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Economic Development of the German Coin-Operated Gaming and Amusement Machine Industry 2011 and Outlook for 2012

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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 comprise basically four different product groups:

- The most important product group consists of amusement machines with prizes (AWPs), which are subject to a comprehensive public regulation.
- A second group contains gaming machines without prizes, be it cash or goods prizes. These are machines such as score games, 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 fifth amendment of the German Gaming Ordinance took effect, these once widespread fun-game machines have been prohibited. More than 80,000 fun games have been dismantled. This was around 30% of all kinds of installed entertainment machines in 2006.
- A third group consists of sport-games machines, such as billiards, darts, table soccer, air hockey etc.
- A fourth group comprises Internet terminals, which have been introduced to the market in significant numbers since the middle of the last decade. They allow a controlled access to the Internet without any specific entertainment content. 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 term “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.

For the product group **AWP**, the National Metrology Institute (PTB) records the number of new approvals. Up to 1 January 2006, the number of new approvals was used to depict the long-term development of the market for AWPs. Since then, these figures no longer reflect the sale of AWPs but the sale and exchange of software packages. There is no longer a stable relationship between the sale of hardware and software. Thus sales statistics based on PTB figures have ceased.[1]

In recent years the traditional wall-mounted, mechanical and electro-mechanical AWPs in Germany have been replaced by completely electronically controlled video-based AWPs. In amusement arcades all traditional AWPs have been dismantled. Even in bars and restaurants more and more of them have been replaced by new generation AWPs. These AWPs provide more leeway for spatial design. This possibility has been used frequently in recent years to create an inviting atmosphere for amusement arcades. However, the limitations of the Gaming Ordinance must be obeyed. For each AWP an amusement arcade must provide a minimum space of 12 m^2 and only two AWPs may be placed together.

These new AWPs contain a broad range of games (game packages) that were only partly developed by German manufacturers. Because of technological progress and the wide scope of design options provided by the fifth amendment of the Gaming Ordinance, the engineers of the domestic manufacturers can access the globally available supply of software-based games offering a broad spectrum of entertainment. Many games have been procured and adjusted to the legal requirements in Germany by software engineering.

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[1] For a comparison of the number of AWP sales and the number of approvals of software packages, see: H.-G. Vieweg, *Economic Development of the German Coin-Operated Gaming and Amusement Machine Industry 2009 and Outlook for 2010*, February 2010, Munich, p. 3.

Hence games can easily be changed by installing new software without replacing the box. However, there is a legal requirement for the installation of new games: The software must be approved for the hardware type by the PTB. With the introduction of video-based AWPs, leasing and renting of machines have gained a prominent role in the market.

AWPs are no longer simple amusement machines that display gaming results on rotating discs. Newly created feature games supply a broad repertoire of games that offer winnings for the successful completion of complex gaming processes. Different levels of skills are linked to different levels of winnings.[2] In addition, a video-based 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 supply of games than before 1 January 2006. In peak hours, some bottlenecks are to be expected, but this is not as common as before the new Gaming Ordinance was put into force. Now a client usually has no trouble finding an AWP with the game of his choice.

These new AWPs are attracting a broad public. A growing number of women, for example, now enjoy gaming. The share of women amongst all AWP users – a former domain of male clients – has risen from 10.3% in 2007 to 13.8% in 2008 and from 16.7% in 2009 up to 19.9% in 2010. Moreover, the survey reveals that among visitors of amusement arcades, women, contrary to expectations, are even more active gamers than men.[3]

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[2] The PTB's Technical Directive (TR) 4.1 stipulates that winning prospects of more than €1,000 may not be displayed by AWPs. According to most recent information, the replacement of AWPs that do not fulfil this provision was largely concluded by 1 January 2011.

[3] J. Trümper, *Umsetzung der novellierten Spielverordnung – Feldstudie 2010*, August Berlin, 2010, p. 40.

