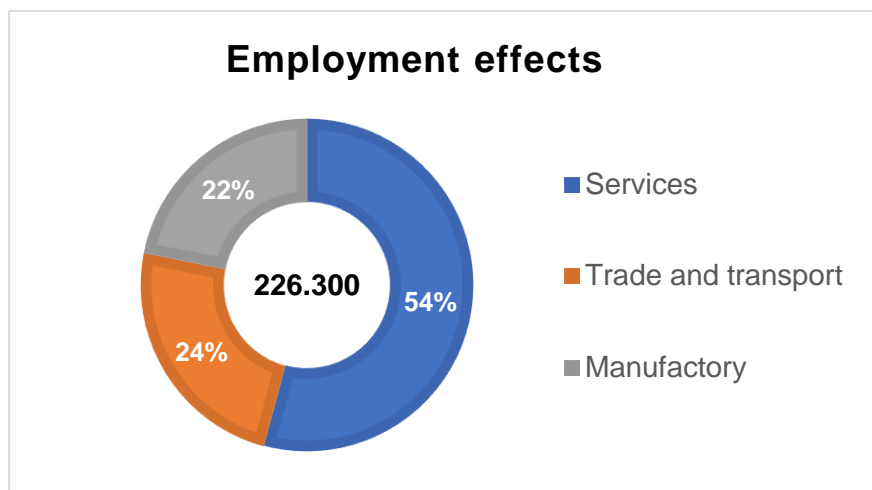


Figure 6: Employment effects

Based on the data of the previous section regarding the effects of production, we concluded that the indirect effects are clearly above the direct effects. We get the opposite result on employment. About 45% belongs to indirect effects while the direct effects are around 55%. The working intensity is the main reason for this outcome. The direct production of goods and services for participation in fairs and exhibitions requires

labor intensive, such as catering or gastronomy, while indirect production is distributed more equitably in the supply services, which normally require less labor-intensive.

In this way, the employment effects are classified as follows. Exhibitors induce with his trade fair expenditure just under 60%, this are about 135.000 people. Visitors generate 82.750 workstations, this equal to 37%. Finally, the investments represent 4% of the total effect, employing 8.250 people.

5.2.5 Tax revenue

The tax revenue is the supply of the public taxes received in public funds for a specified period and a specified region. Visitor and exhibitor expenditures as well as investment of the trade fair organizers (direct and indirect effects) resulted as tax revenues for trade fair cities, for communities, for federal states and for the federal republic of Germany. This involves taxes on sales, taxes on income and production taxes. According to this, the tax-induced revenues for an average trade fair year (based on the period 2005 to 2008) are around € 3.8 billion.

6. The German trade fair and exhibition industry

The trade fair industry is one of the leading service industries in the German economy orientated to the long-term needs of the receiving economy. In addition to their national importance, they play an important role internationally since Germany is the world's number one in the organisation of trade fairs. Around two-thirds of the world's important trade fairs take place in Germany.

It is located in Central Europe, bordered on the North with Denmark and on the South with Austria and Switzerland. To the east with Poland and Czech Republic and to the West with the Netherlands, Luxembourg, Belgium and France. The good location in the heart of Europe allow easy access to neighbouring countries as well as the good air connections allow the cooperation with American and Asian markets. In this way, they manage to bring together suppliers and demanders at the same place, functioning as a worldwide platform to show innovations. More than half of exhibitors are from abroad being a third of them from outside of Europe. In 2015, 5.6% more foreign exhibitors came to Germany, and from the Asian countries even 10%. For consumers, a quarter comes from abroad.

In 2015 a total of 308 events took place in Germany, with 228.000 exhibitors and 15.4 million visitors. Almost 10.000 visitors were recorded in the 164 international and national fairs. AUMA has also surveyed the results of 144 fairs with a regional visitor catchment. At these events, 50.000 exhibitors and between 5 and 6 million visitors meet every year.

In 2016, the national and international trade fairs in Germany produced solid results that were clearly ahead of the previous year. The number of exhibitors increased by 2.5%, the exhibiting area increased 1% while the number of visitors decreased by 0.2%. Rather unstable economic conditions, trade fairs grew at national level.

A survey of 500 representative companies by TNS Emnid in November 2016 on behalf of AUMA showed that on average, a German exhibiting company wants to spend around 285.000 € on exhibitions in 2017 and 2018 together. This is a 1'5% increase compared to 2015 and 2016. Furthermore, around 25% of the exhibitors wants to invest more, only 17% less. The rest of 57% plan constant expenses.

Regarding the legislative framework, the German trade fair industry is integrated by private management and are not bound by any specific legal documents. However, the AUMA organisation function as a self-regulated system. This organisation ensures the coordination and supervision of the competition between trade fairs. In addition, AUMA is responsible for representing the interests of the fair sector to government.

6.1 Important fairs

Each year many important trade fairs take place in Germany. With an exhibition area of around 500.000 m² is the Hannover trade fair the largest of the world, followed by Frankfurt with 346.000 m², Cologne with 284.000 m² and Düsseldorf with 264.000 m².

There are different mechanisms to determine the importance of trade fairs. The number of visitors, the generated profits and the floor space are the most used tools. The following analysis from the B2B magazine of "Wer liefert das" considers the visitors and the floor space to determine the 10 most important trade fairs in the Germany.

International Motor Show cars(IAA)

The International Motor Show Cars (IAA) is one of the largest automotive trade fair in the world. It is designed for everybody who develops, manufactures or uses passenger cars. It takes place in Frankfurt once every two years. The last trade fair in September 2015 beat the records. More than 1.000 exhibitors from 39 countries and 219 world premieres were the key to success. A total of 931.000 visitors went to visit the IAA, around 6% more than the previous one. This year takes place the 67th edition on September 14th to 24th, 2017.

Bauma

The bauma is an International trade fair for construction machines, building material machines, mining Machines, construction Vehicles and construction equipment. It is the largest trade fair for the construction machinery sector of the world and takes place every three years at the new exhibiting centre in Munich. In April 2016, around 580.000 visitors

from 200 countries went to the show. A total of 3,423 exhibitors from 58 countries presented their products, developments and innovation at a total exhibition space of 605,000 square meters. The next edition will take place in April 2016 and it's expected that it will be as successful as the bauma 2016.

Agritechnica

It's the best-known and largest agricultural trade fair in the world, taking place in Hanover every two years. In November 2015, a total of 2.892 exhibitors coming from 52 countries exhibited on the 380.200 square meters exhibition space. The number of visitors amounted to 452.471, around 3.500 more than last exhibition in November 2013.

International Green Week

The International Green Week (IGW) of Berlin takes place each year during the second and third week of January. It's the most important international trade fair for food industry, agriculture and horticulture. In January 2017, the IGW attracted 1.614 exhibitors from 67 countries and 400.000 visitors on a total space of 118.000 square meters.

Essen Motor show

It is another of the largest automotive exhibition of the world. It takes place each December in Essen. In contrast to the IAA, this fair doesn't focus on new vehicle models, but mainly with motorsport and with tuning as well as old and young timers.

Last year around 500 exhibitors present their innovations in the tuning sector on an exhibition space of 105.000 square meters. The number of visitors reach 360.000.

Maimarkt Manheim

The Maimarkt in Manheim is Germany's largest regional fair in providing products and services for almost all areas of life. It takes place each Mai month for 11 days. Despite being relatively small compared to the other fairs mentioned in this section, only 75.000 square meters, the number of visitors coming every year makes it among the most important trade fairs in the country. This year, more than 340.000 visitors attended the fair to see the more than 200.000 products presented by the 1.400 exhibitors.

Gamescom

The Gamescom is celebrated every August in Cologne. It's the leading European trade fair for digital gaming culture. The number of visitors has been growing every year, reaching on 2016 a total of 345.000 visitors reunited on an area of 193.000 square meters. The same happened with the exhibitors. Last year, 877 exhibitors from 45 countries attended the fair to present their products.

