Summary

# Cost-benefit analysis of a licensing scheme for gaming in Norway


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*In this report, we present a comprehensive cost-benefit analysis of the effects of introducing a licensing scheme for gaming in Norway. This analysis should be viewed as an extension and revision of the study Rambøll Management Consulting delivered to the Norwegian Ministry of Culture in January 2015. The analysis concludes that a licensing regime will be economically profitable, compared to today's gaming monopoly. The most important reason for this is that much of the gross gaming revenue from Norwegian gamers will disappear out of the country if the current gaming monopoly is upheld. By taxing a portion of these revenues, proceeds to Norwegian society will increase markedly and more than offset reduced profits for the Norwegian gaming companies.*

*Under a licensing regime, revenues to the state – which in turn can be transferred to sports, culture and the voluntary sector – could be collected through a tax on the gaming companies' activities in Norway. If the tax rate is too high, the gaming companies will choose not to apply for a license, with the effect that the taxable revenue will be low. If the tax rate is set too low, tax revenues will not justify the costs arising from the introduction of a licensing regime. In consequence, the scheme will not be economically profitable. The analysis shows that a regime with a tax rate of 15 percent of the companies' gross gaming revenue[1] is likely to result in the largest economic benefit, although there is some degree of uncertainty related to this estimate.*

*This report was commissioned by a group of international gaming companies represented by Betsson, Cherry Group, ComeOn, Guts and Unibet. Menon would like to thank for valuable input to this study from representatives of Betsson, Cherry Group, ComeOn, Guts, Unibet and Norsk Tipping. The authors in Menon Business Economics AS are responsible for all content of this report.*

**About Menon Business Economics**

Menon provides consulting services to businesses, organizations, and governmental agencies and ministries. While our work primarily revolves around analytics, we also assist in decision making and implementation. We have performed analysis, developed the foundation for decision making and facilitated strategy processes for shipping groups, insurance companies, airlines, industry organization and ministries. Menon has an extensive professional network that both complements our own expertise as well as widens our analytical capacity.

[1] Gross gaming revenue is here defined as the revenue from games that the providers are left with after paying out winnings to the players and before bonuses and jackpot contributions from the company have been taken into account.

