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Economic Development of the German Coin-Operated Gaming and Amusement Machine Industry 2009 and Outlook for 2010

Study Commissioned by the German Working Committee of Coin-operated Machines

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1.1. Market for jukeboxes, sport-game 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, such as touch-screen machines, video games, driving simulators, pinball machines etc. This category also contained fun games that pay out tokens. Since 1 January 2006 – when the new German Gaming Ordinance was put into effect – these once widespread machines have been prohibited.
- A third group includes sport-games machines, such as billiards, darts, table soccer, air-hockey etc.
- A fourth group comprises Internet terminals that have been introduced to the market in significant numbers since the middle of the decade. They only provide 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.

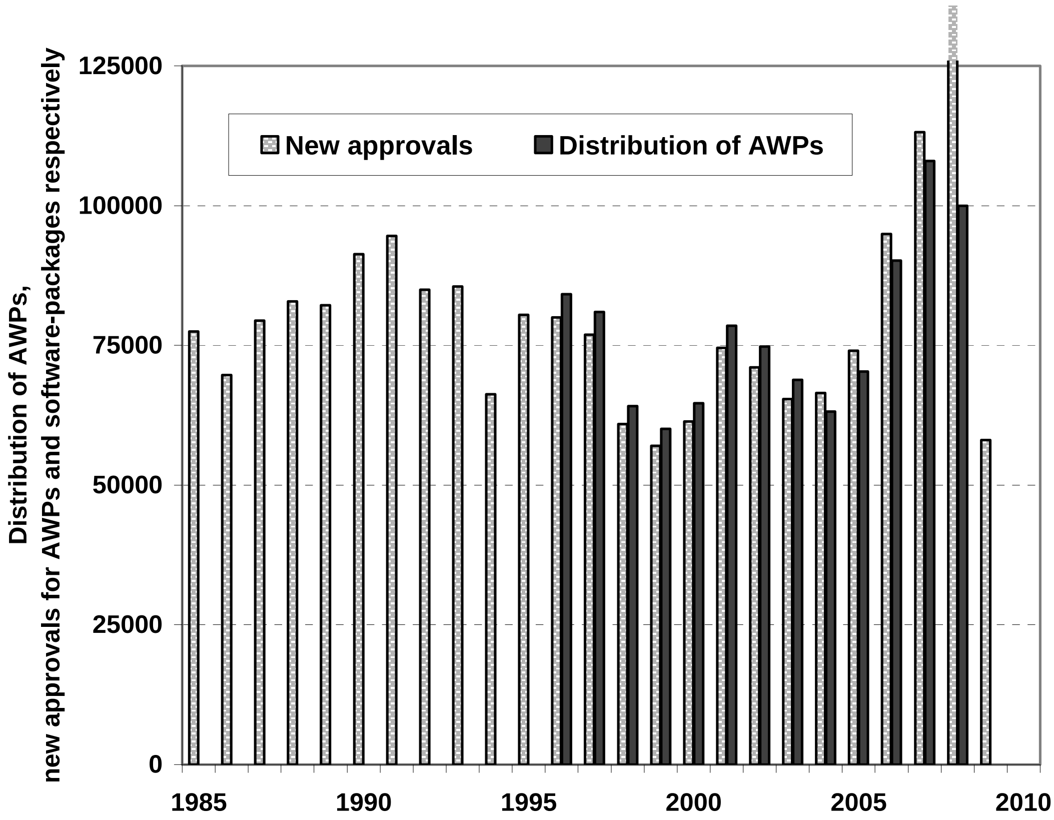
A fifth group of machines that gives players the possibility to use their skills to influence the outcome of the game is subsumed under the term “other games” (subject to Art. 33d of the German Trade, Commerce and Industry Regulation Act (GewO)). The Federal Criminal Investigation Agency (*Bundeskriminalamt*)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

For the product group AWP, the Gaming Ordinance that came into effect on 1 January 2006 has enabled the manufacturers to exploit the pool of globally available games based on software programmes. In recent years more and more screen-based AWPs have been introduced in the market. They offer many different games not all of which have been designed by German manufacturers in their own facilities. The result is a broad range of diversified games for AWPs that can be easily exchanged to better meet clients' preferences. New products are no longer marketed primarily by the sale of amusement machines. Leasing of the hardware has become more common. Renting of software packages has become the predominant type of contract. As a consequence licensing of software has gained importance as compared to the marketing of hardware (boxes).

For AWPs the National Metrology Institute (PTB) records the number of new approvals. Hence its statistics have been applied as an indictor for the market development of AWPs. But there is no longer a stable relationship between software and hardware in the market, and the number of new licences provided by the PTB can no longer be applied as indicator for the marketing of AWPs but of gaming software only.

