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**Economic Development of the
German Coin-Operated Gaming and
Amusement Machine Industry
2014 and Outlook for 2015**

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

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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 5th Amendment of the German Gaming Ordinance (SpielV) took effect, these fun game machines have been prohibited. In the meantime 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 so-called multigamers (see footnote 2) 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 is devoted to attracting new client groups that have not yet been exposed to amusement arcade games.
- 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 of the German Trade, Commerce and Industry Regulation Act [GewO]). The Federal Criminal Investigation Agency

(*Bundeskriminalamt*) uses the licensing process for these machines in such a restrictive manner that this product group is almost irrelevant.

The National Metrology Institute (PTB), a subordinate agency to the Federal Ministry of Economics (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.

Current PTB's statistics on the issue of official permits no longer reflect the sale or lease of hardware but the manufacturers' call-ups of permits for software packages for which type approval procedures were carried out by the PTB¹. These permits indicate the sale and rental of software packages for AWP. To offer clients a variety of innovative games, these software packages are frequently exchanged, while the devices themselves have a much longer service life. The permits no longer indicate changes in the number of installed AWP.

The wide scope of design options provided by the 5th Amendment of the Gaming Ordinance allowed for a technological revolution which has led to the replacement of the traditional wall-mounted, mechanical and electro-mechanical AWP by completely

¹ 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 boxes.

electronically controlled, video-based AWP which offer a broad range of quite different games.²

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 reflected in the call-ups of permits. In this respect the growing initiatives of the Länder – starting at around 2010 – to thwart the objectives pursued by the 5th Amendment of the German Gaming Ordinance, 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 Länder are seeking to roll back commercial gaming. Their initiatives concern above all the Interstate Treaty on Gambling (GlüStV) which was signed by them on 15 December 2011 and took effect on 1 July 2012 in all Länder – with the exception of Schleswig-Holstein³ – in conjunction with the state-specific gaming regulations. Moreover the Council of Constituent States' (Bundesrat) legal requirements (Maßgabebeschlüsse) of 5 July 2013 to the draft of the 6th Amendment of the Gaming Ordinance submitted by the BMWi have been tightening legislation much beyond the stricter regulations introduced by the BMWi.

The consent of the Länder is required for the Gaming Ordinance, and numerous legal provisions had to be added before the 6th Amendment of the Gaming Ordinance could be put into effect.

² AWP 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 AWP.

³ Schleswig-Holstein acceded to the GlüStV on 25 January 2013.

Between early 2011 until mid-2013, the number of official permits issued by the PTB per quarter ranged from 30,000 to 50,000. However, in the quarter thereafter their number shot up to 226,683 permits. In anticipation of the menacing intervention in their business activity, manufacturers called-up permits on a large scale.

However, the Federal Minister of Economics withheld his approval of the 6th 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). In addition, it would constitute a serious infringement of the right to an established and operating business (Art. 12 para 1 GG) and would violate the manufacturers' protected right of ownership (Art. 14 para 1 GG)⁴. 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 took effect on 13 December 2014, in which the infringements of the basic rights of operators were alleviated: For AWP, already on the market, a transition period in accordance with the fiscal amortisation period of four years was introduced.

However, legislators failed to solve the problem created by the German Council of Constituent States on 15 July 2013 with legal requirements that did not take into account the time span required for the PTB to design appropriate test criteria and the subsequent development of games for AWP in conformance with the 6th Amendment of the Gaming Ordinance. On the day that the 6th Amendment took effect, type approvals based on the old Gaming Ordinance immediately became inadmissible. Games – already developed and prepared for type approval – became worthless and the research and development expenses immediately turned into economic losses. Subsequently the lack of marketable, innovative games caused a stoppage of production. Substantial losses in the double-digit million euros range are expected.

⁴ HengelerMueller (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.

The multigamers with their great variety of opportunities for gaming together with emerging new business models by operators, which have been manifested in attractively designed amusement arcades, have contributed much to the opening-up of new customer groups since the 5th Amendment of the Gaming Ordinance was put into effect on 1 January 2006. This positive development has led to a steady increase of the percentage of female guests, who not only attend amusement arcades but have become active gamers. The share of women amongst all AWP users – a former domain of male clients – rose from 8.94% in 2007 to 16.99% in 2009 and up to 21.23% in 2010. In recent years the share has stabilized at around 21%; in larger amusement arcades the average share stands at 26%⁵.