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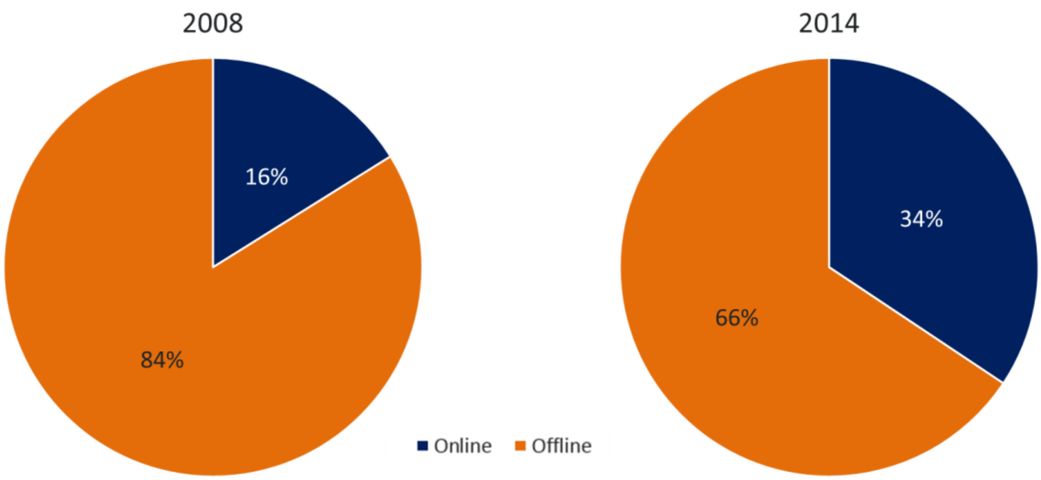
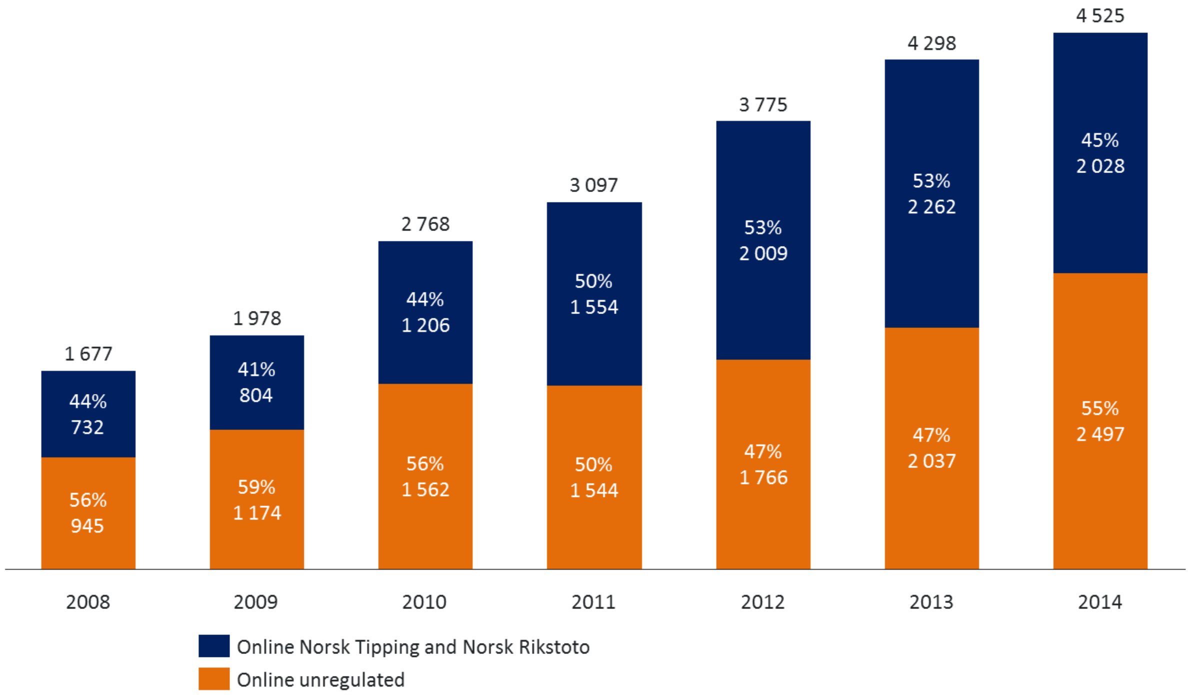
## Background

The gaming market in Norway is undergoing significant changes. An ever-larger share of the gaming market is moving online, where the Norwegian providers (mainly Norsk Tipping) meet tough competition from international gaming companies. Norsk Tipping has adapted to the new competitive situation by focusing more on internet-based games and expanding the range of games it offers. Amongst other initiatives, it has introduced games segments that were previously reserved for international companies, such as online casino and online slot machines. As a consequence of this increased competition, we have seen a marked increase in revenues from Norwegian players to international actors.

**Development in the distribution of gross gaming revenue between online and offline gaming. Source: H2 Gambling Capital and Norsk Tipping**




**Distribution of gross gaming revenue online between Norwegian and international actors (million NOK). Source: H2 Gambling Capital**



As illustrated in the figure above, approximately half of the total gross gaming revenue from Norwegian online players goes to international actors. Norsk Tipping and Norsk Rikstoto have managed to keep their market shares with the help of a significant increase in their online activities.

The consequence of this development, however, is that an ever-larger part of the revenues from Norwegian players is no longer subject to control by Norwegian legislation and administration. This leads to a less regulated market and lost revenues for Norwegian society. This will especially affect sports, culture and voluntary organizations, which have received significant amounts of funding from the monopolies' profits in the past.