Drupa

The Drupa, abbreviation of printing and paper (in German: Druck und Papier), is considered the most important show in printing media industry. It provides important influences for print, media, packaging production, and industrial applications. It takes place in Düsseldorf every four years.

According to the study published by the Messe Düsseldorf itself, last year 260.165 visitors attended the fair to see the products presented by 1.828 exhibitors covering an area of 158.237 square meters.

The study showed that 68% of visitors came from Europe, 19% from Asia, 9% from America, 3% from Africa and 1% from Australia. It also showed that the main reasons for the visit was 55% to discover innovations and trends and around 30% to establish or improving relationship with suppliers and business partners.

Boot Düsseldorf

The Boot Düsseldorf is the largest boat and water sport trade fair in the world. It takes place each January and this year more than 1800 Exhibitors from 70 countries offered all kind of diving, sailing, boats equipment, trend sport, motorboat, fishing, big yachts, water tourism and paddling on 220.000 square meters area. Furthermore, in 9 days of exhibition around 242.000 visitors came to immerse themselves in the marine world.

IFA

IFA is the world's leading trade show for consumer electronics and home appliances and is one of Germany's oldest industrial trade fair. It takes place each September in Berlin. In the last show, more than 1.800 exhibitors presented their latest product highlights and attracted 240.000 visitors on an exhibition area of 180.000 square meters.

Generally speaking, only with this analysis of 10 most important trade fairs, one can even see the trade fair power of Germany in an international comparison.

7. Messe Düsseldorf GmbH

In today's capital city North Rhine-Westphalia, is located Messe Düsseldorf GmbH which is considered one of the most important trade fairs in the world. It had its origins in January 1947, where the Nordwestdeutsche Ausstellungsgesellschaft mbH (NOWEA) was founded as a permanent exhibition society of the city. In 1971, they moved to industrial buildings in the north of the city, creating what is known today as Messe Düsseldorf⁸. Nowadays, Messe Düsseldorf functions as an engine of economic

⁸ The location on the map can be seen in appendix III

development. With around 50 trade fairs and 70 own events, participations and commission events abroad, it is one of the most beneficial trade fair companies in Europe and one of the world's leading export platforms⁹. It attracts visitors and exhibitors from all over the world and their effects are reflected on Düsseldorf, on the region North Rhine Westphalia, on Germany and on the whole world. An average of around 29,000 exhibitors annually present their products to 1.3 million trade fair visitors. Apart from these, there are about half a million congress visitors. It is one of the 10 most important trade fairs and it is recognized as an international company in all regions of the world¹⁰. With about 120 exhibitions each year it employs more than 1.200 workers worldwide. With 68 foreign representative offices and 12 subsidiaries, Messe Düsseldorf extends its service network to 127 countries and regions. Currently it has the highest foreign sales in Russia, the Czech Republic and China.

It has a total of 19 exhibition halls distributed on 261.800 square meters. The average number of employees in 2016 amounted to 932 worldwide. The group sales were around 443 million euros.

Messe Düsseldorf also has the most international capital goods fairs. To the company's own events in the field of competence machines, installations and equipment, around 70% of exhibitors and trade visitors came from abroad. Overall, customers from over 180 countries attend trade fairs in Düsseldorf. The next section, provides information about the socio-economic effects of the Messe Düsseldorf.

7.1 Socio-economic effects

For the calculation of the socio-economic effects, it has been used the study from the Ifo Institute, Leibniz -Institute for Economic Research at the University of Munich- on the economic effects of the trade fairs at the Düsseldorf trade fair.¹¹

⁹ All dates and trade fairs in Düsseldorf in 2017 can be seen in appendix IV

¹⁰ Uhlendorf, Martin(2006). Die deutsche Messe- und Ausstellungswirtschaft (doctoral thesis). Westfälische Wilhelms-Universität Münster. Münster

¹¹ All figures are average figures per year. They are taken from the current study from the Ifo Institute, Leibniz -Institute for Economic Research at the University of Munich- on the economic effects of the trade fairs at the Düsseldorf trade fair and are based on the annual average of the 2013-2016 trade fairs. The figures for the last Ifo study were used as a basis for comparison (2005/2008).

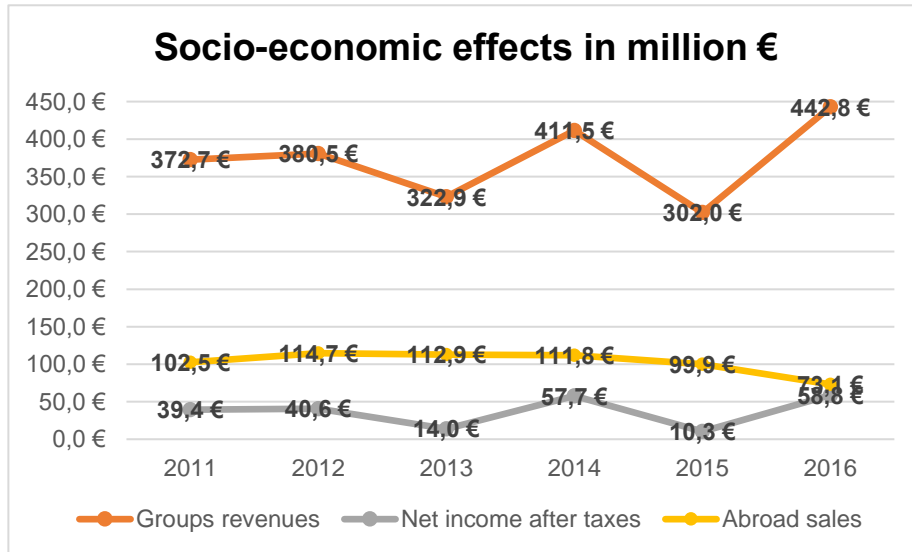


Figure 7: Evolution of socioeconomic effects during the period 2011-2016

As seen in figure 7¹², the year 2015 presented a weaker growth rate for Messe Düsseldorf. The group revenues, the net income after taxes and the abroad sales decreased. This was mainly due to the difficult external environment. In 2015 the world economy grew by just 3.1%. Particularly affected were the major emerging countries (BRIC), such as Russia and Brazil, emerging commodity exporters that showed weaker growth, due to falling commodity prices. In addition to the Russian crisis affected by the sunk price of raw materials, by the Western sanctions, as well as by the decline in the ruble, reaching the year's low of 53 ruble per Euro. In 2015 China's economy grew by only 6.9%. While India grew at an annual rate of 7.5%. Besides the growth of industries was relatively stable, United States gained further impetus after a weak annual growth in 2015.

The situation in Germany was different. The German economy presented an expansion course in 2015. Positive impulses came from private consumption (1.9%) and from public consumption (2.8%), from investment and foreign trade. The sharp fall in oil prices, low interest rates and the favourable exchange rate of the euro for the export economy had a supportive effect on the economy.

As can be seen in figure 7, the results improved in 2016. Messe Düsseldorf Group completed the financial year 2016 with a result way above expectations. The group's revenues reached 442.8 million euros (2015: 302 million euros). The net income after taxes amounted to almost 58.8 million euros (2015: 10.3 million euros). Around 73.1 million euros in sales were generated abroad (2015: 100 million euros). Russia (28

¹² Own elaboration according to the financial year 2016 published by Messe Düsseldorf

million euros) and China (18.6 million euros) were the strongest foreign markets, followed by Singapore (6.7 million euros) and the USA (6.4 million euros). Despite of the Russian crisis¹³, it still maintains the strongest level of foreign sales. Moreover, the difficult economic situation in Russia, together with the sale of the subsidiary Brno Trade Fair in Czech Republic, decreased the Group sales temporarily to 16.5 percent.

The main drivers of revenue and highlights in 2016 were the drupa fair (1,823 exhibitors and 260,165 visitors), K (3293 exhibitors and 232,000 visitors), wire, Tube and glasstec. Apart from its annual number 1 events, MEDICA, ProWein, CARAVAN SALON and boot.