The ambience of an amusement arcade is very important for female clients. They are attracted to the modern and neat premises that have been increasingly erected in recent years. These amusement arcades have become integral parts of leisure-time establishments that also contain cinemas, cafes etc. These predominantly large amusement arcades employ well-trained staff and offer cost-free services. Nearly all of them comply with provisions that must be met with regard to the risks from excessive and pathologic gaming, such as laying out informative material. A representative investigation of amusement arcades revealed that there were no complaints of non-compliance for establishments with more than four licences⁶. Precisely these amusement arcades are the focus of the initiatives taken by Federal States to push back commercial gaming. One of the key instruments to achieve this goal - the ban of amusement arcades approved by multi-concessions - was laid down in § 25 para 2 GlüStV, which took effect on 1 July 2012. In addition, many of the Länder's execution laws reduce the recreation and entertainment value of amusement arcades through additional bans, such as the charged or free-of-charge handing out of beverages and dishes.

⁵ Jürgen Trümper, Feldstudie 2011 – Schwerpunkt Spiel- und Einsatzverhalten von Spielern an Geldspielgeräten, Unna, December 2011, p. 20.

⁶ Idem., p. 33.

Sports betting shops have been mushrooming for quite some time. Their ambience and the structure of their guests contrast strongly to amusement arcades. These establishments are predominantly small, cheaply furnished shops. They are visited by a vast majority of male guests from ethnic minorities.⁷ Beyond betting products, these shops run gaming machines, most of them AWP. As long as not more than three AWP are run and the sports betting shops are official hospitality businesses with Suitability Certificates (Geeignetheitsbescheinigungen) in accordance with § 33c para 3 GewO for the installation of AWP, what they offer is legal⁸. An empirical investigation revealed that the share of illegal fun games according to § 6a SpielV was remarkably high. These prohibited fun games – frequently used for illegal gambling – were found in 16.6% of all sports betting shops⁹.

1.2. Number of installed machines in Germany

The associations of the German amusement machine industry maintain records of 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 recorded are not only those supplied by member businesses but also those of other manufacturers, distributors and importers.

For many years, as a result of unfavourable and burdensome framework conditions for commercial gaming, there has been a reduction in the number of the installed music, sport-games and amusement machines with and without prizes. The industry competes with a wide variety of gambling forms offered by public or private companies with public concessions. Moreover, since the beginning of the last decade, online gambling has made much progress and gained noteworthy market shares, although it has always

⁷ Jürgen Trümper, Feldstudie 2012/13 Schwerpunkte: Gäste und Spielerstruktur – Spiel- und Einsatzverhalten von GSG-Spielern in „Kleinspielhallen“ – Endbericht – Exkurs „Terrestrische Sportwettannahmestellen“, Unna, June 2013.

⁸ Since the entry into force of the Interstate Treaty on Gambling on 1 July 2013 public gambling on the Internet has been prohibited. According to §§ 2 para 4, 4 para 4 GlüStV the supply and brokerage of gambling on the Internet is prohibited in the German gastronomy. Albeit widespread, public sports betting, almost exclusively an Internet gambling market segment, is prohibited.

⁹ Idem, p. 105.

been banned in Germany. Commercial gaming had steadily lost market shares over a long period of time. The operators of amusement machines were not able to meet this challenge due to the strict regulation that did not allow for the installation of attractive AWP. The number of installed AWP steadily declined from 245,000 in 1995 down to 183,000 in 2005.