The same development can be seen across all of Europe. As a consequence of market changes, a number of European countries have recently moved from monopoly-based regulation (or an unregulated market) to introducing a public licensing regime for gaming. The only countries that have not introduced a licensing regime for gaming at the present point are Luxembourg, Austria, Slovakia, Finland, Sweden and Norway.[2] Some of these countries, such as Sweden, are now looking at how a potential licensing regime could contribute to achieving the goals the authorities have set for gaming activities in the country. The European Commission has advocated general political principles for the gaming industry that deal with problem gambling, match-fixing and administrative cooperation procedures for the industry across different member states.

The latest Norwegian government declaration expressed a desire to examine a possible licensing regime for gaming companies on the Norwegian market. The purpose of this study was to investigate whether such a scheme could lead to increased revenues for voluntary organizations while also safeguarding considerations of social policy. Rambøll Management Consulting was commissioned by the Norwegian Ministry of Culture to study the consequences of a possible licensing scheme for the Norwegian gaming market (Rambøll, 2015). The mandate for the assessment was limited to studying the effects of a licensing scheme on government revenues and funding for sports, culture and voluntary organizations. The Rambøll report can therefore not be considered a complete cost-benefit analysis.

## Cost-benefit analyses in brief

Menon has been commissioned by a united gaming industry[3] to conduct a comprehensive cost-benefit analysis of possible licensing regimes in Norway. The calculations in this analysis have been executed in accordance with the Norwegian Finance Ministry's circular 109/14 for cost-benefit analyses (Ministry of Finance, 2014) and the Norwegian Government Agency for Financial Management's guide for economic analyses (DFØ 2014). A cost-benefit analysis is supposed to consider costs and benefits for all stakeholders in society. In addition to the state and the voluntary sector, consequences for consumers, the business and industry sector and the rest of the community must also be taken into account. In addition, both welfare effects and how the measure affects income distribution should be considered.

It has become more and more common to conduct this type of economic analysis prior to major public investments or regulatory or legislative reforms with significant economic effects. The introduction of a licensing regime for gaming in Norway must be regarded as a significant reform in a market that generates revenues of over 10 billion NOK per year. In our analysis, we consider the various cost and benefit effects of the scheme. We analyze the effects of different tax rates and compare them to each other with the help of a cost-benefit account, measured against a continuation of the current scheme.

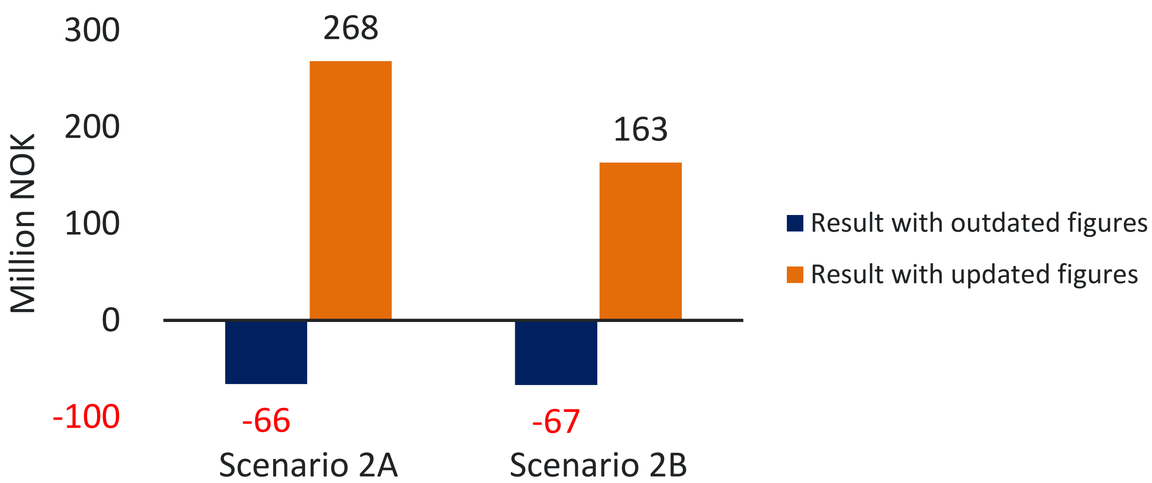
[2] Portugal and the Netherlands are in the process of introducing licensing schemes.
[3] As represented by Betsson, Unibet, ComeOn, Cherry Group and Guts.