Until 1 January 2006 the number of new approvals was used to depict the long-term development of the market for AWPs. Starting in 1985 the development shows that there was a difficult period from the mid-1990s to the middle of the current decade. The distribution of AWPs declined by up to one third and was followed by a sluggish recovery. Only since 2006 has the number of new approvals skyrocketed, but they no longer mirror the distribution of complete AWPs but also the distribution of gaming software for AWPs. The distribution of boxes has grown more moderately. In 2008 the number of AWPs distributed in the market came up to around 100,000 whereas the new approvals for gaming software-packages reached 390,542. The extreme demand for approvals was not only induced by large interest in innovative games but also by the expiration, at the end of 2008, of the permission to apply for approvals for AWPs that are based on the Technical Directive (TD) 3.x. These AWPs had proven to be highly attractive and companies applied for many more approvals than they actually needed. The bulk of these approvals have never been used in the market. However, as a consequence of the boom, applications for approvals declined substantially in 2009. (Figure 1)

Figure 1: Comparison of the distribution of AWPs and new approvals[1)]



1) The number of approvals for AWPs and gaming-software packages respectively.
Source: PTB; VDAI; calculations of the Ifo Institute.

AWPs are no longer the traditional wall-hanging 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. In addition, video games offer 20 or more three-dimensional games with exciting plots. These so-called multigamers provide a more diversified supply of games, although the prohibition of fun games by the new Gaming Ordinance has led to a reduced number of machines installed in amusement arcades. In peak hours some bottlenecks are to be expected, but this is not as common as before 1 January 2006; now a client usually finds 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 of all gamers at AWPs – a former domain of male clients – has risen from 10.3% (2007) up to 13.9% (2008).[1] A more recent survey shows even a further increase of the share up to 16.7%.[2] Additionally, the survey has disclosed that among visitors of amusement arcades, women, link men, are active gamers and not just bystanders.

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, distributors and direct imports. The statistics comprise the number of installed jukeboxes, pinball, 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-game and amusement machines with and without prizes. This development has been the result of the economically difficult situation for the operators that they were confronted with up to the end of 2005. Commercial gaming competes with gambling offered by public companies or by private companies with public concessions and it had lost market shares for more than a decade. This fact prompted the Federal Ministry of Economics (BMWi), in autumn 2000, to start a structural reform of the Gaming

1 J. Trümper, Umsetzung der novellierten Spielverordnung – Feldstudie 2008, Berlin, 2008, p 67.

2 J. Trümper, Umsetzung der novellierten Spielverordnung – Feldstudie 2009, Berlin, September 2009, p 40.

Ordinance, which was not concluded until the end of 2005.[3] Since 1 January 2006 the amusement machine industry has been working under the more favourable framework conditions of the new Gaming Ordinance, which now provides scope for the exploitation of the possibilities of advanced information and communication technologies. Since 2006 the industry in Germany enjoys similar advantageous framework conditions as other European countries have for some time.

In 2005 the number of installed AWPs bottomed out at 183,000 units. This was 52,000 AWPs less than in 1996 when there were 235,000. Since the coming into force of the new Gaming Ordinance the number of AWPs has grown strongly, reaching 207,000 in 2007. By the end of 2008 the number increased to 210,000 AWPs. Preliminary figures for 2009 indicate that the number has grown further to 212,000. Different factors have contributed to this positive trend. Since the coming into force of the new Gaming Ordinance on 1 January 2006, fun games have been prohibited and had to be dismantled. This 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 benefitted. In contrast to the Gaming Ordinance valid until the 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 if an engineered safeguard hinders access to minors. In addition, the new AWPs have proven to be extremely attractive and even amusement machines without prizes have been substituted.

Along with AWPs, Internet terminals that have been installed in recent years also show an upward trend. All other product groups display a downward trend. In total the number of installed amusement machines has declined in recent years. (Table 1)

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

Table 1: Installed amusement machines and sport games machines

Type of machine	Number of machines a), b)			
	2006c)	2007	2008	2009
Amusement machines without prizes	**42,800**	**49,700**	**44,750**	**42,300**
Pinball machines	2,500	2,400	2,350	2,300
Internet terminals etc.		14,500	20,000	22,500
Score games etc.d)	27,000	20,000	10,000	5,500
Video games	13,300	12,800	12,400	12,000
With prizes	**200,000**	**207,000**	**210,000**	**212,000**
Sport-games machines e)	**25,500**	**25,000**	**24,500**	**24,000**
Total	**268,300**	**281,700**	**279,250**	**278,300**

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) Without Internet terminals.
d) Touch-screen machines, juke boxes and other amusement machines.
e) 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.

The overall view does not show that there were different developments in market segments. The 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 2007 and 2008 the number of AWPs in amusement arcades grew by around 8,000 while in bars and restaurants their number shrank by 3,000.

