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Economic Development of the German Coin-Operated Gaming and Amusement Machine Industry 2016 and Outlook for 2017

Study Commissioned by the German Coin-operated Machine Industry

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1.1. Market for jukeboxes, sport-games and amusement machines

Coin-operated amusement machines basically comprise four different product groups:

- The most important product group consists of **amusement machines with prizes** (AWPs), which – for more than 60 years – have been subject to comprehensive public regulation, in particular with regard to the stakes, the winnings and potential losses. The AWPs stand in stark contrast to gambling on slot machines in public or publicly licenced casinos.
- A second group contains **gaming machines without prizes**. These are machines such as touch-screen machines, video games, driving simulators, pinball machines etc. This category also included fun games that pay out tokens. Since 1 January 2006, when the 5th Amendment of the German Gaming Ordinance (Spielverordnung, SpielV) took effect, these fun game machines have been prohibited and all of them had to be dismantled instantaneously.
- A third group consists of **sport-games machines**, predominantly mechanical or semi-mechanical machines, such as billiards, darts, table soccer, air hockey etc. These machines lost much of their importance in amusement arcades when innovative AWPs, so-called multigamers[1] were put on the market.
- A fourth group comprises **Internet terminals**, which have been introduced to the market in significant numbers only since the middle of the last decade. They allow a controlled access to the Internet without any specific entertainment content. These Internet terminals take account of the protection of minors, they bloc access to Websites with pornographic and violent content as well as access

[1] AWPs can offer 20 or more three-dimensional games with exciting plots, so-called **multigamers**. They enable amusement arcade operators to offer a more diversified and attractive supply of games. So-called ‘feature games’ provide a variety of game-boards and narratives. A successfully finalised course of the game is awarded with the pay-out of winnings. Because of the numerous different games per AWP, there are fewer bottlenecks during rush-hours than in the past when guests had to wait until their preferred AWP was freed by another guest. Multigamers are all-rounders and eliminate waiting times.

to Internet gambling services. First and foremost, the installation of these terminals have been devoted to attracting new client groups that have not yet been attracted by amusement arcade games. However, this supply has become outdated by technological progress and the spread of smartphones.

- A fifth group of machines that gives players the possibility to use their skills to influence the outcome of the game is subsumed under the category "**other games with prizes**" (subject to Art. 33d GewO (Gewerbeordnung, German Trade, Commerce and Industry Regulation). The Federal Criminal Investigation Agency (*Bundeskriminalamt*) uses the licensing process for these machines in such a restrictive manner that this product group is at present irrelevant.

The German National Metrology Institute (*Physikalisch-Technische Bundesanstalt*, PTB), a subordinate agency to the Federal Ministry for Economic Affairs and Energy (*Bundesministerium für Wirtschaft und Energie*, BMWi) is responsible – among other tasks – for the type approval of **AWP**s and tests their compliance with the German Gaming Ordinance. As a by-product, the PTB records the number of official permits – based on type approvals – granted per annum for AWPs. Up to 1 January 2006, the number of new permits for the sale and lease of AWPs was used to depict the long-term development of the market. Additionally, the figures could be applied for an assessment of the stock of AWPs installed by the use of information on the scrapping of outdated AWPs or their return to manufacturers.

The wide scope of design options provided by the 5th Amendment of the Gaming Ordinance made possible a technological revolution, which has led to the replacement of the traditional wall-mounted, mechanical and electro-mechanical AWPs by completely electronically controlled, video-based AWPs, which offer a broad range of quite different games (see footnote 1). Current PTB statistics on the issue of official permits only reflect the manufacturers' call-ups of type approvals that – since 1 January

2006 – are granted for gaming-software packages and AWP cabinets.[2] First and foremost, gaming-software packages are being replaced, whereas AWP cabinets can be used for longer periods of time. To offer clients a variety of innovative games, these software packages are frequently exchanged by amusement arcade operators.

The number of permits granted by the PTB is not only affected by manufacturers' product innovations and the operators' investment propensity. Public policies directed towards changes of the framework conditions for commercial gaming are also reflected in the call-ups of permits. In this respect the growing initiatives of the German States – starting at around 2010/2011 – to thwart the objectives pursued by the 5th Amendment of the German Gaming Ordinance should be mentioned. The Ordinance sought to provide framework conditions for commercial gaming to keep up with the competition from state monopoly gambling as well as the growing gambling and gaming supply in the Internet.