In many cases, there will be certain types of benefits or costs that are not possible to quantify. These must be taken into account, and assessed against the difference between those costs and benefits that have been assigned a monetary value (Finansdepartementet, 2014). This will provide an indication of how much the non-quantifiable benefits must be worth in order for the project to be economically (un)profitable. An important component of the non-quantifiable part of this analysis is the extent of problem gambling under different regulatory regimes. This factor is discussed in more detail further below in this document.

## Revision of revenue figures

It is a very important feature of this analysis that revenue estimates for the international gaming companies in Norway have been adjusted sharply upwards (i.e., nearly tripled) compared to the figures used in the study by Rambøll Management Consulting (2015). This adjustment of revenue figures is of critical importance in order to ensure a relevant and truthful representation of the market as it is today. Such a comprehensive revision of figures must necessarily have dramatic effects on the outcome of a cost-benefit analysis, as the companies' revenues provide the basis for the tax revenues that can be channeled to Norway from abroad through the licensing scheme. These tax revenues are a net benefit for Norwegian society. It is important to bear in mind that the model calculations (excluding the lottery segment)[4] carried out by Rambøll Management Consulting would have resulted in higher revenues for the state and the voluntary sector compared to today's situation if the updated figures had been used. In the figure below, we have illustrated the effect of using the new set of figures in the model calculations.

**Net effect of introducing a licensing scheme for the gaming market. Calculated as in Rambøll (2015) with both outdated and updated figures.**




In scenario 2A, Rambøll has assumed a tax rate of 20 percent on gross gaming revenue for licensees and a liberal accountability regime. Scenario 2B is based on a tax rate of 15 percent on gross gaming revenue and a somewhat stricter accountability regime.

[4] Our analysis does not include any calculations related to the potential regulation of the online market for lottery. The main reason for this is that the share of online lottery revenues that goes to international actors is so small that competition is a negligible factor in this segment. A regulation of the lottery market will therefore primarily concern Norwegian actors and is consequently outside the mandate for this report.

## Market development up to 2020

The cost-benefit analysis is based on an assumed development trajectory in the period up to 2020. This requires us to produce realistic estimates for market development, both for a scenario where the current monopoly regulation continues, and for a licensing scheme with a series of alternative tax rates. Our projections are mainly based on data from H2 Gambling Capital and Norsk Tipping, but in order to ensure that the prognoses of these companies are realistic, we have also developed stylized accounts for a representative international gaming company, based on data from existing companies' accounts and interviews with industry representatives. We have used these stylized accounts to find out how many of the gaming companies are likely to participate in the licensing scheme at the various tax rates.

We have calculated future market development under the present monopoly scheme, and for the introduction of a licensing scheme with a tax on gross gaming revenue, at respective tax rates of 5, 10, 15 and 20 percent. Our estimates of how companies will choose to market themselves, how big a market share they will achieve in the individual segments etc. are partially based on the prognoses described above and partially on experience from other countries. This especially applies to Denmark, which introduced a licensing regime with a tax of 20 percent on gross gaming revenue in 2012. Experience from Denmark shows that the former Danish monopolist significantly increased its spending on marketing, and that the company did not lose market share in those segments of the online market it operates in.

