

THE INFLUENCE OF MACHINE
OCCUPANCY RATES ON CATEGORY B1
MACHINE PLAYER BEHAVIOUR

NOVOMATIC
— UK —



Table of Contents

Summary	3
Introduction and Scope.....	4
Principles.....	5
Results.....	6
Conclusions	8

Summary

It has been noted by the author, amongst others, that during particularly busy periods within 1968 Act casinos, players appeared reluctant to leave their slot machine once they had been able to secure a playing position. This did not appear to be the case during quieter periods, nor in general within 2005 Act Small or Large casinos, nor on electronic gaming terminals. There appeared a more relaxed approach within the 2005 Act casinos by the players, with greater movement between terminals, longer periods not gaming and a less intense attitude to their gaming behaviour.

The conclusion, supported by general feedback and comments from players, was that once a slots-playing position in a busy 1968 Act casino was secured, players were disinclined to give up this position, as they were unlikely to be able to return to that machine, or a similar one that they wished to play, following a break of any length.

Proposals and findings published in the Department for Digital, Culture, Media & Sport (DDCMS or 'the department') consultation document indicate the department's view is that 'nudging' players towards shorter play sessions and regular breaks from play is desirable and supportive of problem and at-risk gamblers.

Although many operators are willing to reserve machines for players taking short breaks, there are consequential pressures not to do so due to the commercial impact and the negative responses from other players who may be waiting to play on the machines, these pressures are all the more acute during busy periods.

It was further determined that the data available from Novomatic UK's Server Supported Gaming (SSG) system, which is connected to a significant number of B1 machines in casinos across the UK (over 1/3 of all B1 machines in the UK), could be used to determine whether the hypothesis that players played longer and took fewer breaks during busy periods in casinos with highly restricted numbers of machines was supported by the statistics.

Five casinos were chosen; one 2005 Act as a control subject and four 1968 Act casinos from the same geographical region as a test group. A number of quiet and busy periods in each casino were analysed and the findings very clearly support the theory that as a casino's slot machines get busy and availability becomes significantly restricted, this has an acute effect on player behaviour and leads to a clear and conspicuous increase in the time spent and games played within individual playing sessions.

It can therefore be reasoned that having restricted numbers of B1 machines, particularly in venues where there is considerable market demand over and above availability, is leading to player behaviour which is in direct conflict to that which the DDCMS and Gambling Commission, as well as the industry's responsible operators and suppliers, are trying so hard to promote.

There are numerous psychological studies on Reactance Theory and the strong influence of scarcity on consumer behaviour, something often exploited artificially in the retail market.

In summary, it can be shown that where there are enough B1 machines to satisfy player demand there is no corresponding negative effect on player behaviour when the casino gets busy. However, where there is restricted availability players are reluctant to leave the machines and, either consciously or subconsciously, tend to play for significantly longer sessions rather than take breaks.

Although perhaps initially counter-intuitive, it is evident that the restriction in the number of B1 terminals permitted in casinos may actually have a clear and demonstrable negative effect on problem or at-risk gamblers' behaviour, rather than providing a positive and supportive environment.

Introduction and Scope

In October 2017 the government, through the DDCMS, published the “*Consultation on proposals for changes to Gaming Machines and Social Responsibility Measures*”¹. The consultation document outlined the government’s findings and their proposals following the results of their review into gaming machines and associated social responsibility measures.

The consultation covers the entire range of regulated gaming machines in Great Britain, however this document focusses exclusively on Category B1 machines, whose operation is permitted only within licensed casino venues.

Much of the emphasis within the consultation document is on increased social responsibility and player protection measures, including the suggestion that B1 machines should have the facility for players to set their own limits on spend and/or time as a means of supporting those individuals considered to be problem gamblers or at risk of harm (§ 4.11). This is despite the ABB’s own findings, included in the consultation document, which shows that only 0.5% of machine sessions used these limits (§ 5.4).

Despite the negligible overall effect of voluntary limits seen on B2 machines (§ 5.8.1), the government strongly supports the introduction of such measures on other categories of machines, the implication being that shorter session times are an effective protection measure and supportive means of self-control for those at risk.

The consultation document recognises that factors which influence player behaviour extend beyond stake and prize levels, and that the environment and elements external to the player and the machine can have an impact on the potential for harm. From the consultation document:

5.6. One of the areas of agreement captured in the responses to the call for evidence on this issue is that the factors which influence the extent of harm to the player are wider than one product or a limited set of parameters, such as stakes and prizes, and include factors around the player, the environment and the product.

