

# MUSIC STREAMING IN DENMARK

An analysis of listening patterns and the  
consequences of a 'per user' settlement model based  
on streaming data from WiMP

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## Introduction

This report analyses how a 'per user' settlement model differs from the 'pro rata' model currently used. The analysis is based on data for all streams by WiMP users in Denmark during August 2013. The analysis has been conducted in collaboration with Christian Schlelein from Koda on the basis of data delivered by WiMP.

The report resembles a recent report done in Norway (Maasø 2014), and has adapted some focus points from that report in order to make the results comparable.

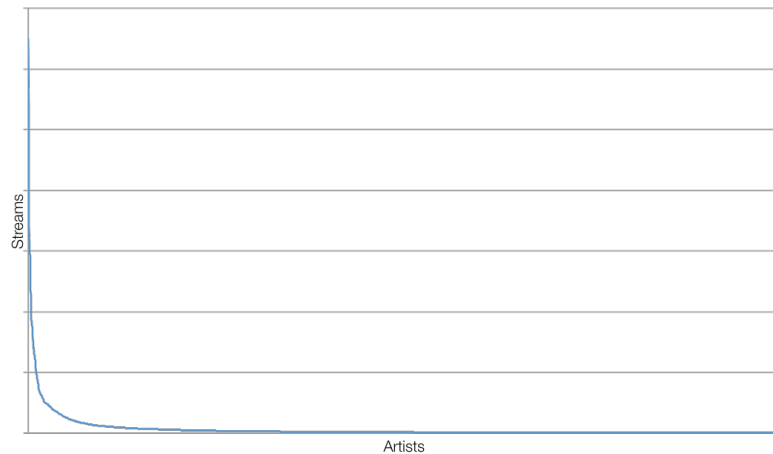
The data does not make it possible to distinguish between streams by paying and non-paying subscribers. The analysis is not conducted on the level of individual rights holders, but on the level of the performing artists or group. Also, the report analyses market shares, and does not take account of specific agreements between streaming services, labels and rights holders.

The analysis presented in this report is a part of the on-going research related to a PhD project conducted in collaboration between Roskilde University and Rhythmic Music Conservatory.

## Listening Patterns Among Streaming Users

Digital distribution of music offers, in principle, unlimited shelf space, which opens for an abundant choice of what has been called 'the long tail' (Anderson 2006). Initially, the hope was that limitless choice would lead to a differentiation in consumption. However recent research indicates that users are not necessarily interested in pursuing niche content, and are often hit by a tyranny of choice, effectively making the digital music market a 'Blockbuster' or 'Superstar' economy (Elberse 2013; Mulligan 2014). The data analysed for this report at first seems to support the latter point. Although the data makes a nice long tail curve, the tail is not as 'thick' as envisioned by Anderson. Rather, top 1% of the artist that were streamed during August 2013 account for 70% of streams, and the curve quickly flattens so that the bottom 95% of artists only account for only 10% of streams. It is worth noting that this does not include the vast number of artists that were not streamed at all during this month. If they had been included, the curve would be even more top-heavy.