**Expected future development of the gaming market under the different alternative regimes in 2015 and 2020. Market size and actors' share of the total market.**

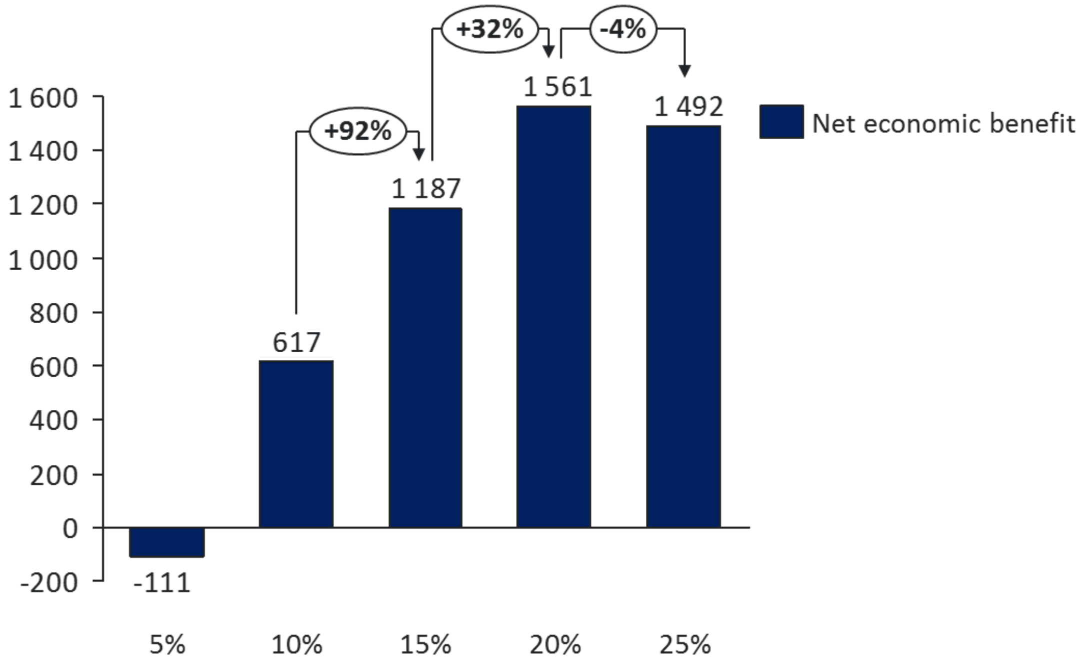
| | | Total size, gross gaming revenue for the gaming market, NOK millions | Norsk Tipping and Norsk Rikstoto offline | Norsk Tipping and Norsk Rikstoto online | Licensed online | Unregulated online |
|---|---|---|---|---|---|---|
| **2015** | | 10 882 | 55% | 20% | 0% | 25% |
| | | | | | | |
| **2020** | Null alternative: No change | 13 097 | 45% | 23% | 0% | 32% |
| | 5% tax | 14 213 | 41% | 21% | 34% | 3% |
| | 10% tax | 14 073 | 42% | 22% | 29% | 8% |
| | 15% tax | 13 774 | 43% | 22% | 25% | 10% |
| | 20% tax | 13 518 | 44% | 22% | 22% | 12% |
| | 25% tax | 13 189 | 45% | 23% | 17% | 16% |

## On economic profitability

In total, a licensing regime for gaming in Norway looks profitable at a tax rate of 10 percent or above. The most important reason for this is that much of the gross gaming revenue from Norwegian players will disappear out of the country if today's gaming monopoly is upheld. By taxing part of this revenue through a licensing scheme, revenues to Norwegian society will rise markedly and more than compensate for reduced profits on the side of the Norwegian gaming companies. Before non-quantifiable effects are taken into account, a tax rate of 20 percent on the companies' gross gaming revenue appears most profitable. These non-quantifiable effects however make it look likely that a 15 percent tax rate would be optimal for society as a whole. The most important non-quantifiable effects apart from problem gambling are a higher consumer's surplus and profits from increased export of marketing services; these indicate that lower tax rates might be more profitable than calculated.