The German States are seeking to roll back commercial gaming. Their initiatives are based above all on the Interstate Treaty on Gambling (*Glücksspielstaatsvertrag*, GlüStV 2012), which took effect on 1 July 2012 and the State-specific gaming regulations, which will cause a reduction of the installed capacities by more than 50%. The key provisions are the minimum distances between amusement arcades and the prohibition of multiple concessions. The transition period will end on 1 July 2017, and all amusement arcades have to apply for new permits which can only be granted if these provisions are met. Moreover, the German Federal Assembly (*Bundesrat*) agreed on a legal resolution (*Maßgabebeschluss*) on 5 July 2013 which became subject to the Assembly's approval of the 6th Amendment of the Gaming Ordinance, submitted by the Federal Ministry of Economics (BMWi) and dedicated to introducing stricter rules on commercial gaming. But this legislative initiative did not satisfy the States' interest in rolling back the amusement machine industry. Because the consent of the States is

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2 These type approval procedures concern the test of software packages together with the related hardware (AWP-box) in compliance with the German Gaming Ordinance. Accordingly, gaming-software packages are only approved for a specific kind of AWP box and are not approved for the installation on different types of AWP cabinets.

required for the Gaming Ordinance, numerous legal provisions had to be added before the 6th Amendment of the Gaming Ordinance could be put into effect. Particularly serious was the shortening of the transition period for AWPs with type approvals (§ 20 para. 2 sentence 1 SpielV, initial version). The taking effect of this version of the Gaming Ordinance without a sufficient transition period for already issued type approvals would be a violation of the rule of law in conjunction with the basic principle of legitimate protection of expectations as guaranteed by the German constitution (Art. 20 GG, *Grundgesetz*, Basic Law of the Federal Republic of Germany). In addition, it would constitute a serious infringement of the right to an established and operating business and would likewise violate the manufacturers' protected right of ownership (Art. 14 para. 1 GG).[3] To this end, the 6th Amendment of the Gaming Ordinance was not put into effect until 11 November 2014. It was directly followed by the 7th Amendment of the Gaming Ordinance, which became operative on 13 December 2014, in which the infringements of the basic rights of operators were alleviated in that for AWPs already on the market, a transition period in accordance with the fiscal amortisation period was introduced.

In recent years the manufacturers called up permits based upon type approvals admitted before 10 November 2014 by PTB. The number of 119,194 (2014) and 148,471 call-ups were in the normal range. The situation only changed during the 4th quarter 2016 when the number of call-ups leapfrogged to 184,721. The number of permits reached a total of 245,559 in 2016.

1.2. Number of installed machines in Germany

The associations of the German amusement machine industry maintain records on the amusement machines installed as of the end of each year. Since 2007, the number of Internet terminals delivered to amusement arcades, bars and restaurants has also been included. The machines that are counted are not only those supplied by member

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3 Hengeler Mueller (ed.); Kurzgutachten zur Vereinbarkeit der Änderungsmaßgaben des Bundesrats zum Entwurf der sechsten Verordnung zur Änderung der Spielverordnung (SpielV) vom 5. Juli 2013, (BR- Drs. 437/13) mit Verfassungs- und Europarecht, Düsseldorf, 11 July 2013.

businesses but also those of other manufacturers, distributors and importers. Preliminary calculations indicate a total number of 302,800 installed music, sport-games and amusement machines with and without prizes at 31 December 2016, thereof 264,000 AWPs, the predominant product group.

With a number of 319,100 the stock of installed machines had reached an all-time high in 2012. This development was caused by a permanent increase in the number of AWPs which more than compensated for losses in amusement machines without prizes and sport-games machines. During subsequent years, investment in AWPs decelerated and since 2015 the stock of installed AWPs has been declining (Table 1).

Table 1: Installed amusement machines and sport-games machines

Type of machine	Number of machines a), b)			
	2013	2014	2015	2016
Amusement machines without prizes	**32,250**	**27,000**	**23,800**	**20,500**
- Pinball machines	2,050	2,000	2,000	1,900
- Internet terminals etc.	18,000	13,000	10,000	7,000
- Score games etc. c)	2,400	2,300	2,200	2,100
- Video games	9,800	9,700	9,600	9,500
with prizes	**267,000**	**269,000**	**267,000**	**264,000**
Sport-games machines d)	**18,500**	**18,400**	**18,400**	**18,300**
Total	**317,750**	**314,400**	**309,200**	**302,800**

a) The estimated number of all machines as of 31 December is based on surveys of the VDAI for the entire market and on other available empirical studies.
b) The figures include machines of non-VDAI members and non-members, sold, rented and leased.
c) Score games, touch-screen machines, juke boxes and other amusement machines.
d) Billiard, dart, table soccer, skittle alleys, bowling, air hockey etc.

Source: VDAI; Arbeitskreis gegen Spielsucht e.V.; IFH Institut für Handelsforschung GmbH; calculations of the Ifo Institute.

The amusement machine industry has always been highly regulated. In particular the policymakers' focus is on commercial gaming, the operators' bread-and-butter business.

To better understand the current development, a retrospective on policy interventions is necessary.

