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**Economic Development of the  
German Coin-Operated Gaming and  
Amusement Machine Industry  
2015 and Outlook for 2016**

**Study Commissioned by the  
German  
Coin-operated Machine Industry**

Hans-Günther Vieweg

**ifo** Institute

**Leibniz Institute for Economic Research**  
at the University of Munich

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Dept.: Institutional Organization and New Technologies



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# 1. The German Jukebox, Sport-games and Amusement Machine Industry

## 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.
- 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 includes fun games that pay out tokens. Since 1 January 2006, when the 5<sup>th</sup> Amendment of the German Gaming Ordinance (Spielverordnung, SpielV) took effect, these fun game machines have been prohibited and all of them have been dismantled.
- 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<sup>1</sup> 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 block access to Websites with pornographic and violent content as well as access to Internet gambling services. First and foremost, the installation of these terminals have been devoted to attracting new client groups that have not yet

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<sup>1</sup> 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. Each game within a software package has been approved for a specific type of multigamer and cannot be installed on other types of AWPs.

been attracted by amusement arcade games. However, this supply has become outdated by technological progress and the spread of smartphones – a process similar to the dissemination of computer games in private households that made the commercial deployment of simple video games in amusement arcades redundant.

- 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 **AWPs** 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 AWP. Up to 1 January 2006, the number of new permits for the sale and lease of AWP was used to depict the long-term development of the market. Additionally, the figures could be applied for an assessment of the stock of AWP installed by the use of information on the scrapping of outdated AWP or their return to manufacturers.

The wide scope of design options provided by the 5<sup>th</sup> 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 AWP by completely electronically controlled, video-based AWP, 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.<sup>2</sup> First and foremost, gaming-software packages are being replaced, whereas AWP cabinets can be used longer. 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 – to thwart the objectives pursued by the 5<sup>th</sup> 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, which took effect on 1 July 2012 (*Glücksspielstaatsvertrag*, GlüStV 2012). 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 6<sup>th</sup> Amendment of the Gaming Ordinance, submitted by the 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 required for the Gaming Ordinance, numerous legal provisions had to be added before the 6<sup>th</sup> Amendment of the Gaming Ordinance could be put into effect. Particularly serious was the shortening of the transition period for AWP with type approvals (§ 20 para. 2 sentence 1 SpielV, old version).

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<sup>2</sup> 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.

The German Federal Minister for Economic Affairs and Energy withheld his approval of the 6<sup>th</sup> Amendment of the Gaming Ordinance in the version dated 5 July 2013. 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).<sup>3</sup>

To this end, the 6<sup>th</sup> Amendment of the Gaming Ordinance was not put into effect until 11 November 2014. It was directly followed by the 7<sup>th</sup> 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 AWP already on the market, a transition period in accordance with the fiscal amortisation period was introduced.

In anticipation of the imminent intervention in their business activity, the manufacturers called-up a record number of permits totalling 337,689 in 2013. This was more than twice the numbers of preceding years. In 2014 and 2015, the numbers of official permits issued by the PTB amounted to 119,194 and 148,471, respectively, which lies in the usual range of 100,000 to 150,000 per annum. To a large extent, the numbers of permits called-up during the past two years only concern the exchange of gaming-software packages. However, in recent years a trend towards more costly and more complex design of the hardware has emerged and has led to an accelerated replacement of simple equipment by the more attractive and expensive AWP cabinets. This development meets the interest of many operators who are striving for a more appealing and sophisticated ambiance for amusement arcades. At year-end 2013 and 2015, the number of installed

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<sup>3</sup> 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.



stock of AWP's was stable at 267,000. Although AWP's were indeed installed in new locations during this period, the same number of AWP's was dismantled elsewhere.

The multigamers have contributed to the development of new business models, especially by means of attractively designed amusement arcades, which have enabled operators to access new customer groups in the wake of the 5<sup>th</sup> Amendment of the Gaming Ordinance that went into effect on 1 January 2006. This positive development has led to a steady increase in the percentage of female guests, who not only frequent amusement arcades but have also become active gamers. In the years up to 2005, women rarely went to amusement arcades. Since then the share of women amongst all AWP users has steadily increased, most recently stabilising at around 20%. In large amusement arcades the share of women stands at around 25%.<sup>4</sup> The ambience of amusement arcades is very important for female clients. They find the modern and aesthetic premises that have been increasingly erected in recent years very attractive. These amusement arcades have become integral parts of leisure-time establishments that also contain cinemas, cafes etc.