The proposals and findings above, in conjunction with observed empirical evidence, prompted an investigation into the effect that occupancy rates on machines had on player behaviour, particularly in relation to busy periods where the number of machines available for play is significantly restricted by demand.

Novomatic UK, through Astra Games Ltd, operate and administer a Server Supported Gaming (SSG) system which, amongst other features, provides access to a number of game and machine performance metrics. Amongst these are average session data figures, providing information such as the average number of games played, average bets sum and session duration over a configurable given period.

The data is anonymous, no player identifiers are generated or held.

¹ <https://www.gov.uk/government/consultations/consultation-on-proposals-for-changes-to-gaming-machines-and-social-responsibility-measures>

It had been noted that in casinos where demand outstrips availability of machines there seems to develop a culture where players, once playing a machine, are reluctant to leave that machine as they are unlikely to be able to continue play following a break, as there is little chance of a machine (or at least a machine of their choice) being available. This appeared to lead to extended session times though had little or no effect on average stake levels.

This empirical theory seemed to be logically sound and so it was determined that an analysis of the data would be carried out in order to examine whether or not this was verifiable and supported by the evidence.

As a control sample we chose a 2005 Act 'Large Casino' where, although the venue can become extremely busy, there are practically always alternative machines of a similar nature available for play. This provides a set of comparative data where the hypothesis that a limited availability of machines is a key influencer of player behaviour can be tested.

All the machines used in this report are similar in nature, have comparable game portfolios, stake options and RTP percentages.

In addition to the control sample casino, four further test casinos from three different operators were chosen as representative of the market. All five casinos are in the same geographical region, the location of the casinos is not disclosed for reasons of commercial confidentiality.

Analysis periods were variable, both in date and length of time, as busy periods and quiet periods vary greatly based on location, clientele demographic and whether the casino has restricted membership or an open-door policy.

The shortest analysis period used was 4 hours, the longest 12 hours. The average was 7 hours.

For each casino 3 'quiet' times and 3 'busy' times were identified, the occupancy rates determined and the corresponding average number of games played, session time and value of total bets placed per session recorded. Although total bets were recorded they are not presented in this document as the figures were found to mirror those of games played with negligible changes in average stake values identified during the different sessions.

All periods are between October and December 2017.

Principles

A session is defined as the period from when a player inserts credit into the machine until there is a credit value below minimum stake (£0.50p) for 30 seconds or more.

Games played, average bets and session duration are rounded to the nearest whole number.

Occupancy rate is presented as the percentage of time all available machines were being played as a factor of the entire time machines were available. For example, a 5-hour period with 10 machines in operation would mean there were 50 machine-hours available, if the total amount of machine play during this period was 40 hours, this would be an occupancy rate of 80%.

In the following graphs the blue bars denote the average number of games played in each of the six sample sessions, the orange line the corresponding occupancy rate at that time.