The emerging difficulties for the amusement machine industry prompted the Federal Ministry of Economics (BMWi), at the end of 1999, to submit a report on possibilities for a reorganisation of commercial gaming. On this basis, the Conference of Economic Ministers on 18/19 May 2000 recognized the necessity that the framework conditions for the German amusement machine industry has to be improved to enable operators to respond to competition from public/publicly-licensed gambling and the growing gambling and gaming supply in the Internet. However it took another six years – during which the industry lost further shares of the gambling and gaming market – until the 5th Amendment of the Gaming Ordinance took effect on 1 January 2006.¹⁰

The 5th Amendment fulfilled the expectations. In fact, the decline of the number of installed AWP had bottomed out in 2005. In the years 2006 to 2010, the number of installed AWP grew rapidly. In the following years, growth decelerated, to a certain extent caused by market saturation. Some indication for this tendency is provided by investigations carried out by Jürgen Trümper, which contain figures on the number of amusement arcade guests¹¹. In 2011 the number of installed AWP in Germany had increased by 4.8%, the years thereafter they fell to an annual average of around 1%. During these years the increase of capacities in amusement arcades was below average,

¹⁰ Hans-Günther Vieweg, *Wirtschaftsentwicklung Unterhaltungsautomaten 2000 und Ausblick 2001*, Munich, 2001, p. 17.

¹¹ In recent years, the expansion of capacities for commercial gaming in amusement arcades have increased stronger than demand. This perception of operators is confirmed by an investigation of Jürgen Trümper. A field study executed in November 2011 showed that on average there were 3.56 guests, respectively 3.04 gamers, per amusement arcade concession. The respective figures of a preceding investigation on June 2010 are 4.07 and 3.26. See: Jürgen Trümper, *Feldstudie 2010 – Umsetzung der novellierten Spielverordnung*, Unna, August 2010, p. 36 and Jürgen Trümper, *Feldstudie 2011, l.c.*, p. 38.

whereas the change for the better in the gastronomy sector – taking place since 2008 – has continued.

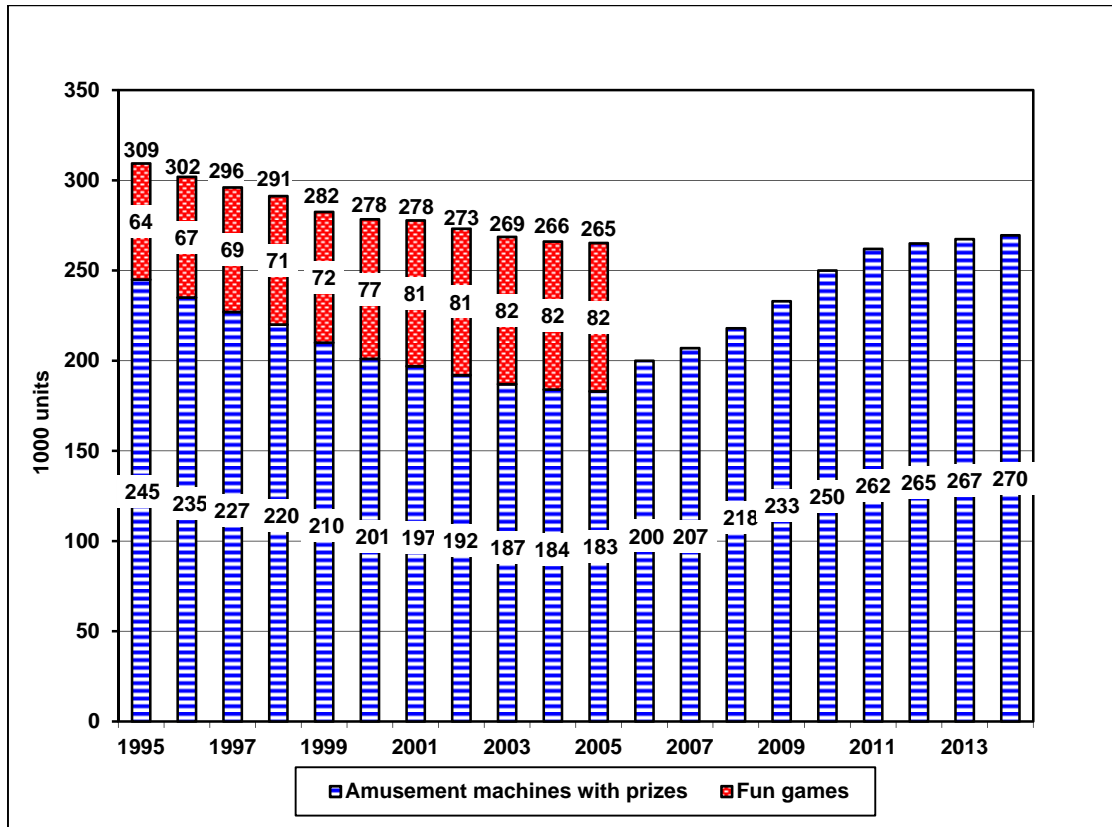
For an unbiased assessment of the comparison, it must be taken into account that from the 1990s up to 2006 a large number of fun games¹² were installed (ca. 82,000 fun games as of 31 December 1995). As of 1 January 2006, these fun games were banned and had to be completely dismantled at short notice. The operators complied with this obligation and focused their investment activities on AWP as compensation of turnover losses from the dismantled fun games. A total of 265,000 installed AWP were reached as of 31 December 2012. This figure equals the number of AWP and fun games together in 2006 that mark the trough of the amusement machine industry's long-term development (Figure 1).