Recently, amusement arcades have become places for private events for adults (birthday parties, bachelor/bachelorette parties etc.). Gaming at low stakes and winnings is suitable for a celebration, where the joy of winning is shared by all. This development was only possible because of the changes in the ambience and the perception of amusement arcades as a broad-based leisure activity.

The objective of the amusement machine industry is the promotion of leisure-time activity combined with the social responsibility dedicated to consumer protection. The achieving of this objective was prepared by the 5<sup>th</sup> Amendment of the Gaming Ordinance, and noteworthy progress has been achieved. It is above all the amusement arcades frequently located in large leisure time centres and based on multi-concessions that are of interest for "event gamers". It is precisely this group, however, that is the

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<sup>4</sup> J. Trümper; Feldstudie 2011 – Schwerpunkt Spiel- und Einsatzverhalten von Spielern an Geldspielgeräten, Unna, December 2011, p. 20.

focus of initiatives taken by the German States to push back commercial gaming via the ban on multi-concessions (§ 25 para. 2 GlüStV 2012). Moreover, the States – with their state-specific gaming regulations – are deliberately damaging the entertainment and recreational value of amusement arcades with additional bans, such as the ban on paid-for or free-of-charge beverages and food, even coffee and snacks.

Alongside commercial gaming's more attractive offer and an increasing demand, the amusement machine industry has undertaken efforts to improve compliance with the law and gamer protection in amusement arcades. Empirical studies that evaluate the implementation of the SpielV confirm the success of the initiatives taken.<sup>5</sup>

These days amusement arcades – with the exception of a few “black sheep” – meet all requirements for comprehensive protection of minors and gamers.<sup>6</sup> Information on commercial gaming, as required by the “Directive for the Prevention and Fighting of Addiction to Gambling” annexed to the GlüStV 2012, is clearly displayed. This allows gamers to assess their risks and the problems that can be caused from gaming. Information on maximum winnings, the probabilities of winnings and losses are provided as well as information on phone consultations offered by the BZgA. Under a voluntary self-obligation already dating from 15 November 1989, non-removable warnings and pictograms concerning the protection of minors and gamers are put on all AWP's display screens.

A development that could harm the reputation of the amusement machine industry is closely connected to the standstill in the allocation of sports betting licences. With the exception of Oddset and licences based on the gambling law of Schleswig-Holstein (*Glücksspielgesetz Schleswig-Holstein*, GlSpielG SH), sports betting is operating in a legal grey area. For several years sports-betting shops have been mushrooming that

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<sup>5</sup> J. Trümper; *Umsetzung der novellierten Spielverordnung – Feldstudie 2010*, Berlin, p. 91.

<sup>6</sup> A representative investigation of amusement arcades revealed that there were no complaints of non-compliance about establishments with more than four licences. However, just these amusement arcades approved by multi-concessions are forbidden as laid down in § 25 para. 2 GlüStV. The ban will come into effect on 31 July 2017. See: J. Trümper (2011) p. 33.

frequently offer AWP alongside betting. Usually these establishments are small and poorly equipped. The predominant clients are immigrant men. In catering establishments that have an “eligibility statement” (*Geeignetheitsbestätigung*) for the operation of AWPs (§ 33c para. 3 GewO), up to three AWPs may be erected (§ 3 para. 1 SpielV)<sup>7</sup>. A remarkably high proportion of sports-betting shops run illegal fun games that have been prohibited since 2006, and quite often – if legally approved AWPs are installed – more than three are operated.<sup>8</sup> The legal state of the brokering of sports bets has not yet been clarified. This hampers law enforcement and causes the supervisory authorities to refrain from actions against infringements of the law for fear of compensation claims. Frequently the media indiscriminately blame the illegal behaviour on the amusement machine industry.<sup>9</sup>

Even during the mid-1990s, the associations of the amusement machine industry discussed the development of codes of conduct and standards for amusement arcades, and the development of a DIN standard was considered. Along with the growing problem of illegal terrestrial gambling and the debate on the GlüStV 2012 and the state-specific gaming regulations, the issue of certification has come back to the forefront starting in late summer 2012. This certification, directed towards the protection of

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<sup>7</sup> Pursuant to Article 5 in conjunction with article 7 para. 5 of the 6<sup>th</sup> Amendment of the Gaming Ordinance the number of AWPs has to be reduced from 3 to 2 AWPs as of 10 November 2019.