The figure below shows the change in the quantified net benefit for the individual tax levels. All values are shown as changes from the null alternative, i.e., a continuation of today's gaming monopoly.

**Net economic benefit from a licensing scheme at different tax rates, 5%, 10%, 15%, 20% and 25%. Shown in net present value (millions 2015-kronas) for the whole analysis period (2015-2020).**



In the table below, we present a complete overview over the quantifiable effects. Pure transfers are included as a change in costs for one actor and a corresponding change in revenues for another.

**Total overview over quantifiable effects in net present value in million NOK over the analysis period, 2015-kronas**

| | 5% | 10% | 15% | 20% | 25% |
|---|---|---|---|---|---|
| **Norwegian gaming companies** | | | | | |
| Higher tax and reduced profits | -153 | -3215 | -5129 | -7043 | -8957 |
| Higher marketing spending | -901 | -901 | -901 | -901 | -901 |
| **Public sector** | | | | | |
| Higher tax revenues from Norwegian companies | 153 | 3215 | 5129 | 7043 | 8957 |
| Higher tax revenues from licensed companies | 931 | 1524 | 1990 | 2295 | 2227 |
| Increased activity for the Norwegian Gaming Authority[5] | -45 | -45 | -45 | -45 | -45 |
| Gaming Authority fee income (higher activity) | -93 | -76 | -66 | -57 | -45 |
| Social cost of public funding[6] | -3 | 116 | 209 | 270 | 256 |
| **Norwegian players and private sector** | | | | | |
| Higher consumer's surplus | + | = | +/- | +/- | +/- |
| Higher revenues from marketing spending to marketing actors | + | + | + | + | + |
| More problem gambling | - | - | - | - | - |
| NET BENEFIT | **-111** | **617** | **1187** | **1561** | **1492** |
| ANNUITY | **-25** | **139** | **267** | **351** | **335** |

## On gambling addiction

The economic benefit from a licensing scheme can be lower than calculated if the scheme leads to a significant increase in the extent of problem gambling. It is however uncertain how large a potential increase in problem gambling would be, as a licensing scheme would allow the Norwegian authorities to regulate a much larger part of the market than a continuation of the current gaming monopoly. Many of the gaming companies that operate in the Norwegian market are stock listed companies with well-developed systems to identify and counteract problem gambling. A number of companies use this clear social awareness in their marketing efforts towards Norwegian customers.

A licensing scheme would mean that new measures against problem gambling and stricter requirements for international gaming companies in the Norwegian market can be introduced. A licensing scheme will make it

[5] The reason why we have divided the higher task load for the Gaming Authority into two separate categories is that we assume that one part will be increased from the Gaming Authority's side, which means the marginal social cost of public funds must be deducted. The other part does not incur a social cost of public funding as we follow Rambøll's (2015) assumption that this will be financed through a fee from the new licensees. Therefore this share has been deducted from this group.

[6] This cost includes both tax benefit and costs.

easier for the gaming companies to coordinate these systems so that more problem gamblers can be identified at an earlier stage. How much of the market can be regulated in this way depends however on how many companies choose to apply for a license and how competitive these are in comparison with non-licensed companies. This will vary according to the tax rate. With a higher tax rate, there will be fewer licensed companies that are less competitive compared with non-licensed companies, which might result in more problem gambling. This indicates that the non-quantifiable costs associated with problem gambling will be higher for higher tax rates, which further supports the hypothesis that a tax rate of approx. 15 percent might be more economically profitable than a 20 percent tax rate.