Since 2010 the Länder have sought to reverse the objectives pursued with the 5th Amendment of the Gaming Ordinance and to push back the amusement machine industry, although they had agreed – at the Conference of Ministers of Economics of 18/19 May 2000 – with the objective to create framework conditions allowing commercial gaming to respond to the competition from public/publicly-licensed gambling and the growing supply of gambling and gaming through the Internet.

The Länder's initiatives to repel commercial gaming by the GlüStV, their execution laws and state-specific gaming regulations respectively include for most of the provisions a transition period until 1 July 2017. Presently, Internet terminals are already seriously affected. The execution laws to the GlüStV of Baden-Württemberg, Bremen, Hesse, Mecklenburg-West Pomerania, North Rhine-Westphalia, Rhineland-Palatine, Schleswig-Holstein and Thuringia ban the installation of all kinds of equipment in amusement arcades that offer the possibility for illegal gambling. The installation of Internet terminals is explicitly prohibited in Saarland, regardless of whether they allow access to gambling Websites or not.

¹² Fun games are amusement machines issuing tokens. Frequently tokens were exchanged illegally for cash.

Figure 1: Installed AWP and Fun Games 1995 to 2014



Source: VDAI; Ifo Institute.

The manufacturers of Internet terminals offer filters which not only fulfil the requirements for the protection of minors and prevent access to Websites with pornographic and violent content but also block the access to gambling and gaming services. Frequently, Internet terminals equipped with filters to block gambling Websites are not accepted by supervisory authorities, even in Länder where Internet terminals with no access to gambling are legally admissible. The unclear situation with regard to the acceptance of Internet terminals prompts operators of amusement arcades to take a cautious stance towards investment in Internet terminals. In case supervisory authorities do not allow the continuation of the operation of long-term installed Internet terminals without access to gambling Websites, amusement arcade operators are inclined to meet the supervisory authorities' wishes to prevent problems in a growingly more difficult environment, even if Internet terminals could be operated legally.

The stock of amusement machines without prizes and sport-games machines 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. While up to 2010 operators heavily invested in the procurement of AWP's leaving little available financing for the investment in other entertainment and leisure offers, in recent years they have been confronted with worsening framework conditions, which has led to strain on profitability¹³. The tighter cash-flow has induced operators to use their scarce means for investments in AWP's, which most guests prefer. These AWP's are – due to their attractiveness – most suited to prevent businesses from slipping into the red. (Table 1)

In gastronomy in the narrower sense – the traditional locations for AWP's in restaurants, pubs, bars etc. – the negative trend of the past has come to an end. Demand has been stimulated by innovative AWP's designed for use in this sector. In the meantime all of the traditional electro-mechanical AWP's have been replaced by video-based AWP's. Since 1 January 2006, three instead of two machines are permissible per location in gastronomy. However, this change in the German Gaming Ordinance has primarily supported demand for AWP's in a narrow market segment only: in traffic hubs, railway stations, motorway service stations, airports etc. In recent years all these factors have