<sup>8</sup> J. Trümper; Feldstudie 2012/13, Schwerpunkte: Gäste und Spielerstruktur – Spiel- und Einsatzverhalten von GSG-Spielern in „Kleinspielhallen“ – Endbericht – Exkurs „Terrestrische Sportwettannahmestellen“, Unna, June 2013, p. 105.

<sup>9</sup> A selection of reports in the media:  
 Christoph Stollowsky; Razzia in Café-Casinos – Polizei beschlagnahmt Spielautomaten, Der Tagesspiegel, 30.06.2015, 12:56 Uhr  
<http://www.tagesspiegel.de/berlin/polizei-justiz/razzia-in-cafe-casinos-polizei-beschlagnahmt-spielautomaten/11989354.html> (21/01/16).  
 Frank Schneider; Bundesweit 125 Objekte durchsucht – Razzia gegen Betrug mit Spielautomaten, Bild, 28.1.2015, 12:06 Uhr  
<http://www.bild.de/regional/ruhrgebiet/gluecksspiel/razzia-spielautomaten-39531924.bild.html> (21/01/16).

minors and gamers, should allow for a proper recognition of orderly managed amusement arcades and the identification of “black sheep”.<sup>10</sup>

Agreements have been reached with two independent German certification bodies to set standards beyond the legal requirements for the protection of clients and gamers. Workshops in the German States have successfully promoted participation in the certification. As of 16 February 2016, around 1,000 amusement arcades have been certified. The certificates provide information to facilitate the tasks of regulatory agencies and approval authorities: The quality of corporate governance and regulatory compliance can be proved simply and transparently. With regard to the expiration of the transition period on 1 July 2017 in accordance with § 29 para. 4, sentence 2 GlüStV 2012, the certification of amusement arcades has been accelerated to provide information to public authorities for pending decisions on the further existence of the establishments.

## **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 businesses but also those of other manufacturers, distributors and importers.

For many years, the number of installed music, sport-games and 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 AWP's from 245,000 (1995) to 183,000 (2005), a loss of around a quarter.

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<sup>10</sup> In many cases the operators of establishments which offer legal AWP's or illegal gambling machines are immigrants or people with an immigration background. In this respect, the associations of the industry have launched an information campaign to support interested operators on their way to become compliant suppliers in the gaming market.

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 5<sup>th</sup> Amendment of the Gaming Ordinance to take effect on 1 January 2006.

The 5<sup>th</sup> Amendment fulfilled the expectations. In fact, the decline of the number of installed AWP's had bottomed out in 2005. In the years 2006 to 2010, the number of installed AWP's grew rapidly. In the following four years, growth decelerated and was nearly stagnant. In 2015, for the first time, the number of installed AWP's declined by 2,000 to 267,000 AWP's at year's end. This shift in development was not caused by saturation of demand but by massive interventions of the German States in their quest to roll back commercial gaming. It was alleged that there was a flood of amusement arcades that had to be stopped.