The company is planning to reach the prior-year level of more than 30 percent of its foreign share within the next five years through continuous worldwide expansion as part of its corporate strategy "Messe Düsseldorf 2030".

7.1.1 Direct and indirect effects

The development in exports and imports of goods and services and the growth in direct investment flows from one country to the other, increases direct expenditures of exhibitors and visitors. Overall, the growing internationalisation increased the expenditures by 9%. This is an average of 1.91 billion euros per year (ticket sales and stand rentals included). This figure is composed as follows. Only in Düsseldorf, exhibitors and visitors spend around 795 million € annually on trade fair participations, which corresponds to 60.64% of the total spending in Germany. In the broader region, the expenses reached 313 million €. While in the rest of Germany the expenses had amounted to 203 million €. The remaining 598 million € belong to external expenses. In this way, the external growth has increased the purchasing power and has generated employment opportunities. In comparison to 2008, the purchasing effect has increased by 11%.

The direct expenses for trade fairs have further positive effects. In order to fulfil their orders, service providers and suppliers also purchase goods and personnel from other companies. This leads to a chain reaction that generates revenue. Nationwide, 2.44 billion euros secondary effects, of which 1.29 billion-euro sales are developed in Düsseldorf by a year, especially in the hotel industry, in the gastronomy, in transport companies, in airlines and taxis, in stand constructors and in the retail sector.

Furthermore, the increasing internationality of its events attract more and more visitors and exhibitors from abroad and most of them stay for several days. Guests from abroad often stay longer than guests from Germany. Around 35 percent of the visitors and 65

¹³ Annual Report Messe Düsseldorf Group 2015

percent of the exhibitors came from abroad in 2016 (Beimdiecke, 2017). So, during trade fair exhibitions, the hotel occupancy increases by 23%. These are 1,035,000 overnight stays in Düsseldorf and outside the city there are around 710,000. At the same time, Beimdiecke (2017) pointed that this fact also has negative effects. Tourists who come to visit the city without the intention of visiting a fair, are affected by high hotel prices, traffic jams or overcrowded public transport. At opening times, usually at 10:00 o'clock (for exhibitors at 8:00) and closing times, generally at 18:00 o'clock, it is almost impossible to enter the trams, trains or buses.

The Düsseldorf trade fair also serve as a driver for employment growth. Around 22,600 jobs in Germany are associated with the trade fair in Düsseldorf in an average trade fair year. Already in Düsseldorf 12.852 jobs were created, which represents 57% of the overall total.

The public sector also benefits from the successful trade fair business through income taxes, trade taxes and sales taxes. The total tax revenues amount to 465 million euros, 234 million euros whereof go to the federal government, 164 million to the NRW region and 37 million to the other federal states. The remaining part of 30.1 million-euro belongs to Düsseldorf. This is an increase of almost 20% compared to the previous period.

7.2 Site and Halls

The exhibition ground of Düsseldorf has 19 exhibition halls with a total exhibition space of 262,000 square meters, having each hall between 3,900 and 25,000 square meters¹⁴. The trade fair also has 43,000 square meters of outdoor space, in addition to varied restaurants of fast foods and specialties both outside and inside the building.

Next to the Fairground is the Congress Centre Dusseldorf (CCD Congress Centre Düsseldorf), a company belonging to the city of Düsseldorf and to Messe Dusseldorf, a space created for conventions, concerts, corporate events, meetings or international sporting events. It has a total of 6,000 m² of exhibition and presentation space and capacity for more than 125,000 people. A further 30,000 m² are available in hall 1 and hall 3, as well as in the CCD Pavilion.

7.3 Management and shareholders

Business management is one of the fundamental aspects of companies as it is responsible for improving productivity and business competitiveness. Tables 6 and 7 show the Management and the shareholders of Messe Düsseldorf, respectively.

¹⁴ The exhibition space of each hall and a map of the exhibition halls can be found in Appendix V.

Table 6: Management of Messe Düsseldorf

President & Chief Executive Officer	Werner Matthias Dornscheidt
Managing director operational trade fair business	Hans Werner Reinhard, Joachim Schäfer
Managing director finance and technology	Bernhard Johannes Stempfle
Supervisory Board	Thomas Geisel
Executive director domestic trade fairs division	Michael Degen
Executive director technology division	Clemens Hauser
Executive director foreign trade fairs division	Erhard Wienkamp

Table 7: Shareholders Messe Düsseldorf

Shareholders	Capital shares
Düsseldorf (city)	56,50 %
Industrieterrains Düsseldorf-Reisholz AG	20 %
State of Northrhine-Westfalia	20 %
Düsseldorf's Chamber of Industry and Commerce	1,75 %
Düsseldorf Chamber of Handicrafts.	1,75 %
Capital stock	100 %

7.4 Foreign markets

7.4.1 Central and Western Europe

With its global network, Messe Düsseldorf position itself on important development markets, open up new business areas and are very close to the branch centers. The internationality of the trade fairs maintained its growing trend in 2016. The proportion of international exhibitors rose to around 71% and the proportion of foreign visitors to around 45%. Approximately 5,000 foreign companies are based at their homebase and more than 750,000 companies, including 21 of the 50 largest companies in Germany, are active in the NRW region. With a population of 11.2 million, the NRW is one of the largest conurbations in Europe. The export world champion in 2008 produced products representing a value of more than 995 billion €.

7.4.2 Russia

Moscow, the most important economic centre of Russia, has around 12 million inhabitants, which represents 8.4% of the total Russian population and it is where the most nationally and internationally trade fairs take place, so that most foreign companies have their location there.

The three most common industries at Moscow fairs are construction, manufacturing and machinery manufacturing. Although the difficult economic and political situation in Russia, in these industries investment is still required, particularly in the production of consumer goods, industrial and packaging applications.

Messe Düsseldorf has been present in Moscow since 1963 with the trade fair know-how, today with its own subsidiary.

7.4.3 China

China is the third largest country in the world, covering 9.6 million square kilometres. It has more than 1300 million inhabitants, which makes it the most populous country in the world and the second largest economic power by volume of GDP.

Established in 1999 in Hong Kong, Messe Düsseldorf China Ltd. (MDC) is the subsidiary of Messe Düsseldorf GmbH. At the present time, Messe Düsseldorf is involved in the Middle Kingdom in Shanghai, Hongkong and Beijing. Messe Düsseldorf (Shanghai) Co., Ltd. (MDS) holds more than 20 leading trade fairs in China, covering the printing, packaging, wire / tube, plastics, renewable energy, medical devices, retail, health / safety, wine / spirits and caravanning industries.

7.4.4 India

India, with a population of 1,324,171,354 people, is one of the 10 largest economies in the world by volume of GDP. With 362 inhabitants per km², India is one of the most densely populated countries in the world, offering a wide range of opportunities. Messe Düsseldorf is present at the two most important trade fairs, New Delhi and Mumbai. It has emerged a growing medical sector, accompanied by Medical Fair India, organized by Messe Düsseldorf INDIA and Messe Düsseldorf.

India's industry, as one of the emerging economies, requires innovations in machines, equipment and modern services. This also promises good opportunities for global companies in the near future.

7.4.5 Japan

Japan has a population of 126,901,000 people and has a high population density, 336 inhabitants per km². With a GDP of 38,500 US dollars per inhabitant, Japan is one of the

world's leading industrializations. According to the OEC, in 2016, Japan exported 605 billion dollars.

Messe Düsseldorf has its subsidiary in Tokyo and supports companies in the development of new business opportunities and the maintenance of business contacts in Europe and worldwide.

7.4.6 North America

The economy of North America is one of the largest in the world. The countries that make up the union (Mexico, United States and Canada), have a high industrial and economic development. North America has around 579 million inhabitants. It made connections to the most important export markets in the world directly to Central and Eastern Europe and in the Asian growth regions. Messe Düsseldorf North America has its subsidiary in Chicago, and from there it supports American and Canadian companies, who are exhibitors and visitors to their trade fairs in Düsseldorf and around the world.