¹³ A major cause for the worsened profitability has been the drastic increases of the amusement tax for AWP's in many municipalities, which frequently exceeds the threshold of 15% of gross gaming revenues. With an amusement tax rate of this amount or even higher, it must be carefully examined on an individual basis whether this is an infringement of the ban on economic strangulation which constitutes a violation of the constitutional protection of the occupation freedom (art. 12 para 1 of the German Constitution (GG)) of AWP operators. (OVG Lüneburg in a ruling of 8 November 2010, Az. 9 LA 199/09). Further provisions which already worsen AWP operators' profitability – in advance of the end of the transition period on 1 July 2017 when the most serious encroachments in basic rights of AWP operators will take effect, such as the ban of multiple concessions for amusement arcades and minimum distance rules between amusement arcades – are the extension of closing hours, which frequently go far beyond the obligatory three hours according to § 26 para 2 GlüStV in the Länder's execution laws, for instance eight hours in Berlin and the reduction of the maximum number of AWP's allowed for installation per amusement arcade concession from twelve down to eight AWP's in Berlin (§ 4 para 2 SpielhG Bln) and Hamburg (§ 4 para 3 HmbgSpielhG). Together with increases of amusement taxes, these provisions add up to a multiple uncontrolled burden for operators of AWP's. For an in-depth discussion of the economic effects of the Interstate Treaty on Gambling and the Länder's execution laws, see: Hans-Günther Vieweg, *Wirtschaftsentwicklung Unterhaltungsautomaten 2011 und Ausblick 2012*, Munich, January 2012, p. 35.

contributed to a turnaround in the gastronomy sector and led to slight but steady growth that will continue in 2015.

Table 1: Installed amusement machines and sport-games machines

Type of machine	Number of machines ^{a), b)}			
	2011	2012	2013	2014
Amusement machines without prizes	36,500	35,600	34,250	29,000
Pinball machines	2,200	2,100	2,050	2,000
Internet terminals etc.	21,500	21,000	20,000	15,000
Score games etc. ^{c)}	2,600	2,500	2,400	2,300
Video games	10,200	10,000	9,800	9,700
with prizes	262,000	265,000	267,000	269,000
Sport-games machines ^{d)}	20,000	18,500	18,500	18,500
Total	318,500	319,100	319,750	316,500
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 (estimated) and all those 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 the market segment of amusement arcades, a tendency towards larger premises based on multiple concessions can be observed. These new establishments have gained importance and – because of their visibility – are easily spotted by the public, whereas smaller, less visible establishments with only one or two concessions have been shut

down because they can no longer be operated economically¹⁴. The perception of a growing number of bright and more visible amusement arcades frequently located together with other offers for leisure time activities in large modern premises have contributed much to an improved image of the industry¹⁵. Nevertheless, the Länder remain unimpressed and are calling for a roll-back of commercial gaming. They are pursuing a ban of amusement arcades with several concessions in spite of their more positive image – which has been confirmed in a field study on the evaluation of the Gaming Ordinance¹⁶ – and a fundamental decision of the Federal Administrative Court (BVerwG) of 1984 that confirmed the admissibility of multi-concessions¹⁷.

Over the past two years, investment in new amusement arcades has come to an end. According to the latest investigation of Jürgen Trümper, the number of establishments peaked in 2012. From 1 January 2012 to 1 January 2014, the number of locations fell by 0.8%, from 8,937 to 8,868, while at the same time the number of concessions grew by 0.8%¹⁸. This contrasting development is explained by a structural change in the industry which, owing to the Länder's policies to encumber the operators with more and more

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

¹⁵ Generally speaking, the broader public takes a liberal stance. Gambling and thus commercial gaming is not regarded as an area for governmental bans, made necessary to protect people from themselves. This is an 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).

¹⁶ 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: Jürgen Trümper, *Feldstudie 2009 (2010)*, l.c., p. 41, pp. 45 (p. 41, pp. 45).

¹⁷ BVerwG Judgement of 9 October 1984, *GewArch* 1985/2, pp. 62. See: Hans-Günther Vieweg, *Wirtschaftsentwicklung Unterhaltungsautomaten 2008 und Ausblick 2009*, Munich, 2009, pp. 27.

¹⁸ Jürgen Trümper, Christiane Heimann, *Angebotsstruktur der Spielhallen und Geldspielgeräte in Deutschland – Stand 1. 1. 2014 – 12. aktualisierte Auflage*, September 2014, Unna 2014; p. 65.

provisions, has been accelerated. Above all, smaller businesses have encountered problems in financing the required measures.