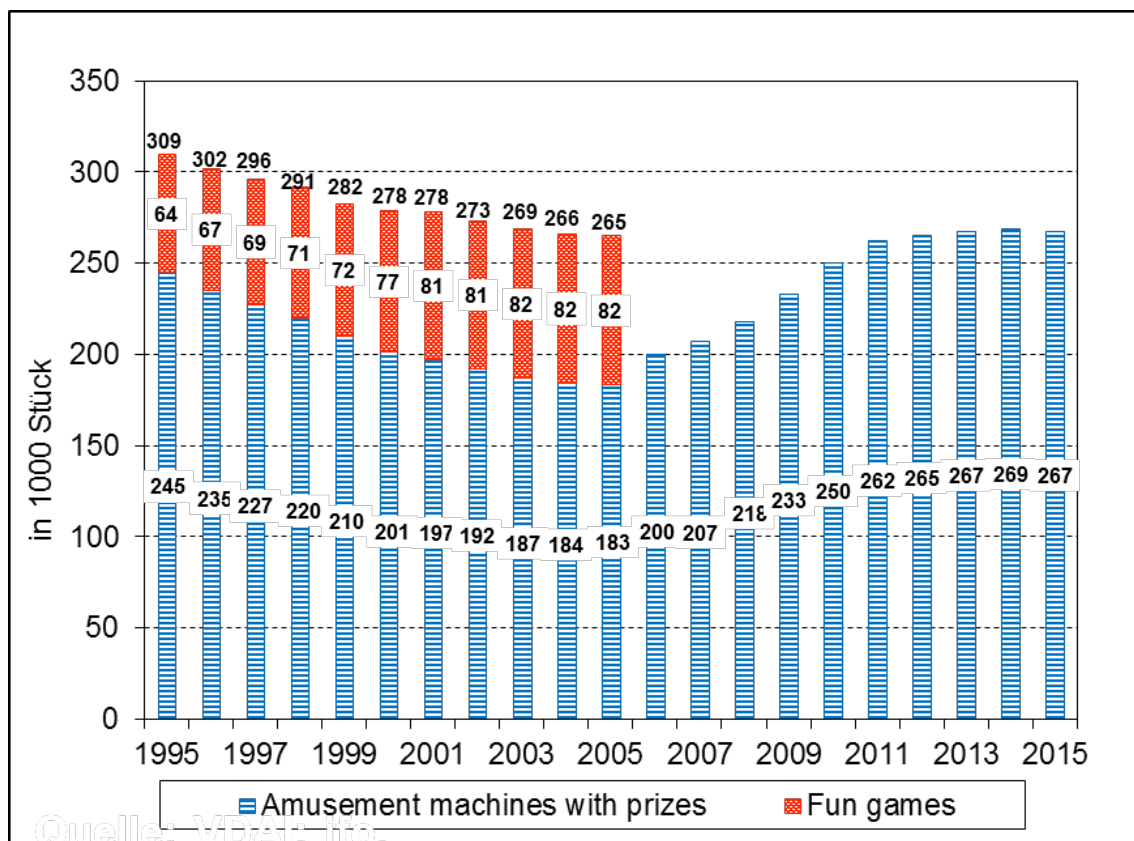
However, this image, which is frequently used by critics of commercial gaming, is based on a distorted view of reality. For a realistic assessment of the development, another product group must be taken into consideration that – as of 1 January 2006 – has been banned from the market. These so-called fun games<sup>11</sup> until then had an appreciable share of the amusement machine industry's business. Fun games offered a much more interesting game than the usual AWP's. For an unbiased assessment of the industry's evolution over time, fun games have to be considered together with AWP's. 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 AWP's as compensation for turnover losses

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<sup>11</sup> Fun games are amusement machines issuing tokens. Frequently tokens were exchanged illegally for cash.

from the dismantled fun games. As of 31 December 2015, the number of installed AWP's amounted to 267,000 units. This figure equals roughly the aggregated stock of fun games and AWP's in 2005, the low point of the amusement machine industry's long-term evolution from 1995 to 2015 (Figure 1).

**Figure 1: Installed AWP's and Fun Games 1995 to 2015**



Source: VDAI; Ifo Institute.

In May 2000, at the same conference the Ministers for Economic Affairs of the German States agreed to create framework conditions that allowed commercial gaming to respond to the competition from public/publicly-licensed gambling and the growing supply of gambling and gaming through the Internet. Since about 2010, the States have revised their position and are pursuing the opposite goal: to marginalize commercial gaming. Systematically they have worsened the framework conditions, first and foremost with the GlüStV 2012 and the state-specific gaming regulations. The rule on minimum distances between amusement arcades (§ 25 para. 1 GlüStV 2012) and the

prohibition of multiple concessions (§ 25 para. 2 GlüStV 2012) have created a bleak medium-term outlook for the amusement industry. When the transition period ends on 1 July 2017 (§ 29 para. 4, sentence 2 GlüStV 2012), these two provisions will come into effect for all existing amusement arcades. At least half of the existing amusement arcades will be shut down, which is why this legal paragraph has been called the “guillotine provision”.

The legal environment has been further aggravated by an initiative of the BMWi that – with the 6<sup>th</sup> Amendment of the German Gaming Ordinance of 23 May 2013 – likewise intended to introduce stricter rules for commercial gaming. However, from the States’ perspective the draft was not sufficiently restrictive and on 5 July 2013 the Federal Assembly (*Bundesrat*) agreed on a legal resolution (*Maßgabebeschluss*) which became subject to the Assembly’s approval to the amendment of the Gaming Ordinance.<sup>12</sup>

In addition to the numerous provisions that have contributed to burdensome framework conditions, the most serious problem is that of legal uncertainty – whether and how the gaming provisions that take effect on 1 July 2017 will be implemented and will affect all existing amusement arcades. Key points are still unclear such as the constitutional rights of operators or operational requirements for the selection of amusement arcades to be shut down.

