## Introduction

n recent years, changing governmental regulations have permitted more lotteries to sell via digital channels, and existing digital lotteries have experienced growth.

As lottery continues to evolve online, it's important to understand the performance determinants for a purchase and distribution method that is not only capable of reaching new players, but has far-reaching potential to drive innovation in lottery games and the player experience.

There is much discussion in the industry about the factors that influence the success of digital lotteries, yet these perspectives have been largely conjecture. To provide an initial, quantified outlook on the performance determinants, IGT's Scott Gallagher tested a set of common hypotheses in a study entitled "The Digital Lottery Experience," incorporating data from 19 lotteries in Europe, North America, and Australasia that operate digital lotteries.

The launch of an interactive sales platform involves changes to a lottery's culture and organizational structure, not to mention a financial investment. With a focus on supporting customers' growth, IGT offers this quantitative research to help lotteries understand the factors that can impact the success of operating online and better determine how their online sales are likely to develop over time.

## Realizing the Potential of Digital Lottery

What drives success when a lottery introduces digital sales? Digital channels can be broadly defined as internet-based, including desktop, laptop, and mobile devices.

The expected impact of introducing digital lottery sales is two-fold. One aspect is an anticipated increase in gross sales volumes via the attraction of new players and the increased spend from existing players. The second aspect is lowered costs via direct sales to consumers.

At a time when many lotteries are finding it challenging to appeal to a younger player base, the typical online consumer represents the type of player lotteries must engage to ensure a more sustainable future. In this context, the historical marketing model of lotteries-relying on anonymous purchase at physical retail, supported by mass-market communications-is becoming less relevant, particularly with new groups of potential players. Digital lottery, especially with a strong mobile component, is a means to refresh lottery's relevance and provide a platform that meets a wider range of needs and preferences.

As much as digital lottery represents enormous growth potential, it is an area that is still emerging in many markets. While a significant amount of study has been done to understand the performance of individual lotteries, this study has looked more globally to see if there are common factors that might explain relative performance differences and expectations.

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## Lotteries Can Benefit from Shared Learnings

The oldest online lotteries have now been in operation for more than two decades, and in Europe there are no less than a dozen lotteries that have been operating online for more than a decade.

Understandably, lotteries are interested in learning from others who have such programs underway. Commonly asked questions about the scope of potential impacts were summarized recently by the governor of a U.S. state that is considering creating an online lottery: "Has it increased revenue? Has it changed the nature of the players in the game? Has it had a big impact on local retailers or not?"

In North America (26\% of total worldwide lottery sales), only $15 \%$ of lotteries offer digital sales channels. In Europe (41\% of total

worldwide lottery sales), $75 \%$ of lotteries offer digital lottery, though within digital lotteries, performance varies greatly'. Key large lottery markets such as Italy and Spain generate very low sales (about 4\%) via digital channels, while elsewhere in Europe, the top tier of digital performance is between $30 \%$ (UK) and $50 \%$ (Finland) ${ }^{2}$. In the middle strata in Europe, the average is about $8-11 \%$.

Some of these performance variations can be attributed to cultural habits and market factors. In Italy, for example, where concerns about fraud and governmental tracking have made consumers wary of leaving a digital footprint, only about 3\% of retail sales occur online (compared to $17 \%$ in the UK, $10 \%$ in France, and 15\% in Germany)³. And despite the fact that Italians use mobile devices at a higher rate than most industrialized countries, the country's regular lottery players prefer to purchase tickets at retail as part of their daily routine. Spain has low levels of online retail overall (4.8\%) ${ }^{4}$. In Finland, by contrast, lottery was one of the first products available online, and the lottery was a driving factor behind the country's ecommerce expansion. As the world's longest-established digital lottery, launched in 1998, it now offers a full portfolio of products and operates within a culture that is highly receptive to ecommerce.

With such varied performance and relatively little quantitative research, it is difficult to draw conclusions about success variables in the digital channel, but there is a common set of questions to examine.

## Questioning the Assumptions

With the rise of digital lotteries have come some common assumptions about the factors that affect performance.

To learn more about whether these assumptions actually account for the success and the variability of digital lottery performance, "The Digital Lottery Experience" examined the following questions:

- Is the number of years a lottery has operated an interactive channel a positive indicator of performance?
- Are multi-channel players more valuable than single-channel players?
- Is social influence a factor in channel selection?
- Does the type of product offered impact a digital lottery's performance?
- Is transaction convenience a determinant of channel selection?
- How do online sales impact in-store spend?