For many years, the number of installed amusement machines with and without prizes was characterized by the unfavourable and burdensome framework conditions for commercial gaming. There has been a steady reduction in the number of AWPs from 245,000 (1995) to 183,000 (2005), a loss of around a quarter. The emerging difficulties for the amusement machine industry prompted the BMWi, in late 1999, to submit a report on possibilities for a reorganisation of commercial gaming. On this basis, the Conference of the 16 Economic Ministers of the German States on 18/19 May 2000 recognized the necessity that the framework conditions for the German amusement machine industry had to be improved to enable operators to respond to competition from public/publicly-licensed gambling and the growing availability of gambling and gaming in the Internet.

However, it took another six years – during which the industry lost further shares of the gambling and gaming market – for the 5th Amendment of the Gaming Ordinance to take effect on 1 January 2006. The improved framework conditions allowed the amusement industry to engage on a level playing field with its competitors. During the subsequent years up to 2010 the number of installed AWPs grew rapidly. The following years saw a slowing of growth with numbers peaking in 2014 at 269,000.

Throughout the past two years, the stock of AWPs declined. This recent development was not caused by saturation of demand, but by the German States massive interventions in an attempt to roll back commercial gaming. It was alleged that there was a flood of amusement arcades that had to be stopped. However, this image, which is frequently used by critics of commercial gaming, is based on a distorted view of reality. For a realistic assessment of the development, another product group must be taken into consideration that – as of 1 January 2006 – has been banned from the market. These so-called fun games[4] until then had an appreciable share of the amusement machine industry's business. Fun games offered a much more interesting game than the usual AWPs. For an unbiased assessment of the industry's evolution over time, fun games have to be considered together with AWPs. As of 31 December 1995, approximately 82,000 fun games were installed, which had to be completely dismantled at short notice. The operators complied with this obligation and focused their investment activities on AWPs as compensation for turnover losses from the dismantled fun games. As of 31 December 2016, the number of installed AWPs amounted to 264,000 units. This figure equals roughly the low point of the aggregated stock of fun games and AWPs in 2005, the low point of the amusement machine industry's long-term evolution from 1995 to 2016 (Figure 1).

Since about 2010/2011, the States have revised their position of strengthening the competitiveness of commercial gaming and are now pursuing the opposite goal: to marginalize commercial gaming. Systematically they have worsened the framework conditions, first and foremost with the GlüStV 2012, which came into effect on 1 July 2012, and the State-specific gaming regulations.

For amusement arcades with authorisation under commercial law (§ 33c GewO), granted until 28 October 2011 (existing stock of amusement arcades = Bestandsspielhallen), the pivotal provisions come into effect on 1 July 2017. For all amusement arcades with an authorisation granted after this deadline, these provisions have been applicable since 1 July 2012 when the Interstate Treaty came into effect, in particular the time-limited gambling-law permission (authorisation under gambling law) (§ 24 GlüStV 2012), the rule on minimum distances between amusement arcades (§ 25 para. 1 GlüStV 2012) and the prohibition of multiple concessions (§ 25 para. 2 GlüStV 2012).

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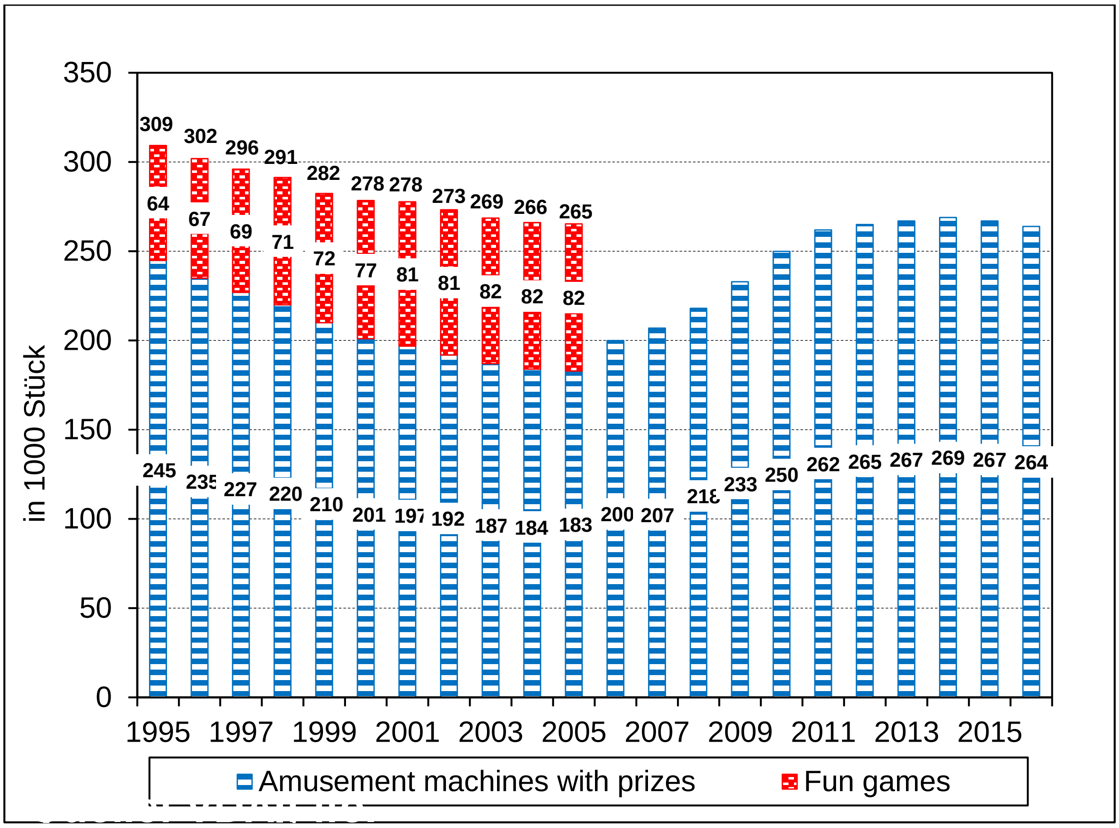
4 Fun games are amusement machines issuing tokens. Frequently tokens were exchanged illegally for cash.