The stock of all other groups of music, sport-games and amusement machines with and without prizes has continued to decline in line with the long-term negative trend right through the end of the period under review for all product groups. Up to the year 2010, operators invested heavily in the procurement of AWP, which left little room for investments in other entertainment opportunities and leisure activities. In more recent years, they have been confronted with worsened framework conditions and a shortened planning horizon. Procurement of equipment has been carried out with a close look at

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<sup>12</sup> The provisions dedicated for the legal tightening taken over in the 6<sup>th</sup> Amendment of the Gaming Ordinance by the States’ initiative are discussed in: H.-G. Vieweg; *Wirtschaftsentwicklung Unterhaltungsautomaten 2014 und Ausblick 2015*, Munich, February 2015, p. 47.

payback periods. In this context, the increased attractiveness of AWP among customers has played an important role. The stock of all coin-operated amusement machines has become even more focused on AWP. (Table 1)

**Table 1: Installed amusement machines and sport-games machines**

Type of machine	Number of machines <sup>a), b)</sup>			
	2012	2013	2014	2015
<b>Amusement machines without prizes</b>	<b>35,600</b>	<b>32,250</b>	<b>27,000</b>	<b>23,800</b>
- Pinball machines	2,100	2,050	2,000	2,000
- Internet terminals etc.	21,000	18,000	13,000	10,000
- Score games etc. <sup>c)</sup>	2,500	2,400	2,300	2,200
- Video games	10,000	9,800	9,700	9,600
<b>with prizes</b>	<b>265,000</b>	<b>267,000</b>	<b>269,000</b>	<b>267,000</b>
<b>Sport-games machines <sup>d)</sup></b>	<b>18,500</b>	<b>18,500</b>	<b>18,400</b>	<b>18,400</b>
<b>Total</b>	<b>319,100</b>	<b>317,750</b>	<b>314,400</b>	<b>309,200</b>
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.

In gastronomy in the narrower sense – the traditional locations for AWP in restaurants, pubs, bars etc. – the negative trend of the past has come to an end. Demand for replacements has been stimulated by innovative AWP designed for use in this sector. In the meantime, all of the traditional electro-mechanical AWP have been replaced by video-based multigamers. Since 1 January 2006, when the 5th Amendment of the Gaming Ordinance came into force, three instead of two machines have become



permissible per location in the catering industry. However, this opportunity was of lesser importance for investments in AWP.<sup>13</sup>

The ban on operating AWP in the permission-free gastronomy – as defined in the German Restaurant Code (§ 2 para. 2 GastG, *Gaststättengesetz*) – came into force with the 6<sup>th</sup> Amendment of the Gaming Ordinance (§ 1 para. 2, no. 4 SpielV) on 10 November 2014. The divestment of the AWP concerned was to a large extent compensated by investment in a narrow but promising market segment: highly frequented places and traffic hubs, such as airports, train stations, motorway service stations etc. Overall, the stagnation in the catering sector has ended, and in 2016 the number of installed AWP will increase slightly.

In the market segment of amusement arcades, a slight decline in the number of installed AWP occurred in 2015. The reduction was caused by structural change characterized by the closure of primarily smaller premises. One important driver was a worsening of the economic situation, which was primarily caused by policies of the German States to increase pressure on commercial gaming through an ever growing number of provisions. This has been burdensome in particular for small, family-owned enterprises, whereas the large players in the market can shoulder the requirements more easily.<sup>14</sup>

The larger amusement arcades based on several concessions which were set up in recent years have been run successfully in this difficult regulatory environment. Frequently, they are located together with other offers for leisure time activities in large modern

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<sup>13</sup> See: Footnote 7

<sup>14</sup> Updates of field studies for the evaluation of the 5<sup>th</sup> Amendment of the Gaming Ordinance in 2009 and 2010 revealed the structural change marked by the closure of smaller establishments. The review of 2,000 and 2,450 amusement arcades, respectively, showed that in each of the two years 82 establishments – still operated the year before – were shut down because of suspension of business, renovation or relocation. Only in three cases were amusement arcades with three and more concession concerned. See: J. Trümper; *Umsetzung der novellierten Spielverordnung – Feldstudie 2009 (2010)*, Berlin, September 2009 (August 2010), p. 70 (70).

premises and have contributed much to an improved image of the industry.<sup>15</sup> This positive perception has been confirmed in a field study on the evaluation of the Gaming Ordinance.<sup>16</sup> Nevertheless, the existence of this kind of establishment will come to an end with the ban of multiple concessions, when the transition period expires on 1 July 2017. The States remain unswayed by a fundamental decision of the Federal Administrative Court (*Bundesverwaltungsgericht*, BVerwG) of 1984 that confirmed the admissibility of multiple concessions.<sup>17</sup>

Currently the industry segment of amusement arcades has proved to be largely stable. Only a small number of AWP was dismantled as a result of the structural change. But in mid-2017, more than half of the AWP will have to be dismantled.