The quantitative study measured performance in two ways: relative performance, expressed as a percentage of total lottery sales, and absolute performance, expressed as per capita sales. (See page 10 to read more about the Research Methodology.)

## Six Success Factors

Having tested the previous questions, relying primarily on regression and correlation analysis of data from 19 lotteries in Europe, North America, and Australasia, the research yielded the following findings:


Factor \#1
Experience Counts
The number of years a lottery has operated a digital channel is a positive determinant of performance. Of the 19 lotteries surveyed, the top five in both percentage of interactive sales and per capita sales all have at least 10 years of experience operating digital lottery. Moreover, a plot of average digital lottery sales shows gradual, steady growth over time.

There are several likely reasons for this. As experience with the digital channel grows and the market matures, lottery operators are now serving a larger customer base that is easier to segment and target. In this regard, player analytics make it easier to both gain a deeper understanding of players and know how to message to them.

With greater size comes economies of scale that drive down costs. And, as Karri Paavilainen, IGT Senior Director, iLottery Services, explains, "Over time, interactive lotteries accumulate a player base of relatively high-spending, loyal players."

Further explanatory factors include changes in a lottery's organizational structure, the easing of regulatory constraints, and an increase in social acceptance as more players engage online.


Factor \#2
Ecommerce: Prevalence is Power
Across the study sample, a highly correlated variable with a lottery's interactive performance is the overall prevalence of ecommerce (for non-lottery purchases) within a given jurisdiction. There is great variability in the online share of retail trade across different markets, and this correlates with digital lottery performance. For example, in some very successful interactive lotteries, such as the UK, the market level share of online retail exceeds $17 \%$. This contrasts with markets like Italy, where the online share of trade is about $3 \%$.

In other words, in countries where consumers generally engage in online shopping, the potential for interactive lottery success should be higher. Analysis of the data found that for every percentage point increase in the ecommerce share of total retail, digital lottery should benefit by a $2.48 \%$ increase in share of lottery sales.


The study does not explore the factors underlying this correlation, but it is perhaps intuitive that as a society becomes more accustomed to transacting online, its willingness to participate in lottery via this medium increases correspondingly. In the U.S., where the prevalence of ecommerce is growing $\left(8.2 \%^{5}\right)$, there is high potential for interactive lottery success.

Factor \#3
Content Matters
The type of product offered by a digital lottery can significantly impact performance. This finding is aligned with academic research and other writing on ecommerce trends, which suggest that certain products are better suited to interactive channels, such as tickets, music, and books, where consumers are less likely to want to touch or try on a product before they buy.

The study found that in the interactive space, the best performing lotteries offer sports betting (not available in all jurisdictions), which is a product well-suited to online purchase. The study confirmed that in both relative and absolute terms, there is a strong, positive relationship between digital lottery performance and the performance of sports betting. In absolute terms, it is suggested that every additional one dollar a lottery has in per capita sports betting corresponds to an additional \$0.91 in per capita digital lottery sales. That said, digital lotteries may also benefit from other explanatory factors, such as years of experience.

The study further tested the hypothesis that a lottery with a high share of scratch-card sales may see a lower share of digital lottery performance, and concluded that retail instant-ticket performance has no impact on relative digital lottery performance.


## Factor \#4 <br> Make It Easy for Players to Register and Make Payments

Specific, qualitative factors concerning the operation of the digital channel-such as the quality of a mobile offer, number of products available, and presence of dedicated online products-have limited explanatory potential in terms of performance, with the exception of ease of player registration to interactive wagering, which is a significant variable.

Some lotteries are constrained by their regulations and must require players to complete a multi-stage registration process such as filling in an online form and then providing physical proof of their identity, either through the mail or to a lottery retailer, before they can wager and claim prizes. This solution has been shown to result in abandonment of up to $50 \%$ of potential players. Other lotteries are permitted to authenticate potential players through an online-only, single-step process, and this results in a significantly higher success rate.

Ease of access also encompasses other variables beyond the registration process, including payment options and e-wallet management. In this context, another potential barrier relates to the payment options players are offered. Players expect to be offered the same payment options for lottery as any other online purchase. Some jurisdictions are constrained by regulations concerning payment options to fund online lottery accounts, which can further contribute to player attrition due to inconvenience.


Factor \#5
Bricks and Mortar Aren't a Factor
lt's reasonable to assume that physical proximity to retail would negatively impact the use of digital lottery channels. That is, if retail lottery is inconvenient, then digital could have greater potential. Yet the research suggests that the level of physical retail penetration in a lottery market has no significant impact on digital lottery performance, and, if anything, better retail penetration is associated with slightly better digital performance.