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. The machines recorded are not only those supplied by member businesses but also those of other manufacturers and distributors, it includes not only domestic production but also imports. The statistics comprise the number of installed jukeboxes, pinball machines, sport-games and amusement machines with and without prizes. Since 2007, the number of Internet terminals delivered to amusement arcades, bars and restaurants has also been included.

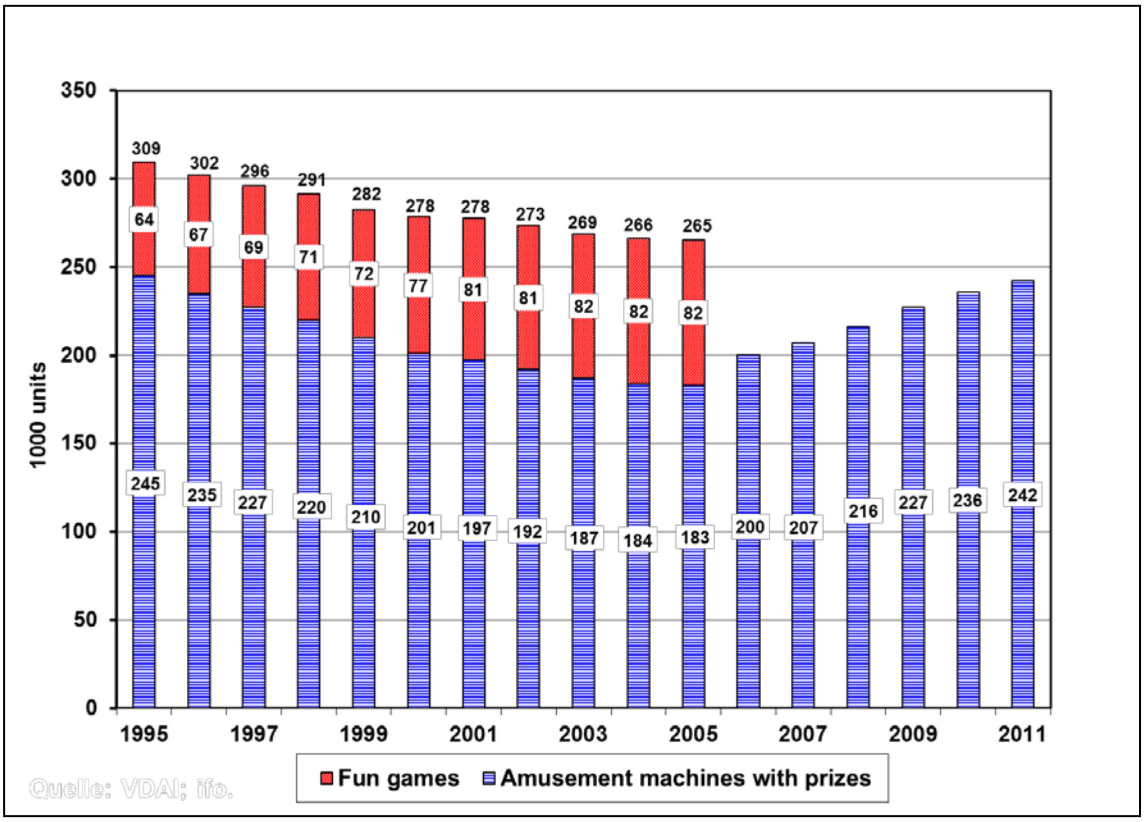
For many years there has been a reduction in the number of the installed music, sport-games and amusement machines with and without prizes. This development has been the result of the economically difficult situation for the operators that they faced up to the end of 2005. Commercial gaming competes with the wide variety of gambling forms offered by public or private companies with public concessions and it steadily lost market shares over a long period of time. Moreover, since the beginning of the last decade, online gambling has made much progress and gained noteworthy market shares, although it has always been banned in Germany. These changes in the market prompted the Federal Ministry of Economics (BMWi), in autumn 2000, to start a structural reform of the Gaming Ordinance, which was not concluded until the end of 2005.[4] The federal states were involved in the negotiations and their requirements were integrated in the 5th Amendment to the Gaming Ordinance. The outcome, however, did not fully meet the expectations of the amusement machine industry.