### **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 AWP, 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 AWP 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 designing the exterior appearances as well as the interiors of amusement arcades etc. It

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<sup>15</sup> Generally speaking, the broader public takes a liberal stance towards gambling. Gambling and thus commercial gaming are not regarded as an area for governmental prohibitions intended to protect people from themselves. This is the assessment of more than three quarters of the interviewees of a representative survey. See: John Stuart Mill Institut für Freiheitsforschung e.V. (ed.); *Wie halten es die Deutschen mit der Freiheit? Freiheitsindex Deutschland 2014*, p. 12  
<http://www.hochschule-heidelberg.de/de/fakultaet-fuer-wirtschaft/john-stuart-mill-institut-fuer-freiheitsforschung/> (9 January 2015).

<sup>16</sup> These bigger amusement arcades are well equipped. They offer the latest amusement machines in a tastefully styled ambience and employ well-qualified staff. Women are especially attracted to these arcades. See: J. Trümper; *Feldstudie (2010) I.c.*, p. 41, pp. 45.

<sup>17</sup> BVerwG; Judgement of 9 October 1984, *GewArch* 1985/2, pp. 62. See: H.-G. Vieweg; *Wirtschaftsentwicklung Unterhaltungsautomaten 2008 und Ausblick 2009*, Munich, 2009, pp. 27.

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 an 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.

Data for the industrial production of the amusement machine industry are collected by the Federal Statistical Bureau (*Statistisches Bundesamt*) and published in the production statistics 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 share is small and it is 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 2)

The upstream turnover and the manufacturing costs were estimated for the years 2012 to 2015. Because of the newly defined time series, both of them are not compatible with the time series reported in preceding studies. Over the period under consideration, the turnover of the upstream sector does not reveal any trend; in 2013 and 2014 they are around 5% below 2012 and 2015. The development can neither be explained by changes

in the stock of installed music, sport-games and amusement machines with and without prizes nor by changes in the regulatory framework for the amusement machine industry. All in all for the whole period under consideration – with regard to a more or less stagnating stock of installed machines – stable upstream turnover is plausible.

**Table 2 Turnover of the Amusement Machine Industry**

Sectoral level	In Mill. €			
	2012	2013	2014	2015
<b>Total</b>	<b>6,200</b>	<b>6,330</b>	<b>6,530</b>	<b>6,715</b>
<b>Upstream-turnover, total <sup>a)</sup></b>	<b>850</b>	<b>790</b>	<b>800</b>	<b>850</b>
Manufacturing costs <sup>b)</sup>	355	470	460	570
<b>Operators <sup>c)</sup></b>	<b>5,350</b>	<b>5,540</b>	<b>5,730</b>	<b>5,865</b>
Amusement machines				
- with prizes <sup>d)</sup>	5,250	5,450	5,650	5,800
- without prizes and sport-games machines	58	55	55	50
Internet terminals	42	35	25	15

a) Turnover of manufacturers, wholesale trade and other industry specific service providers with operators (Selling, renting and leasing of AWP's, 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 VAT, entertainment tax, etc.

d) 2012, 2013 based on the VAT registration applications as published by the Federal Statistical Bureau; 2014 und 2015 estimation based on a survey of major players.

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

However, 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 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. The equipment is replaced more frequently by new and more appealing AWP cabinets. This strategy directed towards quality and the opening-up of new customer segments has turned out to be successful, as confirmed by growing operator turnover without an increase of capacities.

Another modification of the statistical data basis was made in sales of AWPs. The Federal Statistical Bureau compiles the "advance VAT returns" for the category "Amusement arcades and the operation of amusement machines with and without prizes" (*Spielhallen und Betrieb von Spielautomaten*). The statements of the respondents on their net turnover are published. The operators' turnover as it is presented here includes 19% VAT. The publicly available time series requires a revision of the figures as they were presented from 2010 onwards. In contrast to the above revisions, this new time series is backwards compatible for 2009 and earlier years.