Even within both of these market segments, significant differences can be seen. In gastronomy, 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. At the same time, however, a new market niche has gained importance. 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 strongly growing in recent years and investment in new locations is underway. This upward development, however, has only been sufficient to slow down the overall negative development 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.[4] These new locations are gaining importance whereas smaller amusement arcades are being phased out.

The improvement of the framework conditions for commercial gaming by the new Gaming Ordinance was linked to the requirement to dismantle all fun games with a disbursement of tokens and jackpots, although the latter machines were only applied as marketing tools. This process has been almost totally concluded. As a consequence the number of installed score games – which included fun games – has fallen dramatically since the end of 2005.[5]

Likewise the stock of amusement machines without prizes and sports-game machines has shrunk in the past. For most of the product groups the decline has not yet come to an end. Two factors are worth mentioning: The operators' investment budgets have been

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[4] These bigger amusement arcades are well equipped. They offer the latest amusement machines in a tasteful ambiance and employ a well-qualified staff. Above all these arcades also attract women. See Jürgen Trümper, Umsetzung der novellierten Spielverordnung – Feldstudie 2009, Berlin, September 2009, p 20, 41.

[5] On the basis of a survey carried out by Trümper, around 8.3 fun games per amusement arcade concession were installed in past years. A more recent survey of 2008 identifies, on average per arcade, only 0.3 fun games. See J. Trümper, Umsetzung der novellierten Spielverordnung – Feldstudie 2008, Berlin 2008, p 20. Up to mid-2009 the number of fun-games was further reduced down to 0.14 per concession. See J. Trümper, Umsetzung der novellierten Spielverordnung – Feldstudie 2009, Berlin 2009, p 24.

focused primarily on the procurement of AWPs, leaving few funds for the purchase of other amusement machines. The great attractiveness of the new AWPs has inspired clients who in the past used other entertainment offerings of the amusement machine industry to shift their offerings to AWPs. It is assumed that the additional investment expenditure that has been induced by the coming into force of the new Gaming Ordinance reached a conclusion in 2009. This means better prospects for those market segments that have not yet benefited from the good investment climate for the operators. It is expected that the share of amusement machines without prizes and of sports-game machines in the stock of installed machines will at least not be further reduced.

1.3. Turnover of the amusement machine industry

The amusement machine industry is divided into three sectors: machine manufacturers, wholesalers and operators. In 2009 their non-consolidated turnover reached €4.52 billion. Since 2007 the statistics also include Internet terminals dedicated for installation in amusement arcades, bars and restaurants. In 2009 total turnover grew only moderately – by 2.5% after 6.7% the preceding year. The slowdown was caused above all by the manufacturers' and wholesale's business situation (Table 2).

The most important driving factor for the turnover of machine manufacturers and wholesalers was the coming into force of the new Gaming Ordinance on 1 January 2006. In addition to the replacement of old AWPs, investment in additional capacities has been carried out. As already mentioned, since then twelve instead of ten AWPs per amusement-arcade concession are permissible if sufficient space is available ($12m^2$ per AWP); in gastronomy three instead of two AWPs are allowed if devices for the protection of minors are available. The adjustment in the stock of amusement machines is reaching a conclusion.

Technical progress in combination with the new Gaming Ordinance has led to new concepts for the design and marketing of AWPs. They have also led to a detachment of hardware, the box, and software that can be marketed separately. However, conceptual and technical changes of AWPs are strictly regulated by the Gaming Ordinance.

Although the law requires that software packages must be approved together with the box by the PTB, new software packages can replace predecessors if the software-package has received the design approval for the hardware available with the operator. There is no longer a need to exchange a complete AWP if the operator wants to offer new games to his customers.

Table 2: Turnover of the amusement machine industry

Branch	In million euros		
	2007	2008	2009
Total (non consolidated) [a)]	**4,120**	**4,400**	**4,520**
Total turnover with machinery [a)]	**885**	**970**	**1,010**
Manufacturers (own production & imports) [a) b), c)]	430	480	510
Wholesale distributors [a)]	455	490	500
Operators [a) d)]	**3,235**	**3,430**	**3,510**
Amusement machines with prizes	3,050	3,250	3,340
Amusement machines without prizes and sport-game machines	155	130	100
Internet terminals	30	50	70

a) Including Internet terminals from 2007 onwards.
b) Manufacturing companies and wholesale (Sales, renting and leasing of amusement machines and software-packages, incl. licensing fees).
c) Also includes estimates for imports from non-members of the VDAI and turnover from exports of German manufacturers.
d) Income of operators = cash payments including innkeeper's share and VAT, amusement tax, etc.

Source: VDAI; calculations of the Ifo Institute.