7.4.7 Southeast Asia

Southeast Asia is an emerging market. It has around 581 million inhabitants and it is composed by 11 countries, including Singapore, territory in which Messe Düsseldorf coordinate with its subsidiary trade fairs throughout the economic region. Messe Düsseldorf Asia has been active in this region since 1995. It present growing demand for consumer goods and offers immense opportunities for companies from around the world. From its subsidiary in Singapore, Messe Düsseldorf holds fairs in Singapore itself, in Thailand and in Vietnam. Key markets such as Thailand, Malaysia, the Philippines and Singapore have consistently recorded an average growth of 5 to 6 percent in gross domestic product over the past few years.

8. Conclusion

In brief of the presented economic research, it is possible to conclude that the trade fair and exhibition market in Germany generates important benefits on production, employment and tax revenue.

On analysing the functions of trade fairs and exhibitions, it has been concluded that despite the fact that globalization has significantly increased the use of internet by companies, trade fairs still maintain the importance of face-to-face meetings, becoming an ideal platform for the presentation of the most innovative products and for the acquisition of new customers.

The German trade fair market generates a multiplier effect on the economy of the city in which it is celebrated, on the rest of German regions and on the rest of the world. They also contribute to development through investment in infrastructure and fairgrounds.

Moreover, it should be pointed that, since the turnover ratio is a good method to measure the economic efficiency of a trade fair, it has been analysed his evolution. It has been noted that the turnover ratio was decreasing at the beginning of the decade but that in recent years it changed its tendency, becoming increasing. This means that the available exhibition area and the demand grows at a similar rate.

Through the economic-input-output model developed by Wassily Leontief, indirect effects have been quantified, showing the significant effects on production, employment and tax revenue.

Regarding the direct effects, it has been shown that the direct expenditures of visitors, exhibitors and trade fair organizers influence positively on the German economy, leading to demand for production and thus also to employment and to imports in different branches of industry. In short, direct production effects lead to a chain of economic impacts across all economic sectors.

Many important trade fairs take place in Germany each year. With an exhibition area of around 500.000 square meters is the Hannover trade fair the largest of the world. It has been shown the 10 most important trade fair events in Germany in terms of the number of visitors, the generated profits and the floor space.

The trade fair in Düsseldorf has been exposed as an example, showing quantitatively the generated positive effects on the case study. Even though the foreign economy was not going through its peak in recent years, the German economy presented an expansion curse. 2016 was a good year for Messe Düsseldorf, which saw increased their group revenues and the net income after taxes. In addition, it has been shown as direct expenses for trade fairs generate secondary effects on the economy of Düsseldorf, increasing the occupancy rate in hotels, generating sales in gastronomy, in transport and in the retail sector. It has also been shown how the employment and public-sector benefits from them.

In this way, it can be concluded that the German trade fair market plays a fundamental role in the German economy.

A Appendix I: Turnover ratio

Own elaboration based on the official website of AUMA. These figures have been used for the calculation of the turnover ratio.

Year	Exhibition area				
	Available exhibition space, gross in m ²				
	Total area	Rented area		Total rented area	Turnover ratio
Regional		National			
2004	2.639.620	1.490.671	6.620.000	8.110.671	3,07
2005	2.652.531	1.492.671	6.237.854	7.730.525	2,91
2006	2.675.600	1.513.930	6.536.003	8.049.933	3,01
2007	2.715.724	1.542.631	6.727.995	8.270.626	3,05
2008	2.763.646	1.489.975	7.035.359	8.525.334	3,08
2009	2.721.100	1.339.499	5.780.000	7.119.499	2,62
2010	2.757.440	1.432.699	6.830.000	8.262.699	3,00
2011	2.737.425	1.530.768	6.200.000	7.730.768	2,82
2012	2.751.135	1.579.958	7.120.000	8.699.958	3,16
2013	2.752.001	1.514.418	6.696.994	8.211.412	2,98
2014	2.776.545	1.507.321	6.823.894	8.331.215	3,00
2015	2.824.370	1.462.241	6.257.868	7.720.109	2,73
2016	2.822.159	1.536.933	7.577.447	9.114.380	3,23

B Appendix II: Emails

Original e-mail from Mr. Hochheim.

Hochheim, Hendrik <H.Hochheim@auma.de>
per a Sarah

18 d'abr. ☆ ↶

Hochheim, Hendrik
h.hochheim@auma.de

alemany → català → Tradueix el missatge Desactiva per a: alemany x

Mostra'n els detalls

Hallo Frau Müller,

das ifo-Institut München wird in diesem Jahr die **Daten** der Studie aus dem Jahr 2009 aktualisieren. Allerdings werden die Ergebnisse erst im November vorliegen. Das ist für Sie vermutlich zu spät, weshalb ich Sie nur auf unsere Studie aus dem Jahr 2009 verweisen kann.

Etliche Messeplätze haben für ihre Standorte aktuellere Zahlen erhoben, aber diese beziehen sich eben nicht auf Deutschland insgesamt.

Wenn Sie darüber hinaus noch Informationen benötigen, geben sie mir bitte Bescheid. Unsere Messebibliothek www.deutsche-messebibliothek.de kennen Sie sicher schon.

Mit freundlichen Grüßen

Hendrik Hochheim
Referent Forschung
im Institut der Deutschen Messewirtschaft





AUMA
Ausstellungs- und Messe-Ausschuss
der Deutschen Wirtschaft e.V.


Littenstr. 9, 10179 Berlin
Telefon 030 24000-114
Telefax 030 24000-310
www.auma.de

Geschäftsführer: Dr. Peter Neven
Vertretungsberechtigter Vorstand: Walter Mennekes (Vorsitzender), Werner M. Dornscheidt (1. stv. Vorsitzender), Klaus D. Kremers (2. stv. Vorsitzender)
Registergericht: Amtsgericht Berlin Charlottenburg, Vereinsregister-Nr.: 21 366 Nz
Umsatzsteuer-Identifikationsnummer: DE 217620114

Von: Sarah Müller [mailto:gl258164@alumail.uji.es]
Gesendet: Dienstag, 18. April 2017 13:15
An: Hochheim, Hendrik <H.Hochheim@auma.de>

Email from Mr.Hochheim translated into English by gmail.

 **Hochheim, Hendrik** <H.Hochheim@auma.de> 18 d'abr. ☆  
per a Sarah 

 alemany ▾ > anglès ▾ [Visualitza el missatge original](#) [Tradueix sempre: alemany](#)

Hello Mrs. Mueller,
the Ifo Institute in Munich will update this year, the data of the study from the year of 2009. However, the results will be available in November. That's probably too late for you, which is why I can only refer to our study from the year of 2009.
Several exhibition spaces have raised more recent figures for their sites, but they just do not relate to Germany as a whole.
If you still need information beyond, they let me know. Our Trade Fair Library www.deutsche-messebibliothek.de sure you know already.
Best regards

Hendrik Hochheim
Speaker research
the Institute of the German Trade Fair Industry