Figure 1: Installed AWPs and Fun Games 1995 to 2016



Source: VDAI; Ifo Institute.

The regulatory intervention had a direct impact on investment in amusement arcades. Fieldwork carried out by Trümper[5] found that the number of AWPs installed in amusement arcades increased by only 2.4% between 1 January 2012 and 1 January 2014, whereas for the preceding biannual periods the stock was expanded by more than 20% since 2006. For the latest available period, ending 1 January 2016, Trümper reports a decline in the number of AWPs. (Table 2)

In line with § 29 para. 4, sentence 2 GlüStV 2012, the transition period will expire on 1 July 2017 and its provisions will come into force for the existing stock of amusement arcades, with the exception of North-Rhine Westphalia and Schleswig-Holstein where 1 December 2017 and 9 February 2018, respectively, are the deadlines. The dismantling

5 Jürgen Trümper, Christiane Heimann, Angebotsstruktur der Spielhallen und Geldspielgeräte in Deutschland – Stand 1.1.2016, 13. aktualisierte und erweiterte Auflage, Unna, November 2016, p. 55.

of arcades with multi-concessions[6] and the closure of arcades falling under the provisions of minimum distances will cause a reduction of more than half of the currently installed stock of AWPs in amusement arcades.

Table 2: Development of AWPs in Amusement Arcades

Biannual periods	Change rates in % a)				
	2006 / 08	2008 / 10	2010 / 12	2012 / 14	2014 / 16
AWPs in amusement arcades	21,9	21,0	20,2	2,4	-3,8
a) Comparable survey basis, effective dates 1. January 20XX, for each of the periods.					

Source: Jürgen Trümper, Christiane Heimann; Angebotsstruktur der Spielhallen und Geldspielgeräte in Deutschland – Stand 1.1.2014, 12. aktualisierte und erweiterte Auflage, Unna, September 2014, p. 66 and Stand 1.1.2016, 13. aktualisierte und erweiterte Auflage, Unna, November 2016, p. 55.

For more than a decade the **gastronomy** sector suffered from shrinkage in the number of installed AWPs. This trend has come to an end in 2008 with a stock of 78,500, around half the number of 1995. The major reason has been economic problems in the traditional locations for AWPs in restaurants, pubs, bars etc. Moreover, the emerging system gastronomy that does not run AWPs, has aggravated the problems, but attracted clients from the traditional gastronomy. Bucking this trend, new locations have been developed with a focus on traffic hubs, such as motorway service stations, airports etc.

Since 2008 the number of AWPs in the gastronomy sector has been growing. The reversal of the trend has been caused both by investment in these new locations and by the possibility to run three instead of two AWPs per location since 1 January 2006 – when the 5th Amendment of the German Gaming Ordinance came into force. An additional impetus was given by the replacement of the traditional electro-mechanical

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6 These amusement arcades are frequently located in larger and modern buildings together with other leisure facilities and have contributed to an improved image of the industry, as has been shown by a field study carried out for the evaluation of the SpielV. These larger arcades not only offer the latest AWPs and provide a pleasant atmosphere, but build on a qualified staff. These amusement arcades are growingly attended by women. See: Jürgen Trümper; Feldstudie 2010 – Umsetzung der novellierten Spielverordnung, Unna, August 2010, p. 41, pp. 45.

AWPs by video-based multigamers, specialized around the needs of the gastronomy sector.