Distribution of streams

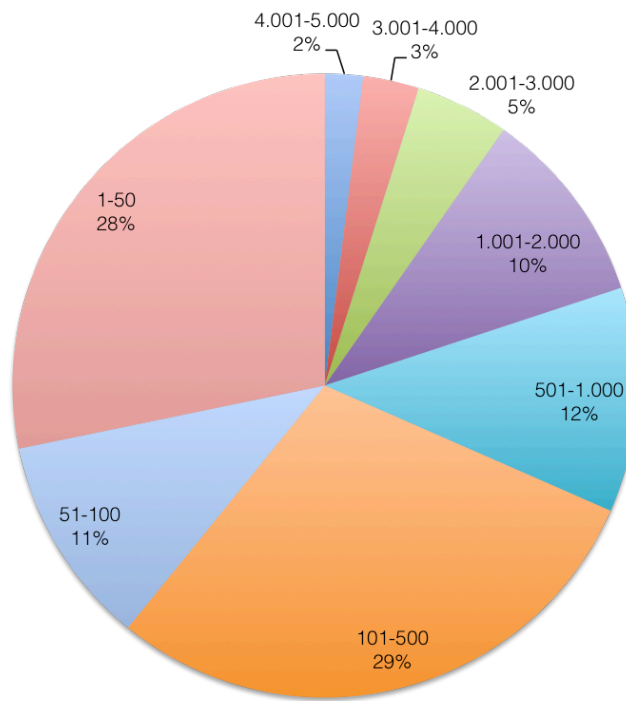


It is however also important to note that with streaming, the number of available catalogue expands significantly. For reference, one of the largest Danish retailers of CD's (Fona) has an active catalogue of 20.000 titles. This does not mean that they are available in stores, but rather that they are available for order – in some cases from the distributor. Furthermore, some artists account for several titles. Based on this, it is roughly estimated that a well-assorted record store will stock no more than 5.000 different artists. The rest of the artists available would therefore not be a part of the mainstream retail market for physical copies of CD's or LP's, but are more to be compared with underground artists selling recordings at their concerts or through personal websites.

For the sake of making the analysis more accurate in terms of the consequences for professional musicians, this report therefore focuses specifically on the top 5.000 artists.

If we isolate the top 5.000 artists, the distribution of streams becomes a lot less top-heavy. Top 1% of the top 5.000 artists (the top 50 artists) account for 28,2% of streams, and the top 20% of the top 5.000 artists account for 80,1% of streams in this segment. Although this might also seem as if there is a significant top-weight, but this distribution is in fact in line with the 'power law' (or Pareto principle) that characterizes distribution of revenue in a wide variety of markets (Anderson 2007). In comparison, the top 50 albums accounted for 46,3% of CD sales in Denmark in 2013 (IFPI 2014).

Distribution of streams  
Top 5.000 artists



This has significant consequences for how we understand the streaming market. On the one hand we can understand it as a blockbuster economy where a very small percentage of artists account for a disproportionately large share of streams. But on the other hand, this trend is to a large extent caused by an extreme expansion of available music on the market. If we choose to focus on artists that would traditionally have been a part of the retail market, the distribution is relatively balanced.

### Pro rata distribution

The current distribution model for streaming services is a pro rata model. This means that each track receives a fraction of the total payout that is proportionate to the track's share of total streams on the service that month. This distribution model is relatively simple to administer, but it also has a bias for quantitative listening.

As an example of this, a sample settlement can be made. Let us imagine a streaming service with only two tracks (X and Y) and two listeners (A and B). Listener A listens to track X 30 times and

track Y 10 times. Listener B listens to track X 10 times and track Y 350 times. The effect of the pro rata distribution is that track X receives only 10% of revenue, even though it is the favourite track of listener A. Because listener B listens streams more, some of the money paid by listener A ends up financing listener B's use.

	Streams by listener A	Streams by listener B	Total streams	Pro Rata Distribution
Track X	30	10	40	10%
Track Y	10	350	360	90%
Total	40	360	400	100%

### Per user distribution

In order to eliminate the bias towards quantitative listening, an alternative, user-centred, distribution model could be used. In this case each listener's subscription fee would be distributed to the artists this listener has listened to. In this case, the value of each stream would not be the same, but would be relative to how many tracks the individual listeners stream. So if a listener listened only to one artist, the listener's total fee (excluding the margins taken by the streaming service) would go to that artist.

In order to analyse the effects of this, I use the term *Dedicated Listener* to denote the equivalent of one listener's full amount of streams during one month.

Taking the same example as above, track X would have 0,778 (30/40 for listener A plus 360/10 for listener B) out of the two dedicated listeners, and therefore receive 38,9% of revenue. Track Y would have 1,222 dedicated listeners (10/40 for listener A and 350/360 for listener B), and therefore receive 61,1% of revenue.