AUMA
Exhibition and Trade Fair Committee
of German Business

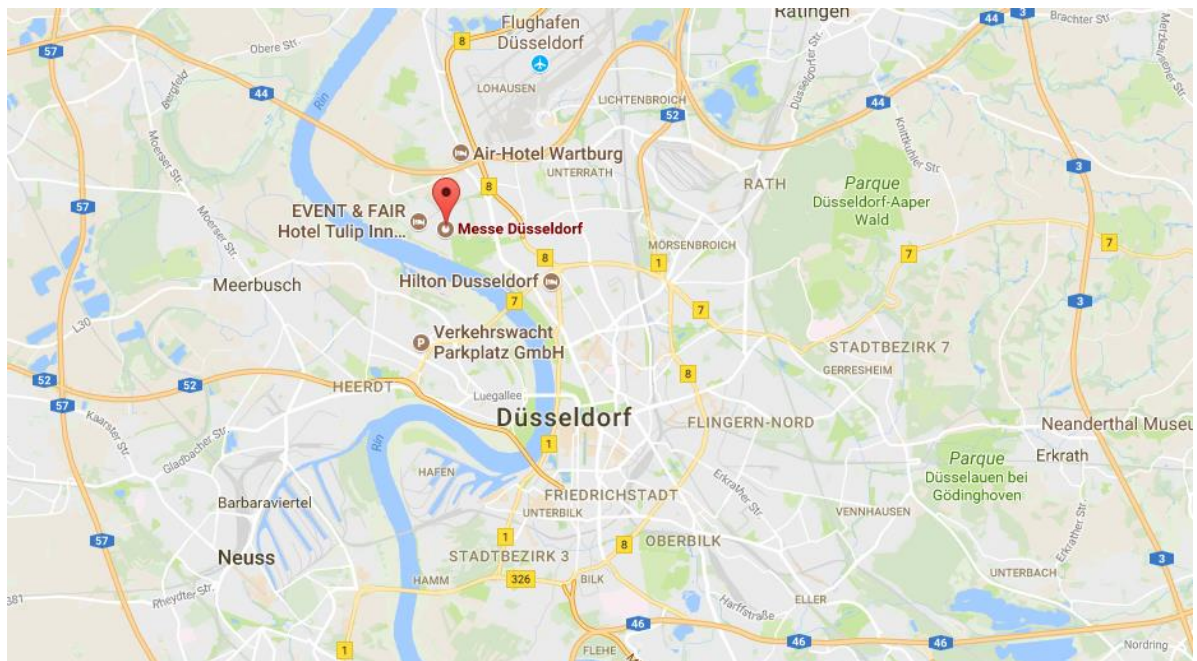
Littenstr. 9, 10179 Berlin
Telephone 030 24000-114
Fax 030 24000-310
www.auma.de

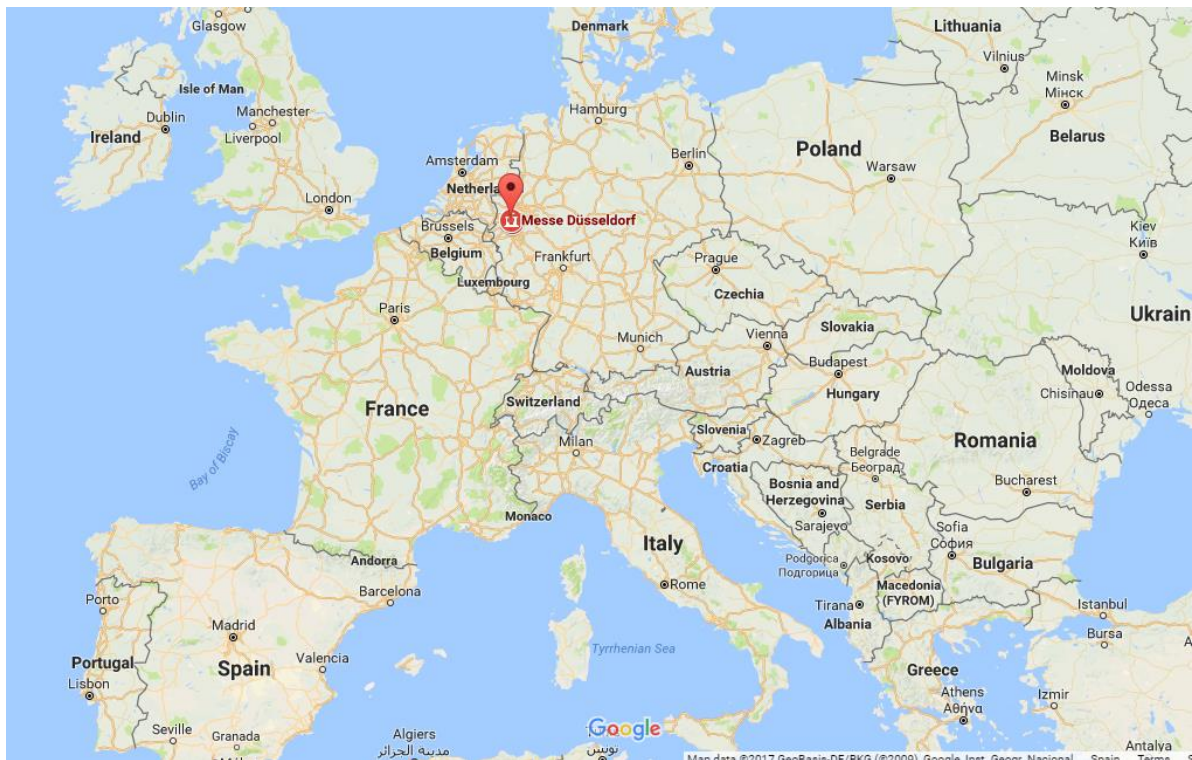
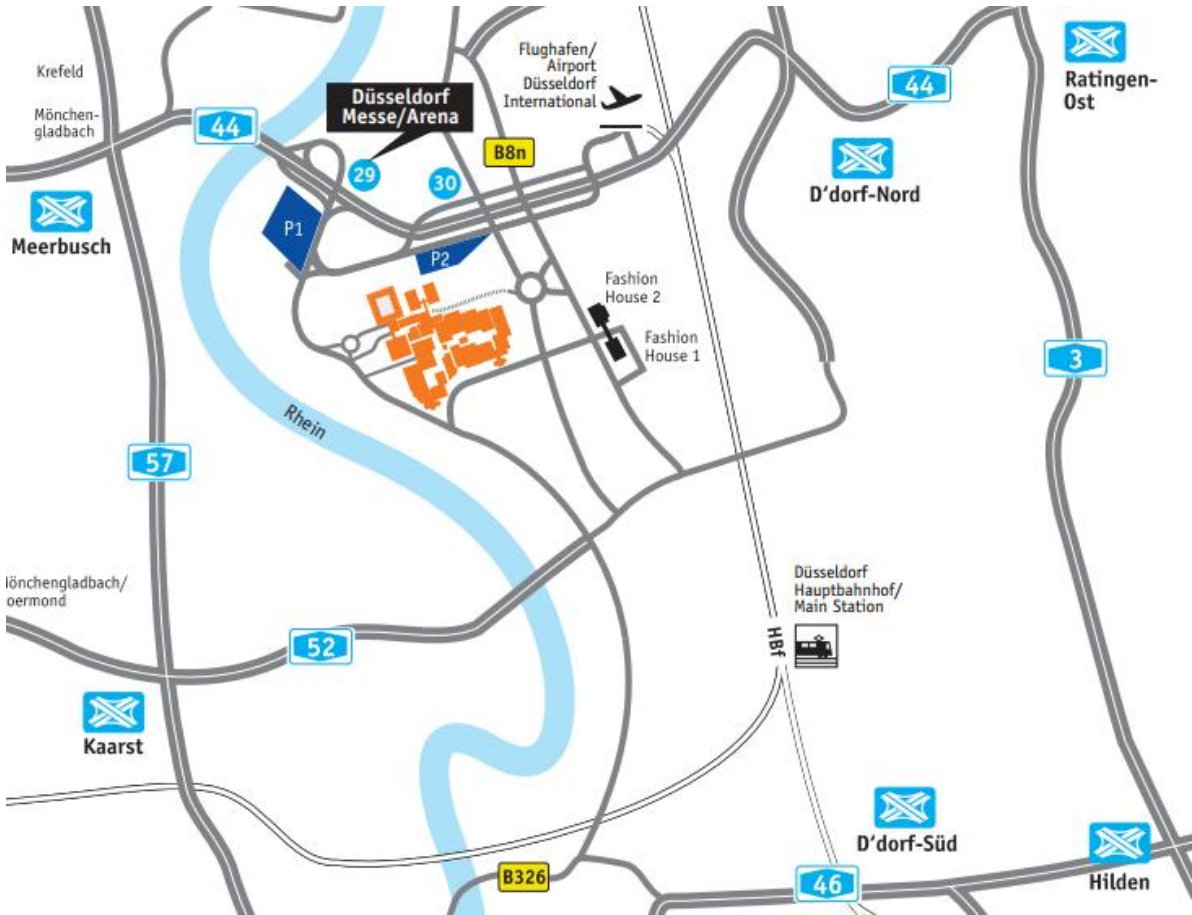
Managing Director: Dr. Peter Neven
Executive Board: Walter Mennekes (Chairman), Werner M. Dornscheidt (. 1st Deputy Chairman), Klaus D. Kremers (2nd Deputy Chairman.)
Register Court: Amtsgericht Berlin Charlottenburg, association Registration No. : 21366 Nz
Sales tax identification number: DE 217620114

By: Sarah Müller [mailto:ai258164@alumail.uji.es]
Posted: Tuesday, April 18, 2017 13:15
To: Hochheim, Hendrik <H.Hochheim@auma.de>
Subject: Current data

C Appendix III: Maps

Map of Düsseldorf and Europe indicating the location of Messe Düsseldorf.