According to Trümper the main explanation for the increasing number of AWPs is the emergence of a new market segment: café casinos sport bistros, tearooms etc., where meals and drinks are not the primary business but the cash from three, or frequently more, installed AWPs. In many places, there is also revenue from sports-betting terminals and illegal gambling devices. These facilities only pretend to have legal business purposes. According to Trümper this kind of pseudo-gastronomy is not limited to Berlin but has spread to the bigger cities in Germany and exists in quarters with a high share of migrants. Trümper supports these findings with an analysis of the development of the number of AWPs by the size of communities. In fact, larger communities display growth rates that are much higher than in smaller ones.[7]

The majority of these pseudo-gastronomy facilities are operated under the legal form of permit-free gastronomy. The installation of AWPs in these facilities has been prohibited since 11 November 2014.[8] There is no precise information available for this market segment. Current estimates range between 30,000 and 40,000 AWPs, including banned fun games. Even if according to Trümper there are only several thousands of AWPs installed in pseudo-gastronomy, the dismantling of this illegal stock of AWPs should have had a measurable impact in the statistics. Instead, the number of AWPs installed in the gastronomy sector grew throughout 2014 and 2015 at 2.3%. (Table 3)

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[7] The installation of AWPs in the gastronomy has been hampered by the growing illegal gambling supply, terrestrial and in the Internet. See: Trümper, Heimann; 2016, l.c., pp. 18.

[8] According § 1 para. 2 no. 4 SpielV AWPs in the permit-free gastronomy (§ 2 para. 2 GastG) are prohibited since 11 November 2014. Likewise the majority of sports betting offices which to a noteworthy extent offer illegal gambling are affected by this provision. Additional the installation of AWPs is prohibited in facilities that offer betting and gambling by State-specific gaming regulations.

The stock of AWPs in the gastronomy on 1 January 2016 was 56,812, as reported by Trümper.[9] In relation to this figure the number of AWPs in the permit-free gastronomy is – based on the assumptions of Trümper - around 5% to 10% of total AWPs in the gastronomy. Even three years after the ban has been put into effect the legally required dismantling of AWPs has not taken place. This is an indication for deficient law enforcement on the local level which is highly critical with regard to the protection of players and minors.[10]

Table 3: Development of AWPs in the Gastronomy

Biannual periods	Change rates in % a)							
	2000 / 02	2002 / 04	2004 / 06	2006 / 08	2008 / 10	2010 / 12	2012 / 14	2014 / 16
AWPs	-13,4	-12,4	-12,7	-5,9	1,5	6,4	4,0	2,3
a) Comparable survey basis, effective dates 1. January 20XX, for each of the periods.								

Source: Jürgen Trümper, Christiane Heimann; 2016, l.c., p. 17.

1.3. Turnover of the amusement machine industry

The structure of the amusement machine industry has changed over the past 10 years. Both the basic technological innovation of AWPs, which led to a physical separation of hard- and software, AWP cabinets and gaming software packages, as well as new business models introduced by the manufacturers were responsible. Direct distribution has become their preferred downstream channel. Leasing and renting of AWPs have become predominant to the detriment of selling. In the course of this development, the traditional wholesale distributors have evolved into service providers. To a large extent they have become consultants, developing business models, drafting financing plans and

9 Trümper, Heimann; 2016, l.c., p. 45. Taking into account the estimated stock of AWPs in the Federal States Bavaria, Berlin, Hamburg and in communalities with less than 10,000 inhabitants (not represented in Trümper statistics) the VDAI/ifo database comes up to a total of 87,000 AWPs in the gastronomy.

10 The size of the problem is striking, because the documents necessary to solve it, are – at least partially – held by the communities themselves. Since 11 November 2014 an eligibility statement is no longer sufficient to legally run AWPs in the gastronomy, additionally the location is required to own a permission according to § 2 para. 2 GastG. Only deskwork has to be carried out to identify permission free establishments that illegally run AWPs since a couple of years.

designing the exterior appearances as well as the interiors of amusement arcades etc. It is no longer possible to clearly distinguish between the activities of manufacturers and wholesale distributors.

The manufacturers, the wholesale distributors and other industry-specific service providers are grouped together and characterized as the upstream sector. The companies' common features lie in the provision of goods and services for operators, the downstream sector. The data on turnover are based on a survey of the major players of the upstream sector. The turnover comprises sales, renting and leasing of amusement machines with and without prizes and sport-games machines, as well as all kind of service activities, such as consultancy, distribution, financing and other sector-specific service activities. In contrast to the statistics applied up to 2015, the newly defined statistics not only comprise the upstream sectors' domestic turnover but also cross-border sales of goods and services.[11]

Data for the manufacturing activity of the amusement machine industry are collected by the Federal Statistical Bureau (*Statistisches Bundesamt*) and published in the production statistics (manufacturing costs) under the position "amusement machines with coins and tokens" (*Spiele mit Münzen oder Spielmarken*). Manufacturers of the industry report production of amusement machines for two further positions of the production statistics. However, these data are not published due to confidentiality reasons. Their shares are small and are estimated to determine the total manufacturing costs of the amusement machine industry. These manufacturing costs are presented as a sub-item position of the upstream turnover. Implicitly they are contained in the upstream turnover through sales revenues, renting and leasing rates – without accrual accounting of the perennial services and changes in inventories. (Table 4)

[11] For the first time this definition of upstream output was applied in the industry report published 2016. Calculations and estimations were carried out to create time series for turnover and manufacturers' production back to 2012. Because of the changed definition both time series are not compatible with former statistics applied up to 2015.

