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Hansen, Henning Otte

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# The global fur industry 2016-17

# Henning Otte Hansen, ph.d.

Department of Food and Resource Economics, University of Copenhagen, Rolighedsvej 25, DK-1958 Frederiksberg C, Denmark. hoh@ifro.ku.dk

After mid 2016 prices of fur skins have increased - after years with huge price decreases. However, we are still far from previous high price levels, and we are probably also far below market equilibrium. The fur skin prices are heavily depended on the supply of fur skins. So the crucial question is, when and how much fur skin production will fall. Global supply of of fur skin is still too high to secure market balance, and we can expect global supply to decrease more in 2017.

The fur farmers and the fur industry all over the world seem to face the same challenges: Prices are volatile, and they are decreasing compared to the inflation. Prices and productivity play an important role for farmers around the world: Productivity - along with innovation and quality - is an important tool to improve farmers' competitiveness.

#### Introduction

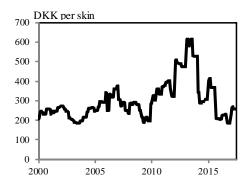
In 2013 the international prices of furskin started to fall - mainly as a result of increasing supply through several years. The decreasing prices continued in the beginning of 2014. However, at the end of 2014 and in the beginning of 2015 prices again increased and stabilized. In the second half of 2015 and in the beginning of 2016 prices again decreased. After mid 2016 prices have again increased, but we are still far from previous high price levels, and we are probably also far below market equilibrium.

The global supply seems to have decreased, and this will be a main factor to stabilize markets again. Global supply of fur skin is still too high to secure market balance, and we can expect global supply to decrease more in 2017.

## Prices

An illustration of the volatility of fur prices in the short and long run is shown in figure 1.

Figure 1. Market prices of mink fur at Kopenhagen Fur. Average price per auction



Note: (Scan) black

Source: Kopenhagen Fur (2017c)

Figure 1 shows the actual price of mink at each auction at Kopenhagen Fur in the period 2000-2016 (including the auction in April-May). Price volatility is substantial, and the price decrease in 2013-14 was substantial.

In 2015 the prices peaked again, but in second half of 2015 and in the beginning of 2016 prices fell again. Recently, prices have again stabilized and increased.

The auction prices seem to follow the same trend from auction house to auction house - see figure 2.

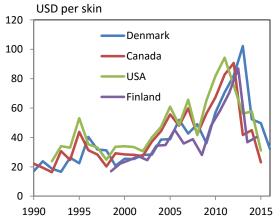


Figure 2. Prices of mink skins at four major fur auction houses (yearly data)

Note: The graphs illustrate that the trends and developments seem to be more or less identical from auction house to auction house. As the type and quality of skins is different from auction house to auction house, the price levels among the auction houses can not directly be compared.

Sources: Own presentation based on Kopenhagen Fur (2017b), Statistics Canada (2017), Profur (2017) and USDA (several issues)

Figure 2 shows, that the prices follow the same trends and variations indicating a global and competitive market.

The present development in skin prices seems to follow what might be expected from the theory - and what might then also be explained and predicted.

Recent fur auctions show rather constant prices. At Kopenhagen Fur's auction in April 2017 almost 6,6 million mink skins were sold. Almost 500 international buyers participated. The price in dollars and renmimbi was at the same level as at the Kopenhagen Furs auction in February.

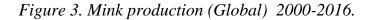
There are still unsold raw fur skins in the important Chinese market, and therefore the customers are careful. On the other hand, there was a renewed activity from Russia in international fur shows during the year. The sales rates ended at 97 percent.

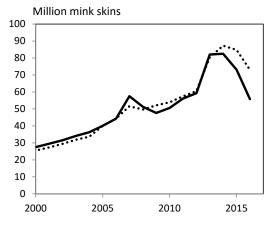
At the auction in May at NAFA 83 per cent of the offering was sold while holding mostly firm on prices, despite a down-trending market.