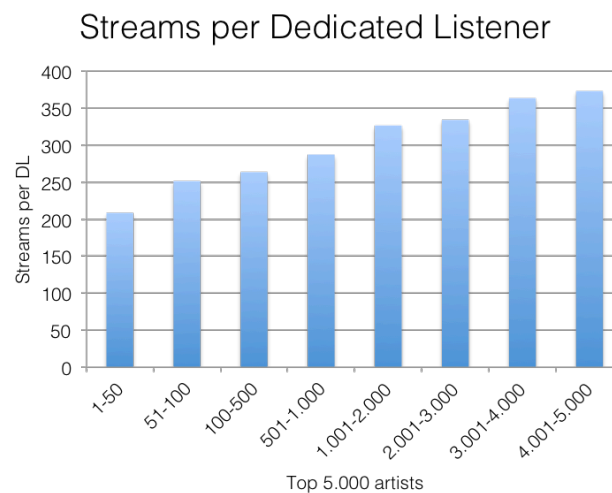
	Streams by listener A	Streams by listener B	Total streams	Dedicated Listeners	Pro Rata Distribution	Per User Distribution
Track X	30	10	40	$30/40 + 10/360 = 0,778$	10%	38,9%
Track Y	10	350	360	$10/40 + 350/360 = 1,222$	90%	61,1%
Total	40	360	400	2	100%	100%

The difference between the two models is that the per user model distributes money paid by the customer to the artists this listener actually listens to, without being affected by how much the user listens in total and relative to other listeners, thus re-establishing the connection between consumer and artist.

### Effects of shifting to per user distribution

Shifting to per user distribution would mean that artist payments would be governed by both the quantity of streams in relation to how much the specific users stream in total. It is therefore interesting to know how much listeners from different segments stream in total, as this becomes an important factor in how much artists get paid.

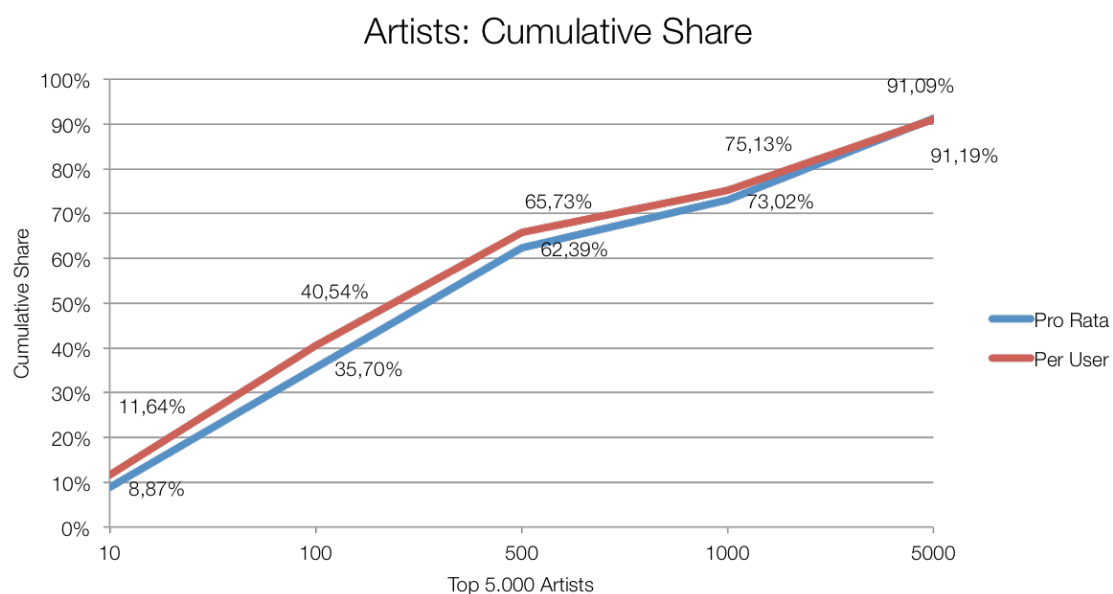
The number of streams per *dedicated listener* gives an indication of the intensity of use among listeners from different segments. The clear tendency among the top 5.000 artists is that the most popular artists have the least intensive listeners. Listeners of top 50 artists on average listen to 208,6 tracks per month, whereas less popular artists, on the other hand, are generally preferred by listeners that also listen to many tracks during a month.



It is important to note that these averages cover individual differences between artists. There are artists in all categories that would benefit from redistribution, and others that would suffer. The following analysis therefore only represents the average effects between different segments of artists.

Because the most popular artists have the least intensive listeners, per user distribution would generally move money from the tail towards the head. Overall, the two models would generate almost the same amount for the top 5.000 artists. The artists further down the tail benefit insignificantly (0,1%) from the pro rata model. But as it can be seen, top 5.000 accounts for more than 91% of all streams, which means that the payments for the individual artists beyond this point will be extremely small in any case.