The new generation of electronically controlled AWPs guarantees the long-term reliability of limit values required by the Gaming Ordinance. As a result their lifespan is no longer limited by law as was the case with their mechanically controlled predecessors. Only a type testing is required by law every two years. The replacement of old machines is now a decision of the operators and is based on the availability of attractive new products and not dependent on legal provisions.

As technical changes have progressed, the manufacturers have adapted their distribution channels and concepts. Leasing and renting have gained importance. There are manufacturers that sell the hardware and rent the software. Others only rent complete systems, consisting of hardware and software. On the one hand, the manufacturers' cash flow has become steadier and is to a lesser extent dependent on the operators' investment cycles. Capital endowment and refunding have become more important topics for manufacturers with the redirection of their business. On the other hand, renting and leasing payments cause permanent liquidity outflow that induce operators to closely watch the profitability of installed AWPs. Contracts for software packages can easily be cancelled and the replacement of non-attractive games has been accelerated.

The changes in the manufacturers' business models have given rise to some challenges for the wholesale sector. Traditionally amusement machines were sold via the trading firms, but now sales have lost importance. Renting and leasing is not an adequate substitute and commissions are not sufficient to compensate for losses in sales of AWPs. Wholesale firms, which consist of companies affiliated to manufacturers and independent medium-sized enterprises, have to exploit other business areas. Financial services, maintenance, repair and overhaul of machines provide opportunities that incorporate the potential to at least partly compensate for losses in sales of AWPs. Moreover, other corporate services, such as technical and management consultancy for operators, could be offered. Nonetheless, the wholesale sector has not been able to benefit proportionally from the upward trend of recent years. In spite of all efforts, growth has been suppressed and capacities have had to be adjusted.

2006 was marked by the implementation of the new Gaming Ordinance. The operators were forced to disinvest all their fun games without any transitional arrangement. Opportunities for compensation were lacking.[6] Until early summer manufacturers and wholesalers were not able to make AWPs available that were designed in accordance with the improved regulation. As a result the operators' turnover plunged. It was only in late summer that they were able to expand their business considerably and regain lost market shares. However, on average for 2006, total turnover fell short of the level of the preceding year by more than 7%. The operators enjoyed a gain of 17% with AWPs, but with other amusement machines they suffered a setback of 60% because of the ongoing disinvestment of fun games.

Only in 2007 did the positive effects of the new Gaming Ordinance become noticeable. The operators' turnover from AWPs soared by 15%. It more than compensated the ongoing shrinkage of turnover from amusement machines without prizes. In total the operators' turnover increased by 13.5%.

But it took another year until the operators were able to regain previous levels reached during the middle of the decade. In 2008 turnover grew by 6%, but the upward tendency lost momentum. Besides AWPs above all the Internet terminals contributed to growth. Both product groups more than compensated the further decline of turnover from amusement machines without prizes.

Initial figures for 2009 indicate that the decline of turnover from amusement machines without prizes has even accelerated. This has been caused by an ongoing reduction of the number of installed machines, but also by a change in user preferences. Customers are more attracted by the innovative games offered by AWPs. This phenomenon has

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[6] H.-G. Vieweg; Wirtschaftsentwicklung Unterhaltungsautomaten 2006 und Ausblick 2007, München, January 2007, p. 23.

been observed even with video games that hitherto have been well appreciated by customers. In 2009 the operators' overall turnover grew by 2.3%, although for amusement machines without prizes it declined by nearly a quarter. With regard to the overall economic development in Germany, the growth of the operators' businesses in 2009 is evaluated as a success. Private consumption in Germany expanded only by 0.5%, in nominal terms.

Since the coming into force of the new Gaming Ordinance, the amusement machine industry has enjoyed a good response from its clients from the more appealing, newly developed AWPs. Additionally, the bright macroeconomic environment between 2006 and 2008 has contributed to the growth of the industry. But a more long-term view of developments shows that the industry has only regained the market shares it lost in the years before. On average for the years 2004 to 2009, the annual growth rate of operators' turnover amounted to 1.2%. On average for this period, consumption of private households grew at an annual rate of 1.7%, in current prices.

In 2010 the outlook for the operators' business is strongly dependent on two drivers. Firstly, will there be sufficient innovative, new amusement machines available that incorporate the potential to attract customers unsettled by a difficult economic situation and growing unemployment? This question is closely linked to the design of new AWPs in line with the Technical Directive 4.1. This directive calls for some changes in gaming features and there is not yet much experience as to customer acceptance. However, the good response of visitors at the industry's trade fair, IMA, in Düsseldorf gives cause for optimism for the current year. But secondly, the investment propensity of operators will be crucial in an environment that is not supportive for spending. The global economic crisis has not been overcome and the terms of financing will only improve in 2011. Additional investment is a prerequisite for operators to grow their businesses. With regard to the overall environment, a small increase in 2010 will be seen as a success.