Since 1 January 2006, the amusement machine industry has been working under the more favourable framework of the new Gaming Ordinance, which now provides scope for the exploitation of the possibilities of advanced information and communication

[4] H.-G. Vieweg, *Wirtschaftsentwicklung Unterhaltungsautomaten 2000 und Ausblick 2001*, München 2001, p. 17.

technologies. The German regulation of commercial gaming has become similar to the more advantageous framework conditions enjoyed by other European countries for some time now.

Figure 1: Installed AWPs and Fun Games 1995 to 2010



Source: Ifo Institute for Economic Research.

In 2006 the implementation of the new Gaming Ordinance caused massive problems for the amusement machine industry. The key parameters for AWPs had been fixed too late and the first AWPs approved by the National Metrology Institute (PTB) could only be delivered during the second half of the year. In spite of this administrative delay, the operators were required to dismantle some 80,000 fun games – entertainment machines paying out tokens – immediately and without a transition period. The number of installed fun games was around 30% of all kinds of entertainment machines run by operators. As a consequence the operators suffered a turnover decline of 7% in 2006. The losses already experienced in 2004 and 2005 accelerated.

In 2005, the number of installed AWPs bottomed out at 183,000 units. This was 62,000 AWPs less than in 1995 when there were 245,000. Since the new Gaming Ordinance came into effect, the number of AWPs has grown strongly. On 31 December 2011 242,250 AWPs were installed, but the level of 1995 has not yet been reached. As compared with the preceding year, some of the growth momentum has been lost. (Figure 1)

Table 1: Installed amusement machines and sport-games machines

Type of machine	Number of machines [a), b)]			
	2008	2009	2010	2011
Amusement machines without prizes	**42,750**	**39,150**	**37,200**	**36,500**
Pinball machines	2,350	2,300	2,250	2,200
Internet terminals etc.	20,000	22,500	22,000	21,500
Score games etc.[c)]	9,000	3,850	2,650	2,600
Video games	11,400	10,500	10,300	10,200
with prizes	**216,000**	**227,000**	**235,750**	**242,250**
Sport-games machines [d)]	**24,000**	**23,000**	**22,300**	**20,000**
Total	**282,750**	**289,150**	**295,250**	**298,750**

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.; FfH Institut für Markt- und Wirtschaftsforschung; calculations of the Ifo Institute for Economic Research.

There are virtually no fun games left in amusement arcades with few exceptions.[5] These extremely rare cases are due to difficulties in problematic regions that could not be overcome by the numerous initiatives on the part of the commercial gaming sector associations (manufacturers, trade and operators) to encourage all industry stakeholders to meet the provisions. In these cases, the supervisory authorities have not met their obligatory tasks of enforcing the legal provisions of the Gaming Ordinance.

The removal of fun games, prohibited since 1 January 2006, gave the operators freed-up space for the installation of additional amusement machines. Above all, the AWPs designed in line with the new Gaming Ordinance have benefited. In contrast to the Gaming Ordinance that was valid up to 31 December 2005, twelve instead of hitherto ten AWPs are permitted per amusement arcade insofar as sufficient space is available: at least $12m^2$ per AWP. In restaurants and bars, three instead of only two AWPs are permitted. The premises' operators have to ensure continuous monitoring in order to prevent minors from gaming. If three AWPs are installed, additional technical devices are required to hinder access to minors. The new AWPs have proven to be extremely attractive, resulting in the substitution of amusement machines without prizes (Table 1)

The overall view does not show that there were different developments in various market segments. Since 2006 amusement arcades have strongly expanded their capacities, whereas in restaurants and bars the number of AWPs has been further reduced in line with the long-term trend. Between 2006 and 2011, the number of AWPs in amusement arcades grew by 42,250, while in bars and restaurants their number