The increase of the manufacturing costs of music, sport-games and amusement machines with and without prizes is striking. This is explained at least to a certain extent by the growing competition among manufacturers, who strive to improve their position in the market not only via gaming-software packages but costly and attractively designed AWP cabinets. This supply side trend coincides with the operators' interest, who for several years have refrained from investing in new capacities but seek to increase business with high-quality offers in already existing locations. In this context the worsened framework conditions for amusement arcades, with a gambling-law permission (§ 24 para.1 GlüStV 2012) granted after 28 October 2011, have played a noteworthy role. The foundation of new amusement arcades has come to an end. As a general tendency business strategies directed towards quality and the opening-up of new customer segments have become more widespread and have turned out to be successful, as confirmed by growing operator turnover, although the stock of AWPs has roughly remained unchanged since 2012.

Up to 2012 industrial production was dominated by domestic demand. In the following years a shift in manufacturers' external position occurred: imports have shrunken and exports grown. In 2016 for the first time the long-term trade deficit inverted into a surplus. The initial three months 2017 indicate an ongoing increase. In the face of domestically gloomy perspectives – at least in the medium-term – manufacturers are in search for new markets for AWPs abroad.

Growth of industrial production provides the material explanation for the growth of total up-stream turnover. The difference between both of these time series comprises above all industry-specific consultancy and other services provided by wholesale distributors, manufacturers and others, most of which are delivered domestically. In spite of the breakdown of services related to the establishment of new amusement arcades, the amount of total services has remained on a high level. This indicates that service providers have been able to benefit from additional operators' need for upgrading their businesses and to meet challenges from worsened framework conditions.

Table 4 Turnover of the Amusement Machine Industry

Sectoral level	In Mill. €			
	2013	2014	2015	2016
Total	**6,330**	**6,630**	**7,215**	**7,765**
Upstream-turnover, total [a)]	**790**	**800**	**850**	**860**
Manufacturing costs [b)]	470	460	570	540
Operators [c)]	**5,540**	**5,830**	**6,365**	**6,905**
Amusement machines				
- with prizes [d)]	5,450	5,750	6,300	6,850
- without prizes and sport-games machines	55	55	50	50
Internet terminals	35	25	15	5

a) Turnover of manufacturers, wholesale trade and other industry specific service providers with operators (Selling, renting and leasing of AWPs, related gaming-software packages, music, sport-games and amusement machines without prizes, financing, consultancy and other services).
b) Manufacturing costs of music, sport-games and amusement machines with and without prizes based on statistics provided by the Federal Statistical Bureau together with an estimation of positions not reported for reason of confidentiality.
c) Income of operators = cash payments including innkeeper's share and value added tax (VAT), entertainment tax, etc.
d) 2013 -to 2015 based on the VAT registration applications as published by the Federal Statistical Bureau; 2016 estimation based on a survey of major players.

Source: Federal Statistical Bureau; VDAI; IFH Institut für Handelsforschung GmbH; calculations of the Ifo Institute.

In 2016 some changes on the statistics concerning the down-stream sector were also carried out. The Federal Statistical Bureau compiles the "advance value added tax (VAT) returns" for the category "Amusement arcades and the operation of amusement machines" (*Spielhallen und Betrieb von Spielautomaten*). The statements of the respondents on their net turnover with AWPs are published. The operators' turnover as it is presented here includes 19% VAT. A revision of the time series was necessary for 2010 and the subsequent years. In contrast to the revisions of the up-stream sector, the definition of the new time series has not changed, and it is backwards compatible for 2009 and earlier years.

The operators' turnover as depicted in Table 4 includes value added tax. The gross turnover of € 6,905 million corresponds to a net value of € 5,803 million. This net amount provides the basis for the calculation of the operators' burden of taxes and levies. Most important is the amusement tax which amounts to 16.1% of net turnover on average of all locations in amusement arcades and the gastronomy sector.[12] Together with VAT and commercial tax the fiscal burden reaches 28.7% of net turnover. (Table 5) This is an amount of € 1,665 million that must be paid by operators of music, sport-games and amusement machines with and without prizes before operating results and earnings taxes can be determined.[13]

Table 5: Turnover and Fiscal Burden of Operators 2016

Indicator	Mio. €
Gross turnover	6,905
Net turnover [a)]	5,803
	in % of net turnover [b)]
Value added tax	18.8%
Input tax	7.7%
Value added tax paid	11.1%
Amusement tax [c)]	16.1%
Commercial tax	1.5%
Fiscal burden	**28.7%**

a) Gross turnover minus VAT.
b) Tax burden 2015 according to IFH Institut für Handelsforschung GmbH.
c) Share of amusement tax calculated on operators effective turnover and paid amusement tax in 2016.