The amusement machine industry has utilized the improvement of the framework conditions provided with the 5<sup>th</sup> Amendment of the Gaming Ordinance that took effect on 1 January 2006 to reposition itself in the gambling and gaming market. Firstly, the technological innovation of AWPs enabled the industry to offer a broad range of diverse games by simultaneously complying with all strict provisions of the SpielV for commercial gaming. Secondly, entrepreneurs targeted investment in advanced, high quality amusement arcades with an appealing ambience. These establishments are on equal footing with a broad leisure time offer from cafés, cinemas, discotheques or theatres, whether in urban entertainment quarters or in large entertainment centres. These amusement arcades based upon multiple concessions have attracted new

customer groups, which manifests itself in the growing share of women among the attendees of amusement arcades. In 2006 commercial gaming was a purely male domain, but now nearly one quarter of gaming clients are female.

The operators have benefited from favourable macroeconomic conditions on the demand side. Between 2012 and 2015, employment increased by 1.5 million and net wages and salaries grew at a rate of 3.5% p.a. with only a slight increase in consumer prices. The households attracted by commercial gaming have experienced a noticeable increase in purchasing power, and the good labour market situation supports consumer spending.

From 2012 to 2015, the operators increased their sales at an annual rate of 4.8%. This development was driven by the bright economic environment and the increased propensity to consume. It is of note that this expansion took place although the number of AWP's in the market was more or less stable. The sovereign consumers with interest in products of the gambling and gaming market made a decision in favour of commercial gaming.

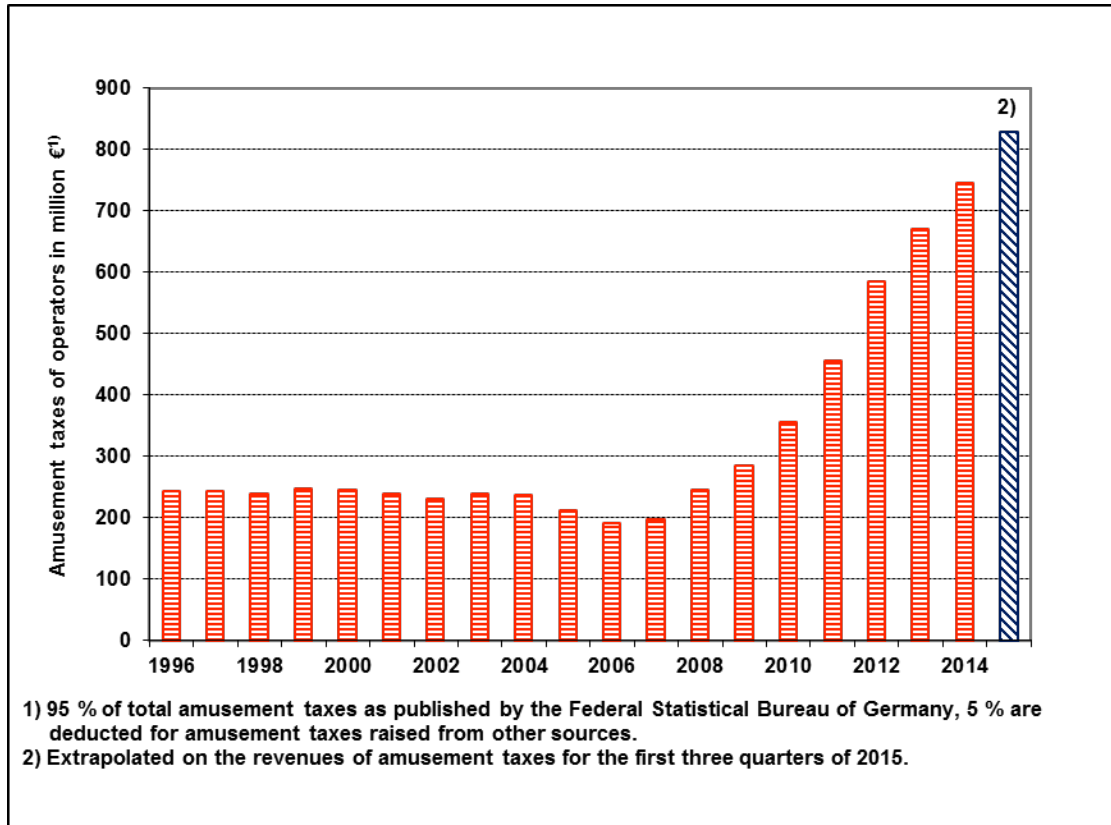
Despite the strong sales growth, the economic situation for the numerous small and medium-sized operator businesses remains difficult. They have great problems bearing the necessary administrative burdens to comply with all the provisions that came into force in recent years.<sup>18</sup> Contribution margins from gross-operating revenues have been reduced by massive tax increases. Between 2006 and 2015, the revenues of the municipalities from amusement taxes more than quadrupled. Initial estimates of the 2015 amusement tax revenues amount to € 830 million. (Figure 2) This amount