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[5] Fieldwork carried out annually revealed that in 2005 on average around 8.3 fun games were installed per amusement arcade licence. This amounts to a total number of approximately 80,000 fun games in Germany. In the follow-up study of 2008, there were only 0.3 fun games per amusement arcade licence (see: J. Trümper, *Umsetzung der novellierten Spielverordnung – Feldstudie 2008*, Berlin 2008, p. 20). By mid-2009 the indicator had shrunk to 0.14 (see: J. Trümper, *Umsetzung der novellierten Spielverordnung – Feldstudie* 2009, Berlin 2009, p. 24) and in 2010, the indicator was close to zero or 0.075 fun games per amusement arcade licence (see: J. Trümper, *Umsetzung der novellierten Spielverordnung – Feldstudie 2010*, Berlin 2010, p. 24).

declined. In 2008, however, a turnaround occurred when the number of installed AWPs started to grow slightly. Still, the 2006 level of the number of machines was not yet matched in 2011. The number of AWPs in gastronomy is 2,250 units below the former level.

Even within both of these market segments, significant differences can be seen. In gastronomy in the narrower sense – the traditional locations in restaurants and bars – the number of AWPs has shrunk, although at present three instead of two machines are permissible in each establishment. Newly designed AWPs for use in gastronomy derived from video-based AWPs designed for amusement arcades have been brought onto the market. These multigamers are replacing the traditional electro-mechanic AWPs. A positive development has begun in a new market segment: airports, railway stations, motorway service areas and other public interchanges have become promising locations for the installation of AWPs. The operators' business with these highly frequented sites has been growing strongly in recent years and investments in new locations are underway. This upward development has contributed to the turnaround in gastronomy.

In the market segment of amusement arcades, a tendency towards larger premises based on multiple concessions can be observed. Many of these new amusement arcades are an integral part of leisure-time facilities that additionally comprise cafés, cinemas, bars etc. This development has contributed to a better public acceptance of amusement arcades and has become part of a changing supply side.[6] These new locations are gaining market shares, whereby smaller amusement arcades – with only one or two concessions – are coming under pressure. They are pursuing strategies dedicated to benefiting from

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6 These bigger amusement arcades are well equipped. They offer the latest amusement machines in a tastefully styled ambiance and employ well-qualified staff. Women are especially attracted to these arcades. See Jürgen Trümper, *Umsetzung der novellierten Spielverordnung – Feldstudie 2009*, Berlin, September 2009, pp. 20, 41.

specific local conditions or from individual services. Those who have not been able to meet the challenge have had to shut down their premises. A structural change is taking place. The perception of this development by the public is very uneven. A broad public is aware of the newly opened larger amusement arcades, but the disappearance of the smaller arcades has gone largely unnoticed.[7]

The survey conducted regarding the implementation of the 5th Amendment to the Gaming Ordinance reveals that these more attractive and larger amusement arcades comply with the provisions. Although most of the smaller amusement arcades likewise comply with the provisions, some problems have been reported.[8] In spite of this positive assessment, the German federal states who have launched strong measures to repeal commercial gaming, plan to ban multiple licences that create the legal basis for larger amusement arcades.

1.3. Turnover of the amusement machine industry

The amusement machine industry is divided into three sectors: machine manufacturers, wholesalers and operators. In 2010, their non-consolidated turnover reached €5.145 billion. Since 2007, statistics also include Internet terminals dedicated for installation in amusement arcades, bars and restaurants. In 2010 total turnover grew by 5.8%. As in previous years, the manufacturers' turnover grew more than proportionately, by 7.5% (Table 2).

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[7] Inspections carried out in connection with fieldwork providing updates on the implementation of the new Gaming Ordinance showed that in 2009 and 2010, 82 out of 2,000 or 2,450, respectively, of the visited arcades which had been in operation the previous year were now closed because the business had been given up, due to renovations or moving to another site. See Jürgen Trümper, *Umsetzung der novellierten Spielverordnung – Feldstudie 2009 (2010)*, Berlin, September 2009 (2010), each issue p. 70.