The average size of amusement arcades has been growing over the past two years. This development is documented by the statistics collected by Jürgen Trümper: The total number of installed AWP's in Germany has increased by 3.2%. This stems in roughly equal proportions from more concessions per amusement arcade, on average, and a higher number of AWP's, on average, per concession¹⁹. The increase in the average number of AWP's per amusement arcade took place in spite of the fact that in Berlin and Hamburg the number of AWP's per concession was reduced from twelve to eight by their respective state-specific gaming regulations. The extended capacities per location contribute to the efforts of operators to comply with all the provisions issued by municipalities and the Länder without incurring losses. This concerns, on the one hand, the economic burden from increased amusement taxes and, on the other hand, restrictions on the usage of capacities installed through the expansion of closing hours, which in many Länder exceed the minimum three hours according to § 26 par 2 GlüStV and up to eight hours in Berlin.

1.3. Turnover of the amusement machine industry

The amusement machine industry is divided into three sectors: machine manufacturers, wholesalers and operators. In 2014, their non-consolidated turnover amounted to €5.63 billion, a slight increase of 0.8% over the previous year. However, the economic situation of manufacturers and wholesalers continued to deteriorate because of the excessive burden imposed on the industry's businesses – in particular through the Länder's initiatives. Investment activities of operators have dropped dramatically. Both branches, machine manufacturers and wholesalers, once more suffered a decline, for the third time in a row: in manufacturing by -12.5% and in the wholesale trade by -6.5% from 2013 (Table 2). As compared with 2011, when both branches had passed their peaks, their turnovers in 2014 undercut these levels by 30% and 18%, respectively.

¹⁹ Idem p. 66.

Another explanation for this development is seen in the fact that investment of the amusement machine industry had soared following the 5th Amendment of the Gaming Ordinance that came into force on 1 January 2006. Due to improved framework conditions, operators were able to compensate for massive losses in the market for gambling and gaming from competitors that they had suffered between 1995 and 2005 from publicly monopolized gambling operators as well as from the growing gambling and gaming offers in the Internet. Already by around 2010, the upsurge lost much of its momentum, investment in new capacities faded and the demand for AWP's declined. This negative trend has been aggravated strongly by the Länder with their initiatives to roll-back commercial gaming.

Table 2: Turnover of the amusement machine industry

Branch	In million euros			
	2011	2012	2013	2014
Total (non-consolidated) ^{a)}	5,575	5,600	5,585	5,630
Total turnover with machinery ^{a),b)}	1,120	1,050	940	850
Manufacturers (own production & imports) ^{a), b)}	595	550	480	420
Wholesale distributors ^{a), b)}	525	500	460	430
Operators ^{c)}	4,455	4,550	4,645	4,780
Amusement machines with prizes	4,350	4,450	4,550	4,700
Amusement machines without prizes and sport-games machines	60	58	55	50
Internet terminals	45	42	40	30
a) Manufacturing companies and wholesale (Sales, renting and leasing of amusement machines and software-packages).				
b) Also includes estimates for imports from non-members of the VDAI and turnover from exports of German manufacturers.				
c) Income of operators = cash payments including innkeeper's share and VAT, entertainment tax, etc.				

Source: VDAI; calculations of the Ifo Institute.

On 1 July 2012 the GlüStV came into force, despite the fact that numerous renowned legal experts had stated that this treaty is unconstitutional and violates European law. With state-specific gaming regulations, the GlüStV was put into force by the Länder. In many states even more restrictive provisions were introduced. For instance, in Berlin and Hamburg the maximum number of AWP's that are permissible per concession was reduced from 12 to 8. This provision was put into effect although this exceeds the competence that the states were assigned during the Reform of the Federal System I (Föderalismusreform I). At the same time, in some Federal States the closing hours have been expanded beyond the three hours foreseen in § 26 para 2 GlüStV. Moreover, amusement taxes have been increased to levels which not only will lead to an economic strangulation of marginal companies but even of firms with average industry profitability.