Results

Fig. 1 Casino A

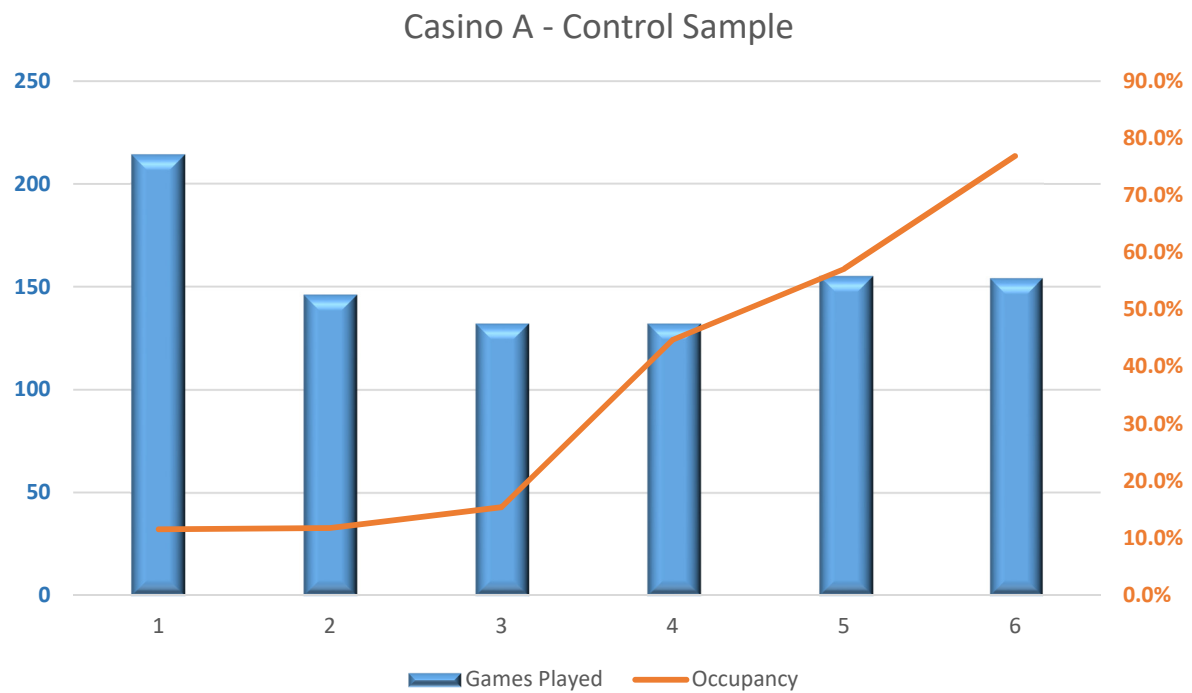


Fig. 2 Casino B

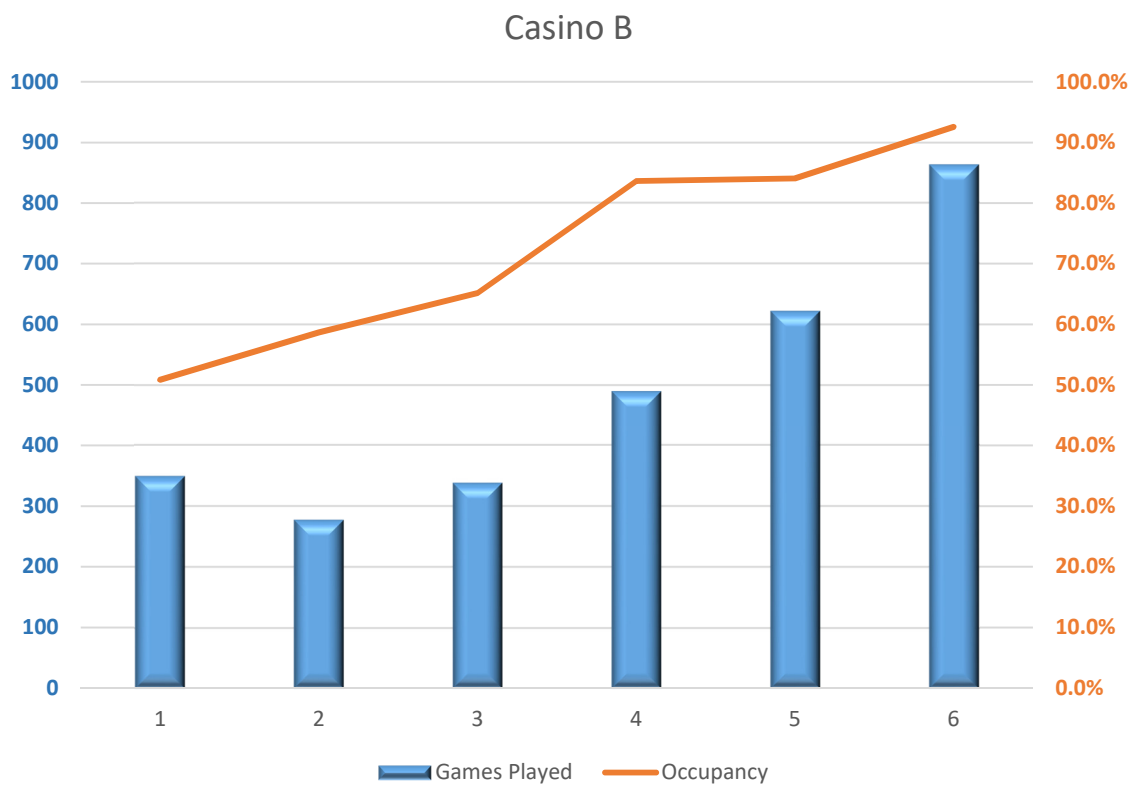


Fig. 3 Casino C

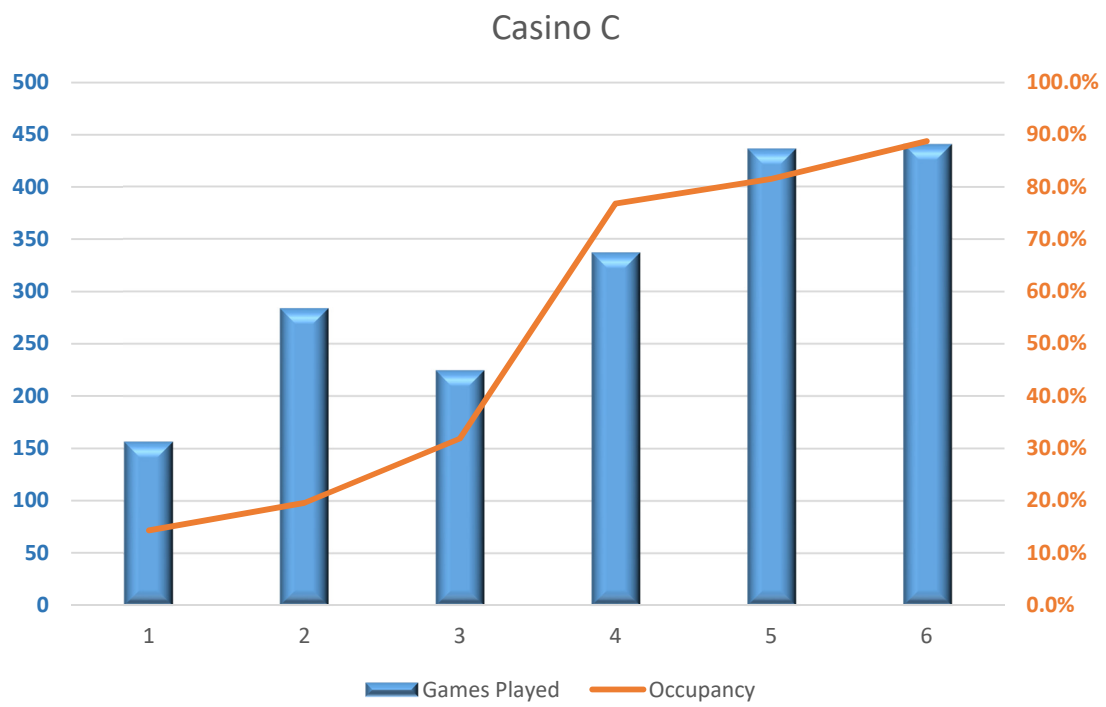


Fig. 4 Casino D

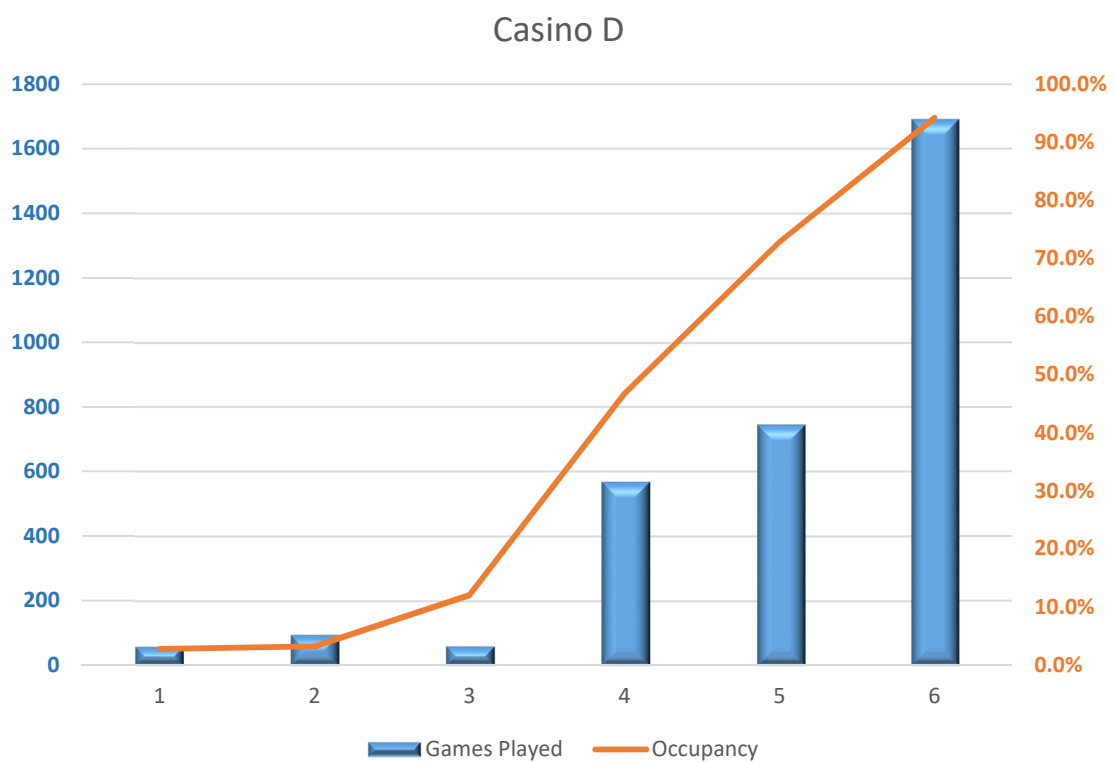
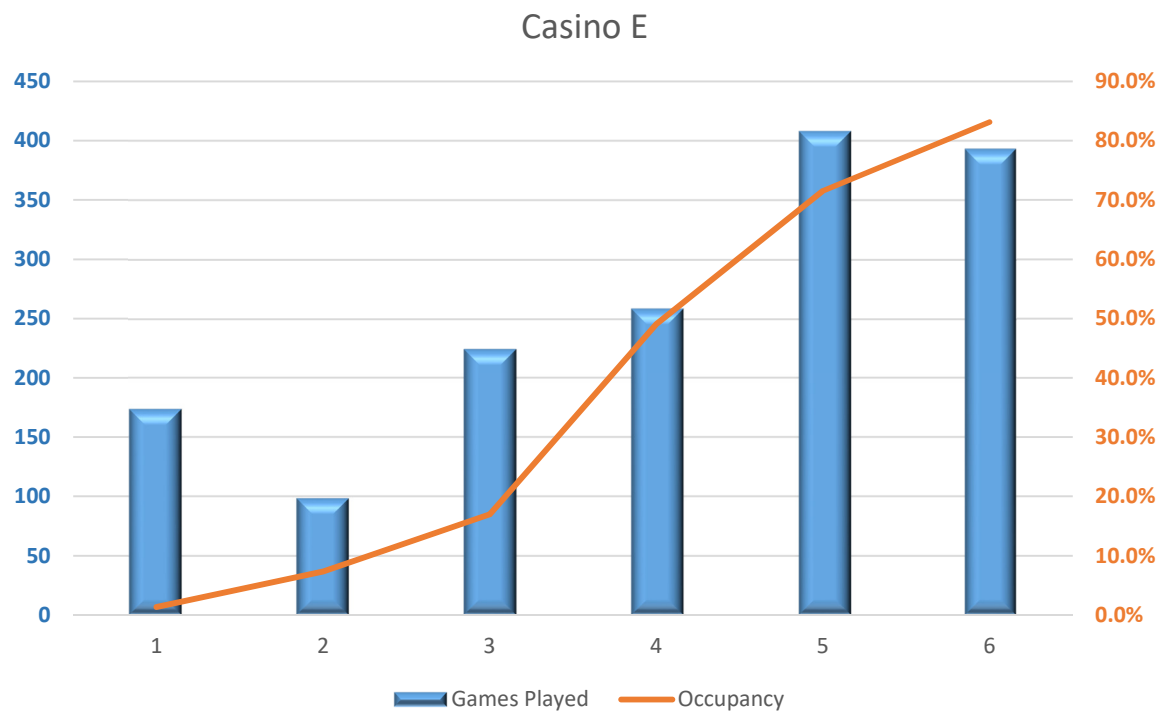


Fig. 5 Casino E



Conclusions

From Fig. 1 it can be seen that occupancy levels have little or no consistent corresponding effect on the average number of games played per session in the Control Group casino.

A 500% increase in occupancy rate resulted in only a 9% increase in the average number of games played, average play session times varied from 10.4 minutes to 15.9 minutes in the periods.

In all the test casinos there was a reliable, consistent and demonstrable correlation between occupancy rates and extended session play.

In Casino B where occupancy levels were as high as 58.7% there was an average session time of 19 minutes, when occupancy rose to 92.6% there was a corresponding rise in session time to 68 minutes on average.

Similarly in Casino E, at occupancy rates of 12% the average session was only 6.5 minutes, when occupancy rose to 94.2% the average session time rose to over 113 minutes.

Although the effect of increased occupancy rates on session length / games played is not 100% linear in all cases, there is a clear, demonstrable and repeatable correlation which strongly supports the hypothesis that restricted availability of B1 machines leads to significantly increased session play where there do not appear to be any other influencing factors.