Shortly after the completion of this report, the Norwegian Gaming Authority published its own report on gambling addiction and problem gambling (Lotteri- og stiftelsestilsynet, 2015). The Gaming Authority's main conclusions are as follows:

*Conclusions on consequences for social welfare (Lotteri- og stiftelsestilsynet, 2015)*

- *From a social welfare perspective, today's monopoly model will be the best alternative if Norwegian authorities succeed in locking out unregulated operators from the Norwegian gaming market.*
- *If Norwegian authorities do not succeed in locking out unregulated operators, a licensing model will give the authorities control over the supply of games for a significant majority of the players – compared to approximately half today*
- *Assuming that the licensed market comprises pervasive accountability measures across operators that hold both gaming companies and players accountable, a licensing system might result in fewer negative consequences than the monopoly model.*

The Gaming Authority's conclusion does not directly recommend a licensing scheme, but assuming that measures to lock international gaming companies out of the market are not likely to be successful, its conclusion is in line with ours, where a licensing scheme with sufficient accountability measures would provide more control over problem gambling than the current regime.

## Other uncertainties related to the calculation of economic profitability

As with all cost-benefit analyses, there is a significant degree of uncertainty. The economic profitability of a licensing scheme will be largely governed by how much of the market can be channeled into the licensing scheme, and how much market share Norwegian gaming actors are going to lose. To illustrate the effect of changing the premises on which our assumed market development is based, we have tested how sensitive our conclusions are to changes in market development.

Since our main analysis assumes that future gross gaming revenue for Norsk Tipping and Norsk Rikstoto will remain unchanged under the different licensing regimes, we test how sensitive our analyses are for an assumed loss of market share by the Norwegian actors. If we assume a loss of 15 percent market share for the Norwegian companies, a licensing regime will become unprofitable at a tax rate of 10 percent (measured in gross gaming revenue), but profitable at rates above 10 percent. If the licensing scheme causes a loss of market share within online activities (excluding lottery) of 45 percent for Norsk Tipping and Norsk Rikstoto, and Norsk Tipping's offline sports betting falls by 30 percent, a tax rate of 15 percent will also prove economically unprofitable, while the licensing scheme remains profitable at a tax rate of 20 percent. Experience from other countries indicates that the probability of such a significant fall in the market share of national actors is very small.

Since there is a certain amount of uncertainty related to Norsk Tipping's and Norsk Riktoto's choice of marketing strategy under a licensing scheme, we have tested how sensitive our results are to an increase in marketing costs for TV and sponsorships by these actors. In our main analysis, we have assumed that both Norsk Tipping and Norsk Rikstoto increase their spending for TV-advertising and sponsorships by 50 percent. If we increase spending by 100 percent, a licensing scheme will still remain profitable in the 15 and 20 percent scenarios.

## Distribution effects

In addition to the purely economic profitability effects of a licensing scheme, a change in gaming regulation will also lead to some major changes in the distribution of resources between different actors in society. The most important distribution effect will be a reduction in direct transfers to sports, culture and voluntary organizations, while tax revenues to the state increase significantly.

**Difference from today's situation in disposable income to charitable causes depending on tax level for the individual years (current prices, NOK millions).**

| Tax level | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|
| **5%** | -27.3 | -17.8 | -0.9 | 11.0 | 23.1 |
| **10%** | 89.2 | 99.7 | 131.9 | 154.2 | 183.6 |
| **15%** | 189.0 | 199.8 | 235.8 | 262.1 | 297.2 |
| **20%** | 257.3 | 267.0 | 302.4 | 330.7 | 368.7 |
| **25 %** | 261.2 | 263.9 | 287.4 | 305.0 | 327.9 |

In total, a licensing scheme will nevertheless lead to a rise in total disposable income available for charitable causes in the form of tax revenue and profits from Norwegian gaming companies. If all income from gaming is earmarked for the same purposes as today, sports, culture and voluntary organizations will receive higher transfers than under a continuation of the current gaming monopoly. The amount of resources transferred to sports, culture and the voluntary sector will however be subject to more political control than under the present regime. The degree to which distribution between different charitable causes will change if a licensing scheme is introduced depends therefore more on political prioritizations than on the form in which the gaming market is regulated.