Looking to top-performing digital lotteries, like the UK and Finland, each has a level of retail penetration of approximately one point of sale per 1,400 people, which is very much in line with European averages.

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## Factor \#6

## Growth is Possible

 Across Multiple ChannelsIt has been widely assumed within and outside the lottery industry that the addition of online sales, though generating incremental revenue, would come in part from cannibalized retail-channel sales. An analysis of 17 of the 19 lotteries from this study (for which retail data was available for the year pre-launch of a digital lottery channel) shows varied results. In absolute terms, 60\% (10 of the lotteries) grew their physical retail business. The study found the mean retail lottery sales compounded annual growth rate over each period (timed differently for each of the sample lotteries) to be $2.7 \%$, with a median of $1.1 \%$.

The possible cannibalization of physical retail by online channels is a valid consideration, and one not only applicable to the lottery industry but all retail. In this study, the fact that 60\% of the lotteries analyzed have actually grown physical retail sales since the launch of interactive demonstrates that traditional channel sales growth is still possible. It is highly plausible that many lotteries have not yet reached their overall sales potential, and thereby with product initiatives and continued investment in retail may continue to grow that channel.

This finding does not definitively answer the question of whether an online channel will detract from retail sales. Based on sales data in Finland and the UK, there's no evidence that the launch of a digital lottery has taken sales away from the physical retail channel, particularly in the first years of operation.

What's more, the consequences of not having a digital channel are potentially significant, as a lottery runs the risk of never capturing a segment of potential players. Lotteries must balance the risks on both sides and continue to invest in the physical retail channel as the digital channel becomes more established. The opportunity and the means to managing risk is to invest in and grow both channels.

## Key Takeaways

Experience Counts: Average digital lottery sales show gradual, steady growth over time.


Ecommerce Prevalence is Power:
In countries where people engage in general ecommerce, the potential for digital lottery can be expected to be higher.


Consider Content: The type of product offered by a digital lottery can significantly impact performance.


Ease of Access Matters: Higher success relies, in part, on the degree of ease in player-registration and payment options. Look Beyond Bricks and Mortar: The level of physical retail penetration in a lottery market has no significant impact on digital lottery performance.

Balance Risk: There is not yet any conclusive evidence that a digital lottery detracts from sales via the physical retail channel. Overall, lotteries need to balance this possibility against losing the opportunity to modernize and appeal to a digitally-reliant player segment for whom physical lottery is increasingly irrelevant.

## Research Methodology

A Quantitative Approach
The academic study, "The Digital Lottery Experience: The Determinants of Interactive Lottery Sales Performance," by IGT's Scott Gallagher, Senior Marketing Director, investigated the determinants of success related to the sale of a lottery's products via digital channels.

The quantitative study, completed in December of 2014, measured performance in two ways: relative performance, expressed as a percentage of total lottery sales, and absolute performance, expressed as per capita sales. Relying primarily on regression and correlation analysis, the study tested six hypotheses that were assumed to be determinants of digital lottery performance, where the dependent variable of each of the hypotheses was the performance of the digital lottery, and the independent variable was the hypothesis. Based on the findings of these tests, the study proposed a model which quantified the most significant variables and their impact on digital lottery performance variance.

The study incorporated data from 19 lotteries across Europe, North America, and Australasia that operate digital lotteries. Lottery-specific data was overlaid with relevant socio-economic metrics.

To supplement "The Digital Lottery Experience: The Determinants of Interactive Lottery Sales Performance," IGT updated key data in 2017 and used additional primary and secondary research from the Centre for Retail Research and the U.S. Census to add context to the study's findings.


## Stage 1

Regression analysis plotting six hypotheses against the actual performance of digital lotteries in both total lottery sales and per capita sales.


## Stage 2

A model quantifying the most significant variables and their impact.

## About

nternational Game Technology is the global leader in the lottery and gaming industries. We enable players to experience their favorite games across all channels and regulated segments. From slot machines and social games to lottery terminals and business management, we anticipate the demands of consumers wherever they decide to play. As the lottery category leader, we serve 39 out of 45 jurisdictions in the United States offering lottery and run 79\% of wagers through our systems. We also assist more than 20 national lotteries, including the United Kingdom, Finland, Poland, Czech Republic, Italy, Mexico, and Colombia.

## Contact

For more information about "The Digital Lottery Experience" and the creation of an omnichannel, player-centric digital lottery supported by responsible gaming principles, please contact:

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