Source: Federal Statistical Bureau; VDAI; IFH Institut für Handelsforschung GmbH; calculations of the Ifo Institute.

12 There is a large variance in the amusement tax burden, in particular between amusement arcades and the gastronomy. In amusement arcades the amusement tax is much higher and can exceed even 25% of net turnover. One complaint by the industry concerns the frequently applied basis for the calculation of the amusement tax, the gross turnover. This basis contains the VAT which is not available at the operators` disposal. It is for this reason that the cash box content (Gross turnover incl. VAT) is not an adequate measure for the collection of the amusement tax. See:
Hans-Günther Vieweg; Wirtschaftsentwicklung Unterhaltungsautomaten 2009 und Ausblick 2010, Munich, January 2010, pp. 44.

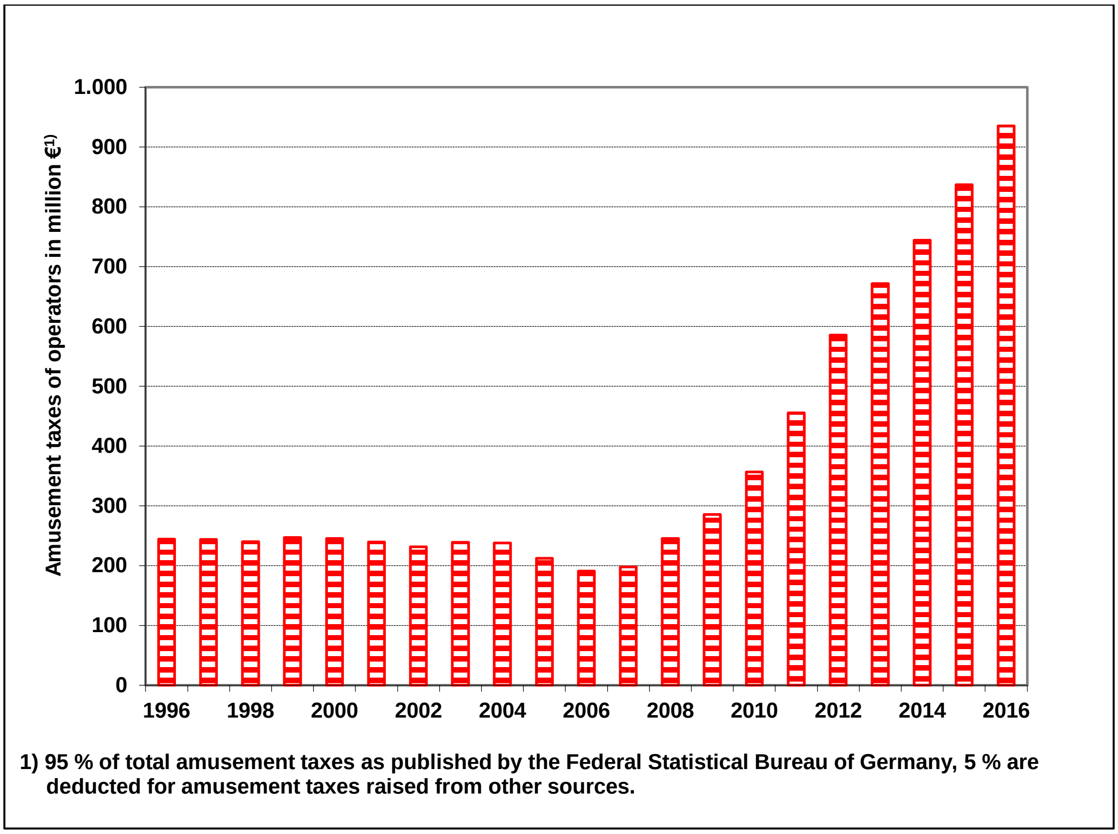
13 This calculation is based on the concept for the business assessment applied by the IFH as part of its the annual empirical study on the economic situation of operators, see:
IFH Institut für Handelsforschung GmbH; Betriebsvergleich Unterhaltungsautomatenunternehmen 2015, p. 42.

In accordance with the VAT regime, the end-user must bear VAT without any deduction. The VAT is a non-discriminatory tax with regard to the VAT rate charged to the end-user. Since VAT is levied at each stage of the value chain, the tax rate would vary with the number of stages if companies were not allowed to deduct the VAT paid for services purchased. This said, it becomes obvious that the overall burden of operators with VAT is in fact 19% of their net turnover. As a consequence their fiscal burden from amusement tax, VAT and commercial tax in 2016 was € 2,112 million. This corresponds to 36.4% of net turnover.