Increased marketing activity through direct sponsoring of for example sports clubs might lead to a situation where individual organizations will experience an increase in direct transfers, but there is reason to believe that this will primarily benefit those clubs with the strongest brands. Irrespective of this, there is little doubt that a licensing regime will reduce the most important sports federations' control over the distribution of funds.

A licensing scheme can also increase the risk for problem gambling. As mentioned above, it is uncertain if and to which extent the problem will increase as a consequence of a licensing scheme. If the risk for problem gambling proves to increase, this will result in unwanted distribution effects because an especially vulnerable group in society is affected negatively. It is however possible to introduce a number of compensatory measures, not least because the total revenue available for charitable causes will rise. This makes it possible for the state to support prevention and treatment of gambling addiction to a bigger extent than at present. Better systems for the identification of problem gambling might also help to target these efforts more accurately and precisely than under today's regulatory regime.

## Overall assessment and conclusion

The Norwegian gaming monopoly is under pressure. An ever-larger part of the gaming market is moving to the internet where competition from international gaming companies is tough. As a consequence of this, more and more of the gaming revenue from Norwegian players is going to international actors. The effect of this is a loss of revenues for Norwegian society and less public control over the market actors. A licensing scheme for gaming in Norway is therefore likely to be economically profitable. The reason for this is that the overall revenues available for charitable causes will rise and a larger part of the market for gaming will fall under Norwegian regulation. Even if we assume a considerable increase in marketing costs and significant loss of revenue for Norwegian gaming companies, a licensing scheme appears economically profitable. Despite significant uncertainty related to future market development, our conclusions appear robust. Economic profitability however requires that the tax rate is set high enough to compensate for a reduction in direct transfers to sports, culture and voluntary organizations.

The disadvantage of a licensing regime is that it will increase exposure to gaming-related marketing. This can increase the risk of problem gambling and somewhat reduce the overall benefit from such a scheme. On the other hand, a licensing scheme will ensure that a larger part of the gaming market falls under Norwegian regulation, which makes it possible to set strict requirements for accountability. The design of a potential licensing scheme must therefore be based on a balance between the desire for the highest possible tax revenues from foreign actors and the need to regulate as much of the market as possible. A high tax rate will result in large revenue increases to Norwegian authorities, but reduce the share of the gaming market under the authorities' control and increase the risk for more problem gambling. A lower tax rate also increases the probability of reduced prices for games from international companies, which will be a benefit to Norwegian consumers. Export of marketing services will also increase with a lower tax rate. This might result in higher profits for Norwegian companies offering marketing services.

Even though a licensing regime with a 20 percent tax rate on gross gaming revenue appears to be the most economically profitable alternative, the non-quantifiable effects of such a scheme indicate that a lower tax rate could lead to higher overall benefits. Experience from other countries that have introduced licensing regimes also seems to point in the direction that tax rates as high as 20 percent increase the risk that over time, some companies will choose to leave the licensing scheme. In this case, tax revenues and control by the authorities will gradually decrease, which will reduce the long-term economic benefits of the scheme. We are therefore of the opinion that a licensing regime with a tax rate closer to 15 percent will probably be more profitable overall.

The most important distribution effects resulting from a licensing scheme entail that direct transfers of funds to sports, culture and voluntary organizations are reduced and moved to the state in the form of taxes. The consequence of this is that the distribution of disposable income to charitable causes will be subject to more political control. In total, disposable income available for charitable causes will rise, which means that in principle, transfers to *all* charitable causes can be increased. There is also reason to believe that a higher level of control by the authorities will make it easier to introduce measures against problem gambling, and thus to counteract many of the negative effects a licensing scheme might have on the extent of problem gambling. There is therefore little reason to assume that undesired distributional effects will be large enough to exceed the overall economic efficiency gains from such a scheme.

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