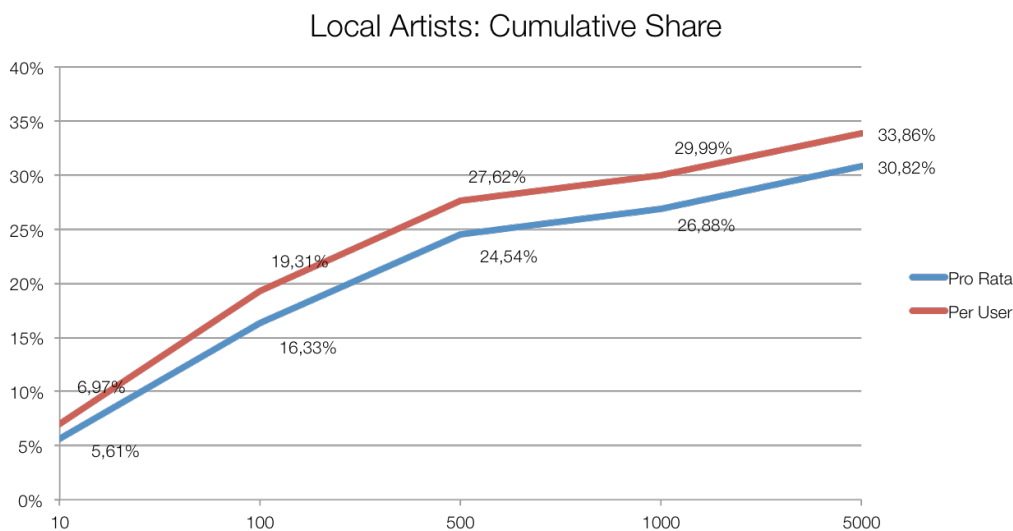
Among the top 5.000 artists, per user distribution would primarily benefit the most popular artists at the expense of the less popular. Top 1% among top 5.000 artists would go from 28,2% of payout with the current model to 31,0% of payout with the per user model. Artists between 1.000 and 5.000 would go from 18,1% of payout with the current model, to 15,9% of payout with the per user model – a relative decrease of 12,1%



## A national perspective

From a national perspective, it is noteworthy that Danish artists account only for 30,8% of streams among the top 5.000 artists. Compared to the fact that Danish artists accounted for 48,5% of all revenue from recorded music and 64,8% of revenue from physical sales in Denmark (IFPI 2014), this number is relatively low. However, it should be noted that the Danish share of the total Danish streaming market in 2013 was 41,3% (IFPI 2014).

When analysing the cumulative share for Danish artists, we see that the Danish artists among the top 5.000 artists would benefit from per user distribution. As with the overall tendency, it is still the most popular artists that benefit the most. But where the overall tendency is that artists under top 500 suffer significantly from per user distribution, Danish artists in this group are on average only marginally affected.



Danish artists among top among top 5.000 would see an average relative increase of 9,8%, but the most of this increase would go to the most popular artists. Danish top 500 artists would see an increase of 12,5%. Danish artists between 500 and 1.000 would only see a marginal increase, and Danish artists between 1.000 and 5.000 would see a marginal decrease.

## Conclusion

The streaming economy is characterized by the fact that a proportionately small number of artist account for a major part of the streams. Top 1% of the artists streamed account for 70,0% of all streams. However, given the increased amount of available music, this does not tell us that the streaming economy is a 'superstar economy'. Among top 5.000 artists, top 1% only account for 28,2% of streams.

Switching from the current pro rata distribution model to a per user distribution model would primarily benefit the most popular artists. The per user distribution model would benefit Danish artists. However, the redistribution would primarily go to Danish artists among top 500.



There are two primary benefits of shifting to a per user distribution model. First, it re-establishes the economic connection between the consumer and the artist, where the fees paid by the subscriber is distributed among the artists she actually listens to. Secondly, it benefits local artists, which could be interesting from a cultural policy perspective.

## Litterature

Anderson, C. (2006). *The long tail: How endless choice is creating unlimited demand*. Random House Business Books.

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