The present collapse in investment has been caused above all by § 29 para 4 sentence 2 GlüStV, which eliminates all prospects for operators to run amusement arcades economically. In accordance with the so-called "guillotine provision", all restrictions of the GlüStV for all enterprises will come into effect on 1 July 2017. They will – if the legality of the state-specific gaming regulations is not successfully contested – lead to a shrinkage of operators' businesses by more than half.²⁰

Since 2011 operators have shifted their activities from expansion investment towards optimization of their businesses. The focus is on the exchange of less attractive AWP's by more appealing ones and the increase of the number of AWP's – provided this is appropriate with regard to the current utilization and legally admissible – up to the maximum number of 12 AWP's per concession (8 AWP's per concession in Berlin and Hamburg). The operators are striving for a higher exploitation of scale effects to allow them to bear higher costs induced by numerous new and burdensome provisions enshrined in the GlüStV and the Länder's execution laws. These burdens include:

²⁰ A comprehensive assessment of the state of the legal clarification is given by: Hans-Günther Vieweg, *Wirtschaftsentwicklung Unterhaltungsautomaten 2014 und Ausblick 2015*, Munich, February 2015, Chapter 2.2.3.

- education and training of the supervisory staff, in some states to be carried out annually,
- additional supervisory staff (one person for each concession per amusement arcade, § 6 para 2 SpielhG Bln),
- introduction of access control systems,
- introduction of an access control and barrier system for banned players for all amusement arcades in the State of Hesse (§§ 6, 11 HessSpielhG),
- implementation of a social policy as well as
- the duty to inform players on stakes, wins, pay-out ratios, win and loss probabilities as well as the addiction risks of the offered games and public reporting obligations.

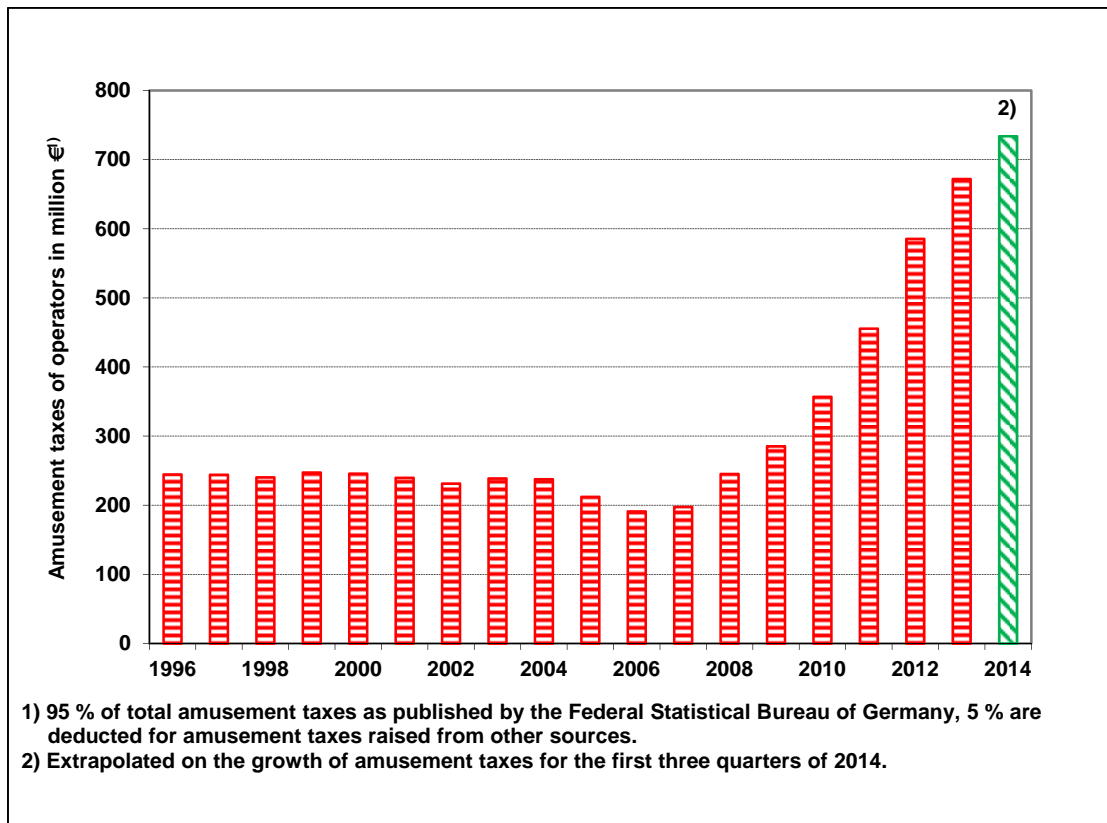
All of these provisions that larger amusement arcades with – at present still admissible – multiple concessions might be able to bear, will strangle smaller establishments with few or only one concession. The latter are not in a position to earn sufficient contribution margins from their revenues to cover the additional fixed costs. The former, according to § 25 para 1 sentence 2 GlüStV, will no longer be permitted as of 1 July 2017.