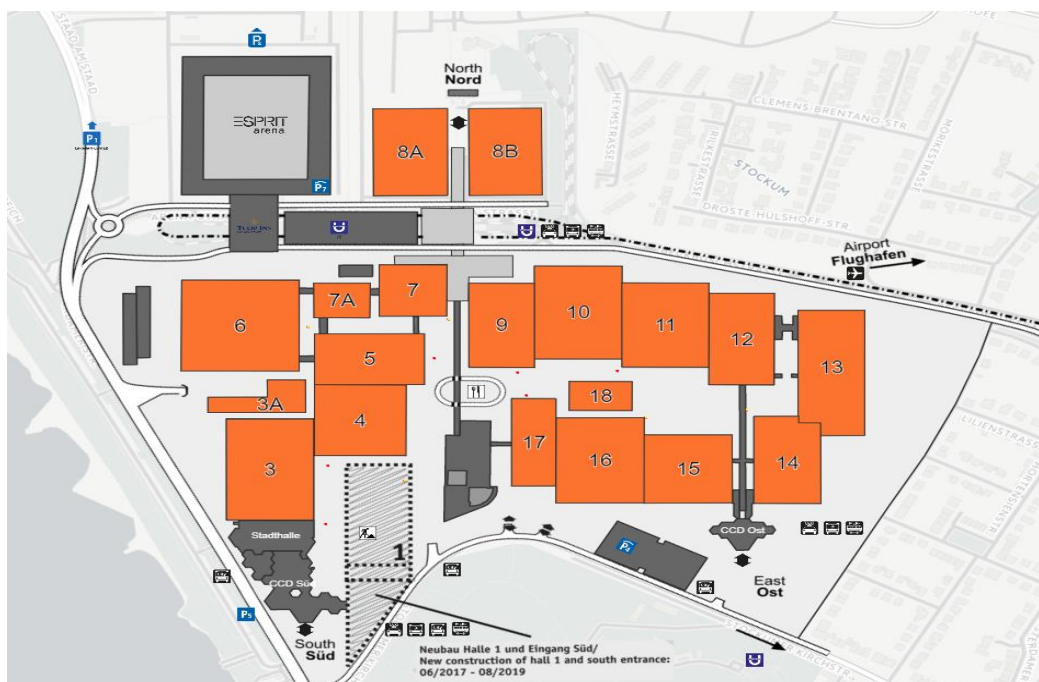
D Appendix IV: Dates and trade fairs in Düsseldorf 2017

Stand 07/2017	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
January	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu
										PSI***	10.-12.01.																				
February	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu			
										GOS***	07.-09.02.																				
March	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr
										EuroShop*	05.-09.03.																				
April	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	
May	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We
June	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	
July	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	
August	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th
September	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	
October	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu
November	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	
December	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su

■ Maschinen, Anlagen und Ausrüstungen *Machinery, Plant and Equipment* ■ Handel, Handwerk und Dienstleistungen *Trade and Services* ■ Medizin und Gesundheit *Medicine and Health*
■ Mode, Lifestyle und Schönheit *Fashion, Lifestyle and Beauty* ■ Freizeit *Leisure*
■ Partner-/Gastveranstaltungen *Shows in cooperation with partners/guest shows*

* Veranstaltung mit wechselndem Standort *Event with alternating location* ** Nur für Fachbesucher oder Facheinkäufer mit Legitimation/Einladung *Only for trade visitors or trade buyers with legitimation/invitation* *** Nur für PSI Mitglieder *For PSI members only* 1) Fachbesucher- und Medientag *Trade visitors and media day*

E Appendix V: Site and halls of Messe Düsseldorf



Hall	Length / Width / Height	Load-bearing capacity	Hall space
1	158,34 m / 77,4 m / 20 m	10.000 kg/m ²	12.025 m ²
3	176,12 m / 118,98 m / 8,00 m	10.000 kg/m ²	20.279 m ²
4	107,09 m / 118,97 m / 8,00 m	10.000 kg/m ²	11.880 m ²
5	148,97 m / 77,08 m / 8,00 m	10.000 kg/m ²	11.483m ²
6	160 (145) m / 160 (145) m / 16/26 m	10.000 kg/m ²	25.276 m ² (incl. Gallery)
7	76,86 m / 58,00 m / 4,00 m	10.000 kg/m ²	3.883 m ²
	91,20 m / 89,40 m / 3,20 m	500 kg/m ²	6.650 m ²
	91,20 m / 83,40 m / 3,20 m	500 kg/m ²	6.324 m ²
7a	52,30 m / 74,80 m / 12,00 m	10.000 kg/m ²	3.938 m ²
8a	150,56 m / 98,50 (84,25) m / 15,00 m	10.000 kg/m ²	12.850 m ²
8b	150,56 m / 98,50 m (84,25 m) / 15,00 m	10.000 kg/m ²	12.850 m ²
9	137,15 m / 88,97 m / 8,00 m	10.000 kg/m ²	12.409 m ²
10	137,14 m / 118,98 m / 8,00 m	10.000 kg/m ²	16.296 m ²
11	137,14 m / 118,98 m / 8,00 m	10.000 kg/m ²	16.251 m ²
12	137,17 m / 88,99 m / 8,00 m	10.000 kg/m ²	12.120 m ²
13	216,36 (182,76) m / 88,98 m / 8,00 m	10.000 kg/m ²	16.256 m ²
14	131,04 m / 88,98 m / 8,00 m	10.000 kg/m ²	10.822 m ²
15	118,99 m / 107,16 m / 14,00 m	10.000 kg/m ²	13.148 m ²
16	137,14 m / 118,96 m / 14,00 m	10.000 kg/m ²	16.721 m ²
17	137,15 m / 58,98 m / 14,00 m	10.000 kg/m ²	8.298 m ²
18	85,00 m / 50,00 m / 06,00 m	1.500 kg/m ²	4.250 m ²

9. References

- Agritechnica. *Daten und Fakten*. Requested date 15.06.2017, in:
<https://www.agritechnica.com/de/fuer-aussteller/daten-fakten/>
- AUMA. (2009). *Die gesamtwirtschaftliche Bedeutung von Messen und Ausstellungen in Deutschland* (30th ed). [PDF file]. Berlin. Requested in:
<http://www.auma.de/de/DownloadsPublikationen/PublicationDownloads/Edition30.pdf>
- AUMA. (2009). *Wirtschaftliche Bedeutung von Messen*. Requested date 22.05.2017, in:
<http://www.auma.de/de/messemarkt/messemarktdeutschland/bedeutung/seiten/default.aspx>
- AUMA. (2010). *Deutsche Wirtschaft will mit Messen neue Überseemärkte erschließen*. Requested date 11.04.2017, in: <http://www.auma.de/de/Presse/Seiten/Presse13-2010.aspx>
- AUMA. (2013). *The German trade fair industry: facts, functions, outlook* (5th ed). [PDF file]. Berlin, in:
<http://www.auma.de/en/DownloadsPublications/PublicationDownloads/TheGermanTradeFairIndustry.pdf>
- AUMA. (2015). *Verhalten und Struktur der Fachbesucher auf deutschen Messen: Sekundäranalyse repräsentativer Besucherbefragungen* (41th ed). [PDF file]. Berlin, in:
<http://www.auma.de/de/DownloadsPublikationen/PublicationDownloads/Verhalten-Struktur-Fachbesucher-auf-deutschen-Messen.pdf>
- AUMA. (2016). *Programm zur Förderung der Teilnahme junger innovativer Unternehmen an internationalen Leitmessen in Deutschland*. [PDF file]. Berlin, in:
<http://www.auma.de/de/DownloadsPublikationen/PublicationDownloads/BMWi-FoerderprogrammInnovativeUnternehmen.PDF>
- AUMA. (2017). *MesseTrend 2017* (46th ed). [PDF file]. Berlin. Requested in:
<http://www.auma.de/de/DownloadsPublikationen/PublicationDownloads/AUMA-MesseTrend-2017.pdf>
- AUMA. *Messelexikon*. Requested date: 13.04.2017, in:
<http://www.auma.de/de/Messelexikon/Seiten/Default.aspx>