For the period 2010 to 2016, the operators enjoyed a clear growth of turnover. The annual average growth rate was 7.3%. Simultaneously, the burdens for the industry increased as a result of numerous measures. First and foremost was the amusement tax, with an average annual increase of 17.4% or 2.6-fold, from € 357 million in 2010 to € 936 in 2016. (Figure 2)

Of particular importance are the GlüStV 2012, which came into effect on 1 July 2012, and the State-specific gaming regulations. These laws led to serious limitations on the supply, as for instance by the extension of the curfews to at least three hours (§ 26 para. 2 GlüStV 2012), which was increased to eight hours in Berlin (§ 5 para. 1 SpielhG Bln, *Berliner Spielhallengesetz*). Further restrictions of the supply have been imposed by provisions on the reduction of the maximum number of AWPs per concession in amusement arcades from twelve to eight in Berlin as of 2 June 2013 (§ 8 para. 3 SpielhG Bln) and Hamburg (§ 9 para. 2 HmbSpielhG, *Hamburgisches Spielhallengesetz*).

Figure 2: Amusement tax burden for operators



Source: Federal Statistical Bureau; calculations of the Ifo Institute.

In contrast to the prevailing opinion in the legal literature the Federal Constitutional Court (Bundesverfassungsgericht, BVerfG) has taken the position that the maximum number of AWPs per amusement arcade as a requirement of commercial regulations has been assigned to the Law of Amusement Arcades (*Recht der Spielhallen*). As a consequence the States have the legislative competence.[14] Additional administrative tasks have to be carried out which are in particular are burdensome for smaller amusement arcades and family owned enterprises:

- Training courses for the supervisory staff, in some States annually,
- additional supervisory staff (one person for each concession of an amusement arcade (§ 6 para. 2 SpielhG Bln),
- introduction of access control system to block banned players,
- development of social concepts and

[14] BVerfG; court decision on 7 March 2017, para. 112.

- obligation to inform players on stakes, winnings, payout rates, probabilities on winnings and losses, addiction risks of the games offered and the obligation on public reporting.

Large amusement arcades and chains are able to bear these requirements easier.[15]

In spite of the worsened framework conditions, operators enjoyed a strongly growing turnover. This was partly caused by the bright economic situation in Germany and the improved consumption propensity of private households. Remarkably, the business expansion took place without an increased number of installed AWPs but by a quality campaign of the operators. With a nearly constant number of AWPs, the sovereign consumer has expressed interest in the products of the gaming and gambling market in its decision for commercial gaming, whereas the state-monopolized gambling has continued to struggle. In some market segments, sales slumped and were only offset by the introduction of new products. In particular the Eurojackpot has turned out to be successful. Only in the past two years have the casinos experienced a turn for the better.

On 1 July 2017, the transition period according to § 29 para. 4, sentence 2 GlüStV 2012 will expire. The most challenging provisions (§§ 24 and 25 GlüStV 2012) threatening the existence of the industry will come into effect. Then the provisions of the State-specific gaming regulations on minimum distances and the ban of multi-concessions (§ 25 para. 1 and para. 2 GlüStV 2012) will apply not only for new but for all amusement arcades. The implementing of the provisions will eliminate more than half of the currently installed capacities, and the current workforce of around 70,000 will be reduced to between 30,000 and 35,000.[16]

It is to be expected that there will be no abrupt decrease, although the BVerfG confirmed in its court decision of 7 March 2017 the compatibilities of the GlüStV 2012 and the State-specific gaming regulations with the German Constitution. However, it

[15] For a comprehensive presentation of the imposed obligations and implied burden, see: H.-G. Vieweg; Wirtschaftsentwicklung Unterhaltungsautomaten 2014 und Ausblick 2015, February 2015, pp. 22.

[16] H.-G. Vieweg; Wirtschaftsentwicklung Unterhaltungsautomaten 2012 und Ausblick 2013, March 2013, pp. 56.

has not been yet clarified which selection procedures – specified by the competent authorities – duly take into account the constitutional rights of the operators. The responsibility for this has been delegated to subordinated administrations, each of which with their own respective selection procedures designed to withstand a judicial review. The decision as to whether they succeed lies with the courts.[17] According to the current forecast, the selection procedure will not be finalised by the deadline of 1 July 2017. The expected subsequent law suits will not be brought to an end within a year. As a result, the operators' turnover will not fall abruptly in 2017. After another slight increase in the first half year, only a slight decline is expected. On average, turnover in 2017 will stagnate.

[17] The complaints lodged bei several operators against the legality of the selection procedures of Lower Saxony came to a judgement that highlighted the problems communities are confronted with to take into account the operators' constitutional rights.