The situation is aggravated still further by provisions which cause a reduction of revenues and contribution margins. Above all the extension of closing hours to a minimum of three hours (§ 26 para 2 GlüStV) and up to eight hours in Berlin (§ 5 para 1 SpielhG Bln) and the increase of amusement taxes are important in this context. From 2006 to 2014 they were raised massively, from 191 million euros up to 734 million euros. This amounts to an increase of 285% (Figure 2). It is of note that the growth of operators' turnover by far fell short of the increase of amusement taxes charged for the operation of AWP. Operators' gross gaming revenues only expanded by 92%.

The operational measures to stabilize profitability are mirrored in the statistics. In his latest empirical investigation, Jürgen Trümper has identified an increase in the number of concessions per amusement arcade, a trend that reflects the structural change driven by the closure of smaller, economically disadvantaged businesses, whereas larger ones

have been able to bear the growing burdens²¹. Simultaneously with this development, the number of AWP's installed per concession has been increased. In spite of these efforts, profitability has permanently worsened in recent years²².

Figure 2: Amusement tax burden of operators



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

The upward trend of operators' turnover – induced by the 5th Amendment of the Gaming Ordinance – is history. As of 2007, growth rates accelerated and the rapid expansion remained high until 2011. This was the last year with a strong growth rate, which was 5.7%. In the following years, growth was around 2% per annum. In 2014

²¹ Jürgen Trümper, Christiane Heimann, l.c.; September 2014, pp. 65.

²² Institut für Handelsforschung (IFH) (ed.), Betriebsvergleich der Unterhaltungsautomatenunternehmen – Jahresbericht 2012, Bonn 2012, p. 12, 24, 44: The study reports poor profitability –measured as a percentage of net revenues – of 2% to 3% for operators with stakes in the gastronomy or amusement arcades. For most of these predominantly smaller businesses profitability declined in 2012 from previous year. A comparison group of larger businesses shows for the same period an improved profitability and the rate of profit is more than twice as high.

operators benefitted from a good economic climate, growing employment and rising real net household income. In combination with measures to increase profitability and the supply of attractive games, operators' turnover improved by 3% on average. A development of which approximately one third was caused by the higher number of AWP's installed in 2014 over previous year and the remainder from other factors, among them more appealing games.

However, the development differed strongly between regions and sometimes even from one amusement arcade location to the next. This is explained by the provisions enshrined in the Federal States' execution laws to the GlüStV as well as the state-specific gaming regulations, which show significant differences. For instance, in North Rhine-Westphalia a smoking ban took effect on 1 May 2013 and induced a temporary reduction of visitors at a double-digit rate. The introduction of an access control across all amusement arcades in the State of Hesse for excluding banned players (§§ 6, 11 HessSpielhG) has caused major problems. Amusement arcades that have invested in the access control system and duly carry out the required controls have suffered high-double-digit declines in their revenues. In the beginning, the slump was above all caused by guests who had no ID-papers at hand. However, it has also been reported that guests have been migrating to amusement arcades in neighbouring Federal States, which has turned out to be an important topic for Hesse with its extensive intra-German frontiers. But more important however was migration to competitors within Hesse who were in no hurry to implement the provision or who did not apply the provisions literally.²³

²³ During the early months, the supervisory authorities might have had difficulties controlling compliance with the provisions on the implementation of the access control systems and the proper control of access. The operators expect that an area-wide enforcement of the law will enable their businesses to return to normal. However, a permanent lack of enforcement would bear the risk that bad examples would be copied and that operators who complied with legal provisions would be forced out of the market.