[8] See Jürgen Trümper, *Umsetzung der novellierten Spielverordnung – Feldstudie 2009*, Berlin, August 2010, pp. 29.

In 2010 machine manufacturers' turnover was not only driven by the sale of AWPs and innovative games. An important factor was also the obligation of the amusement industry to convert AWPs to conform to the Technical Directive (TR) 4.1 by 1 January 2011. The necessary activities triggered a soaring number of approvals for gaming software packages. Their total number in 2010 reached 253,405, approximately five times as much as in the previous year. The costs for the operators to fulfil this obligation amounted to around €20 million, a considerable financial burden for them.

In 2011 the number of approvals for gaming software packages amounted to 163,991. The lower number as compared to 2010 is explained by the fact that the conversion of the AWPs to confirm to the TR 4.1 had been concluded by year-end. However, the machine manufacturers' business turned out to be better than expected, with investment in new locations being the driver. Investors had to implement their projects as soon as possible.[9] Preliminary figures suggest that the manufacturers' turnover grew at a rate of 4.4% in 2011.

In the years after 2006, growth of the operators' turnover had to compensate for previous losses. Not until 2008 their total turnover with AWPs, entertainment machines, sport-games machines and other entertainment offers exceeded the 2003 value.

The explicitly intended improvement of framework conditions for commercial gaming by policy-makers came about with the Gaming Ordinance, which took effect in 2006. The attractive offerings were well received by clients. At the same time, commercial

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[9] The German federal states envisage a strict regulation that endangers the economic viability of many amusement arcades. Investors that had been in the final stage of opening up an amusement arcade and could not stop projects without major losses had to accelerate their projects. Only those amusement arcades that had received an approval based on § 33i German Trade, Commerce and Industry Regulation Act (GewO) up to 28 October 2011 will be provided an inventory protection of five years by the 1st Amendment to the Interstate Gambling Treaty (1. GlüÄndStV). Approvals granted after that deadline guarantee inventory protection of one year only.

gaming became more budget-priced and likewise contributed to its increased attractiveness. Before the 5th Amendment to the Gaming Ordinance came into force, the price for one hour of gaming was €22.50, on long-term average. Today the price has fallen down to a long-term average of €10.89 for one hour at an AWP.

Table 2: Turnover of the amusement machine industry

Branch	In million euros 2008	2009	2010	2011
Total (non-consolidated) [a)]	**4,500**	**4,865**	**5,145**	**5,365**
Total turnover with machinery [a),b)]	**975**	**1,040**	**1,090**	**1,120**
Manufacturers (own production & imports) [a), b)]	485	530	570	595
Wholesale distributors [a), b)]	490	510	520	525
Operators [c)]	**3,525**	**3,825**	**4,055**	**4,245**
Amusement machines with prizes	3,370	3,700	3,940	4,140
Amusement machines without prizes and sport-games machines	105	70	65	60
Internet terminals	50	55	50	45

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.

Starting from 2006 – at the historical trough – the operators' turnover had increased by 43% up to 2011. However, to conclude that the amusement machine industry has enjoyed unbridled growth – as is done by some critics – is premature. Starting with a base year of 2003 instead of 2006, the increase of the operators' turnover amounts to only 30%. Over a period of eight years, the annual average growth rate is 3.4%. Taking inflation into account, the price adjusted growth rate averages somewhat more than 2%. This is a success but only a moderate one.

In 2012 the operators will benefit from good consumer sentiment of private households. This assumption is supported in particular by more than proportionate increases of wages and salaries, which throughout the past decade grew less dynamically than national income. It is expected that in 2012, the operators’ turnover will grow up to 3%, in parallel to the increase of consumption. However, the machine manufacturers and wholesalers will feel pressure from the initiatives of the German federal states to roll-back commercial gaming. The uncertainty about the future regulation of commercial gaming has induced an increasing reluctance to invest. In these circumstances the market environment will worsen further on, and at the latest in 2013 a slump in production will take place.