- AUMA. *Trade fairs in Germany*. Requested date 12.06.2017, in: <http://www.auma.de/en/YourSuccessIsOnlyFair/TradeFairsInGermany/Seiten/Default.aspx>
- Bauma. *Die bauma auf einem Blick*. Requested date 15.06.2017, in: <http://www.bauma.de/messe/messeprofil/auf-einen-blick/index.html>
- Bedeutung von Messen: Daten, Zahlen, Fakten.(2012). *Koelnmesse Journal*. Requested date 15.06.2017, in: <http://koelnmesse-journal.de/2012-12/storys/social-media-das-aus-fuer-messen/bedeutung-von-messen-daten-zahlen-fakten/>
- Beimdiecke, J. (2017). Wie die Wirtschaft von Messeständen profitiert. *Handelsblatt*. Requested date 25.09.2017, in: <http://www.handelsblatt.com/unternehmen/handelskonsumgueter/duesseldorf-frankfurt-hannover-wie-die-wirtschaft-von-messestaedten-profitiert/20302282.html>
- Boerse.de (2016): *OTS: Messe Düsseldorf / Geschäftsjahr 2016 bestätigt höchste Profitabilität*. Requested date 10.10.2017, in: <https://www.boerse.de/nachrichten/OTS-Messe-Duesseldorf-Geschaeftsjahr-2016-bestaetigt-hoechste-Profitabilitaet-/7769695>
- Boot Düsseldorf: *Erleben Sie die größte Wassersportmesse der Welt*. Requested date 18.06.2017, in: <http://www.boot.de/>
- Bueno, S. (2015). Técnicas de motivación para aumentar la productividad de los trabajadores. *El Economista*. Requested date: 27.03.2017, in: <http://www.eleconomista.es/emprendedores-pymes/noticias/7018410/09/15/Tecnicas-de-motivacion-para-aumentar-la-productividad-de-los-trabajadores.html>
- Cañada Martínez, A. *Una nota sobre coeficientes y modelos multiplicadores a partir del nuevo sistema input/output del SEC-95*. [PDF file]. Requested in: <http://www.ine.es/daco/daco42/daco4214/cbtc26.pdf>
- Comisión Europea.(2010). *Capítulo 9. Tablas de origen y destino y marco input-output*. [PDF file], Bruselas, 2010. Requested in: [http://www.europarl.europa.eu/RegData/docs_autres_institutions/commission_europeenne/com/2010/0774/COM_COM\(2010\)0774\(PAR11\)_ES.pdf](http://www.europarl.europa.eu/RegData/docs_autres_institutions/commission_europeenne/com/2010/0774/COM_COM(2010)0774(PAR11)_ES.pdf)
- Congress Center Düsseldorf. *CCD Congress Center Düsseldorf Veranstaltungsräume*. Requested date 20.10.2017, in: <http://www.ccd.de/veranstalter/raeume/>

- CreceNegocios. *Que es y como aplicar el benchmarking*. Requested date 27.03.2017, in: <http://www.crecenegocios.com/que-es-y-como-aplicar-el-benchmarking/>
- Datosmacro.(2017). China, India, Japón: Economía y demografía. *Expansión*. Requested date 12.10.2017, in: <https://www.datosmacro.com/paises/>
- Deutsches Institut für Wirtschaftsforschung (Hg.): *Messen und Ausstellungen als expansive Dienstleistungen*, Sonderheft 141, Berlin 1985
- Dierig, C. (2006). Messen beharken sich. *Die Welt*. Requested date 02.10.2017, in: <https://www.welt.de/print-welt/article195710/Messen-beharken-sich.html>
- Dierig, C. (2009). Vermischtes: Messen als Wirtschaftsmotor. *Welt print*. Requested date 23.09.2017, in: https://www.welt.de/welt_print/vermishtes/article4968974/Messen-als-Wirtschaftsmotor.html
- Drupa. *drupa - Die Nr. 1 für Ihren Geschäftserfolg*. Requested date 17.06.2017, in: <http://www.drupa.de>
- Empo. *Deutschlands Messestädte*. Requested date 15.06.2017, in: <http://www.empo.de/de/messticker/deutschlands-messestaedte0/>
- Essen Motor Show. *Messe Essen*. Requested date 15.06.017, in: <https://www.essen-motorshow.de/automobilmesse/>
- Expansión. *Transparencia del mercado*. Requested date 11.04.2017, in: <http://www.expansion.com/diccionario-economico/transparencia-del-mercado.html>
- Expansión.(2016). *El PIB de Alemania creció un 1,7% en 2015 y se espera un avance del 2% en 2016*. Requested date 12.10.2017, in: <http://www.expansion.com/economia/2016/01/14/569769b0268e3e76078b463e.html>
- Fedesarrollo, Z. Luis A. y Jaramillo, L. (2005). *Impacto económico de las ferias comerciales sobre la economía del distrito de Bogotá*. [PDF file].pp 6. Requested in: <http://www.repository.fedesarrollo.org.co/handle/11445/1168>
- Ferias internacionales. (2011). *Fundamentos de ferias internacionales*. [PDF file], in: <http://feriasinternacionales.wikispaces.com/file/view/fundamentos+de+ferias+internacionales.pdf>

- Gabler Wirtschaftslexikon. *Steueraufkommen*. Requested date 09.06.2017, in: <http://wirtschaftslexikon.gabler.de/Definition/steueraufkommen.html>
- Gamescom. *Gamescom 2018*. Requested date 16.06.2017, in: <http://www.gamescom-cologne.com/gamescom/index-9.php>
- Geschäftszahlen 2015.(2016). *Messe Düsseldorf*. [PDF file]. Requested in: https://www.messe-duesseldorf.de/cgi-bin/md_home/lib/pub/object/downloadfile.cgi/MD_GeBe2015_D.pdf?oid=1482&lang=1&ticket=g_u_e_s_t&src=geschaeftsbericht_de_pdf
- Haufe. *Betriebswirtschaftliche Funktionen von Messen*. Requested date: 23.03.2017, in: https://www.haufe.de/unternehmensfuehrung/profirma-professional/betriebswirtschaftliche-funktionen-von-messen_idesk_PI11444_HI2011920.html
- IAA. *Statistiken Besucher & Aussteller der IAA Pkw 2015*. Requested date 15.06.2017, in: <https://www.iaa.de/iaa/statistiken>
- Ifa. *Die Ifa*. Requested date 18.06.2017, in: <http://www.ifa-berlin.de/>
- Ifo Pocketbrochüre.(2017). *Valyou: Wir fördern Wirtschaft*. [PDF file]. Requested in: https://www.messe-duesseldorf.de/cgi-bin/md_home/lib/pub/object/downloadfile.cgi/Web_pdf_ifo_Pocketbrosch%C3%BCre.pdf?oid=2009&lang=1&ticket=g_u_e_s_t
- Inside business*. Messen: Das Wichtigste über die 11 größten Messen Deutschlands. Requested date 15.06.2017, in: <https://www.wlw.de/de/inside-business/messen/groessten-deutschen-messen>
- Institut der Deutschen Wirtschaft Köln. (2017). *Wirtschaftsfaktor Messe*. Requested date 29.09.2017, in: <https://www.iwd.de/artikel/wirtschaftsfaktor-messe-340418/>
- Instituto de estadística y cartografía de Andalucía. *Marco Input-output de Andalucía 1995*. [PDF file]. P. 18-19 Requested in: <https://www.juntadeandalucia.es/institutodeestadisticaycartografia/mioan/mioan95/cap1.pdf>
- Internationale Grüne Woche Berlin. *Die Messe: Die Grüne Woche*. Requested date 15.06.2017, in: <http://www.gruenewoche.de/de/DieMesse/DieGrueeneWoche/>