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<sup>18</sup> For a comprehensive discussion of the burden caused by provisions introduced in recent years see: H.-G. Vieweg (2015) l.c., pp. 22.

represents a share of 14% of the operators' total turnover. In 2006 the share was only 7%.<sup>19</sup>

**Figure 2: Amusement tax burden for operators**



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

Although the demand side environment has been bright, the positive development of the operators' turnover in recent years has been puzzling, because the legal framework conditions have been worsened by massive interventions of the German States. First of all the GlüStV 2012 should be mentioned, 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 expansion of the closing times to a minimum of three

<sup>19</sup> The average annual amusement tax rate for AWP's in 2015 was close to 15%, a percentage which requires a careful case-by-case assessment if this rate constitutes an infringement of the ban of economic strangulation, which would be an unlawful encroachment on the professional freedom of operators in accordance to Article 12 GG. (Higher Administrative Court (*Oberverwaltungsgericht*, OVG) Lüneburg; Judgement of 8 November 2010, Az. 9 LA 199/09).

hours in accordance with § 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 AWP's per concession in amusement arcades from twelve to eight in Berlin as of 2 June 2013 (§ 8 para. 3 SpielhG Bln) and Hamburg for amusement arcades with multiple concessions as of 19 December 2014 (§ 9 para. 2 HmbSpielhG, *Hamburgisches Spielhallengesetz*).<sup>20</sup>

The States enacted a strict ban on advertising for commercial gaming. According to § 26 para. 1 GlüStV 2012, the outer appearance of an amusement arcade must not advertise the games offered and the design of the venue must not provide any incentive for gaming. In contrast, the hitherto strict ban on advertising for public and publicly licensed gambling has been relaxed. Advertising, in accordance with the objectives of the GlüStV, is allowed again (§ 5 para. 1 GlüStV 2012).

Further provisions were put into effect to reduce the attractiveness of gaming with low stakes that caused massive slumps in sales, as for instance the smoking ban for arcades in North-Rhine Westphalia, which took effect on 1 May 2013 or the ban on paid-for or free beverages and food in Berlin (§ 6 Abs. 1 SpielhG Bln). Eight of the sixteen German States have introduced access controls for amusement arcades that during the initial phase already posed some difficulties because attendees did not carry identity documents. The introduction of access controls and a barrier system overarching all amusement arcades in Hessen (§§ 6, 11 HessSpielhG, *Hessisches Spielhallengesetz*) led to high, double-digit sales declines.

The high consumption propensity of private households suggests that the operators' turnover could increase in 2016 at rates between 2.5% and 3% – a similar order of

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<sup>20</sup> In summary judicial proceedings the Higher Administrative Court (OVG) of Hamburg ordered (inter alia decision of 19 May 2015, Az. 4 Bs 24/15) that a reduction of the number of AWP's from twelve to eight is not obligatory until a decision in the main proceedings is reached. According to the court's assessment the different transition periods for the obligation to reduce the number of AWP's in amusement arcades with only one concession and arcades based on multi-concessions (§ 9 para. 2 HmbSpielhG) contradicts the principle of equality among operators.



magnitude as in the preceding years. The outlook for 2017 is marked by a slightly lower growth in GDP vis-à-vis the previous year. Private consumption will remain an important driver for domestic demand. It could be assumed that the operators' turnover will expand at a similar pace as in 2016. However, on 1 July 2017 the most serious encroachments on the basic rights of AWP operators (§§ 24, 25 GlüStV 2012) will take effect in accordance with § 29 para. 4, sentence 2 GlüStV 2012 and the state-specific gaming regulations. The minimum distance rule (§ 25 para. 1 GlüStV 2012) – with its concrete provisions as laid down in the state-specific gaming regulations – and the ban of multiple concessions (§ 25 para. 2 GlüStV 2012) will come into effect not only for new but for all existing amusement arcades. The amusement machine industry will shrink to less than half of the currently installed capacities.<sup>21</sup> The number of employees will fall from around 70,000 to between 30,000 and 35,000. A dramatic slump in turnover is to be expected.

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<sup>21</sup> H.-G. Vieweg; *Wirtschaftsentwicklung Unterhaltungsautomaten 2012 und Ausblick 2013*, March 2013, pp. 56.