Kresse, H.; von Weizsäcker, Robert K.; Penzkofer, H.(2005). *Die Bedeutung des Messeplatzes Deutschland*. Ifo Schnelldienst; Munich. pp.3-14. [PDF file], in: http://www.cesifogroup.de/pls/guest/download/ifo%20Schnelldienst/ifo%20Schnelldienst%202005/ifosd_2005_3_1.pdf

La importancia de la comunicación corporativa en ferias y congresos. *EIKONOS*. Requested date: 27.03.2017, in: <http://eikonos.com/blog/la-importancia-de-la-comunicacion-corporativa-en-ferias-y-congresos/>

Maimarkt Mannheim. *Willkommen auf dem Maimarkt*. Requested date 16.06.2017, in: <http://www.maimarkt.de/allgemeine-infos/ueberblick.html>

Mayunke. (2016). CatCap begleitet die Messe Düsseldorf beim erfolgreichen Verkauf der Aktienmehrheit an der Messe Brunn. *Deal advisors*. Requested date 24.09.2017, in: <http://deal-advisors.com/catcap-begleitet-die-messe-duesseldorf-beim-erfolgreichen-verkauf-der-aktienmehrheit-an-der-messe-bruenn>

Mesa editorial Merca2.0. (2011). Emotional branding generado a través del punto de venta. *Merca2.0*. Requested date 27.03.2017, in: <http://www.merca20.com/emotional-branding-a-traves-del-punto-de-venta/>

Messe Düsseldorf China. *Messe Düsseldorf China Ltd*. Requested date 12.10.2017, in: <http://www.mdc.com.cn/company/mdc?lang=en>

Messe Düsseldorf Shanghai. *Messe Düsseldorf GmbH*. Requested date 11.09.2017, in: <http://www.mds.cn/en/company/aboutmd>

Messe Düsseldorf. *Bilanz Geschäftsjahr 2016*. Requested date 24.09.2017, in: https://www.messe-duesseldorf.de/cgi-bin/md_home/lib/all/lob/return_download.cgi/PM_Bilanz_Gesch%C3%A4ftsjahr_2016.pdf?ticket=g_u_e_s_t&bid=1120&no_mime_type=0

Messe Düsseldorf. *Impressum*. Requested date 13.09.2017, in: https://www.messe-duesseldorf.de/cgi-bin/md_home/lib/pub/tt.cgi/Impressum.html?oid=504&lang=1&ticket=g_u_e_s_t

Messe Düsseldorf. *Über uns: Management & Gesellschafter*. Requested date 13.09.2017, in: https://www.messe-duesseldorf.de/cgi-bin/md_home/lib/pub/tt.cgi/Management_Gesellschafter.html?oid=102&lang=1&ticket=g_u_e_s_t

- Messe Düsseldorf. *Unsere Geschichte*. Requested date: 13.04.2017, in: https://www.messe-duesseldorf.de/cgi-bin/md_home/lib/pub/tt.cgi/Geschichte.html?oid=274&lang=1&ticket=g_u_e_s_t
- Morrillas, A. *Introducción al análisis input-output*. [PDF file]. Requested in: <http://webpersonal.uma.es/~morillas/trAnalisisI-O.pdf>
- Muñiz, R.(2014). *Márketing en el siglo XXI: La feria como herramienta estrategica del marketing* (5th ed). Centro de estudios. Requested date: 27.03.2017, in: <http://www.marketing-xxi.com/la-feria-como-herramienta-estrategica-de-marketing-68.htm>
- NGDATA. (2017). What is customer acquisition? Requested date: 22.03.2017, in: <https://www.ngdata.com/what-is-customer-acquisition/>
- Nittbaur, G. *Wettbewerbsvorteile in der Messewirtschaft, Aufbau und Nutzen strategischer Erfolgsfaktoren*, Wiesbaden 2001
- Observatory of Economic Complexity (OEC). *Japón*. Requested date 12.10.2017, in: <http://atlas.media.mit.edu/es/profile/country/jpn/>
- OCDE. (1996). *The Knowledge-based economy. Organisation for economic co-operation and development*. [PDF file]. Paris. Requested in: <https://www.oecd.org/sti/sci-tech/1913021.pdf>
- Penzkofer, H. (2002). *Wirtschaftliche Wirkungen der Frankfurter Messen*. [PDF file]. Requested in: https://www.cesifo-group.de/pls/guest/download/ifo%20Schnelldienst/ifo%20Schnelldienst%202002/ifosd_2002_1_3.pdf
- Preserve articles. *What do you mean by international understanding?*. Requested date 11.04.2017, in: <http://www.preservearticles.com/201105076330/what-do-you-mean-by-international-understanding.html>
- RP Online. (2017). *Düsseldorf: 242.000 Besucher kamen in neun Tagen zur Boot*. Requested date 18.06.2017, in: <http://www.rp-online.de/nrw/staedte/duesseldorf/242000-besucher-kamen-in-neun-tagen-zur-boot-aid-1.6568839>
- Sarmiento García, M. (1995). Instituto de Estudios Turísticos Secretaría General de Turismo: *El mercado de ferias y exposiciones y otros viajes de negocios*. [PDF

file]. pp. 191-210. Requested, in: <http://estadisticas.tourspain.es/img-iet/revistas/ret-126-1995-pag191-210-74366.pdf>

Solá, R. (2003). *Las ferias como escaparate de la comunicación empresarial*. [PDF file], Requested in: http://repositori.uji.es/xmlui/bitstream/handle/10234/79647/forum_2003_43.pdf?sequence=1&isAllowed=y

Statistisches Bundesamt.(2010). *Input-Output-Rechnung im Überblick*. [PDF file]. Requested in: https://www.destatis.de/DE/Publikationen/Thematisch/VolkswirtschaftlicheGesamtrechnungen/InputOutputRechnung/InputOutputRechnungUeberblick5815116099004.pdf?__blob=publicationFile

Stoeck, N. and Von Grega, F. (2009). Messen lassen die Kassen Klingeln. *Handelsblatt*. Requested date 10.05.2017, in: <http://www.handelsblatt.com/unternehmen/handel-konsumgueter/tourismus-messen-lassen-die-kassen-klingeln/3291746.html>

Uhlendorf, M. (2006). *Die deutsche Messe- und Ausstellungswirtschaft. Räumliche Standortstruktur- bzw. -entwicklung, Standortbewertung am Beispiel der Messestadt Frankfurt*. (Doctoral thesis). Westfälische Wilhelms-Universität Münster. Münster

Von Grega, F. (2013). *Internationalisierung des Messewesens: Auswirkungen auf öffentliche Veranstaltungsgesellschaften*. Leipzig: Springer Gabler. pp.146-148.

WiseGEEK. *What is customer acquisition?* Requested date: 22.03.2017, in: <http://www.wisegeek.org/what-is-customer-acquisition.htm>

Zielinski, M. (2011). *Trade fairs as source of knowledge – the role of trade fairs organizer*. Requested date 11.04.2017, in: https://www.researchgate.net/publication/267383686_Trade_fairs_as_source_of_knowledge_-_the_role_of_trade_fairs_organizer