#### **Global fur production**

The fur skin prices are heavily depended on the supply of fur skins. So the crucial question is, <u>when</u> and <u>how much</u> fur skin production will fall. It is clear, that the price drops in 2014-15 will influence production levels all around the World. It is also necessary that global production and supply decreases substantially in order to create market balance and to make prices rise again.

Statistics about skin production in individual countries are very scarce and often uncertain. However, some statistics exist, and these statistics and other statistics based on information for individual countries confirm, that global supply of mink skins is decreasing - see figure 3





Note: Two different sources

Source: Author's calculations based on Kopenhagen Fur (2017b) and official statistics from 25 countries

The figure shows that both the increase in 2012-2014 and the decrease afterwards were substantial. Still, the size of the decrease in recent years is still uncertain. Especially the development of Chinese production of fur skins is very uncertain, and due to China's increasing role in global production of fur skins, the Chinese production and supply is becoming more important for market prices, market balance etc.

The correlation and the relationship between supply and price of fur skins are clearly shown in Figure 4.

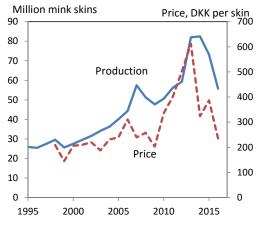


Figure 4. Mink production (Global) and the price of mink, 1980-2016.

Source: Author's calculations based on Kopenhagen Fur (2017b), Hansen, H. O. (2016) and Statistics Denmark (2017)

Production in 2016: Estimated

As the figure show, there is clear evidence that price increases are followed by an increase in production 2-3 years later. The figure also shows, that price reductions are followed by production reductions. Similarly, one can see that the price falls if there has been a period of increased production.

It is therefore possible, to a great extent, to explain and predict both price and supply, albeit with a certain time lag, which can be explained by adjustments to production and the formation of expectations amongst mink producers. A clear price-supply mechanism is apparent whereby supply reacts with a reaction time of 2-3 years, while the price adjustment occurs within a year.

The price-supply correlation in 2005-10 seems to be repeated in 2012-2017.

## The Russian market of raw fur skins and fur garments

According to Sojuzpushina (2013), fur skin production in the Soviet Union/Russia peaked in the late 1980s when it reached 16 million skins a year, of which 14 million were mink. Right up until the early 1990s, Russia was regarded as the world's largest producer of farmed mink. In the late 1980s, the production of mink pelts was calculated at 10 million (Titova, 2003), while in 1993, production was estimated at about 12 million pelts, which equated to 36 percent of world mink production.

Since 2005 the Russian production of mink skins is estimated to be around 1,2-2,3 million. Based on three editions of "Fur Farms of Russia catalogue" it is possible to collect and calculate fur production data. If only herd size data are available, then the herd size is multiplied with a factor.

Production data for 2014-2016 are shown in figure 5.

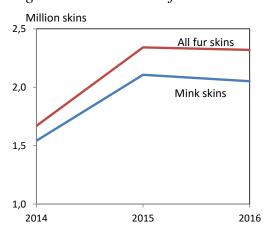


Figure 5. Production of mink skins and all fur skins in Russia, 2014-2016

Source: Estimated based on Fur Farms of Russia catalogue (2015, 2016 and 2017)

The figure confirms the general global declining production trend, although the Russian decline is rather modest.

In general, Russia is a major player on the international fur markets: As an exporter of fur skin, but mostly as an importer of fur garments. Several countries still have Russia as their most important export market for their fur garments. For countries like China, Greece, Turkey and Italy, Russia was the most important export market in 2015.

Countries export fur garments to Russia for 2,0-2,5 billion US\$ per year, and there has been a steady increase since 2008 in spite of financial, economic and political crises, cf. figure 6.

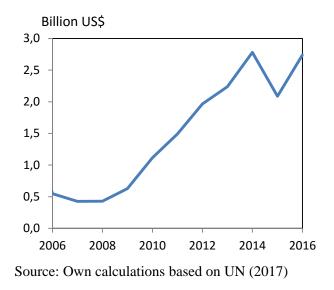


Figure 6. Major countries' export of fur garments to Russia, 2006-2016

The Russian Federal Statistics publish data about fur retail sale - see figure 7.

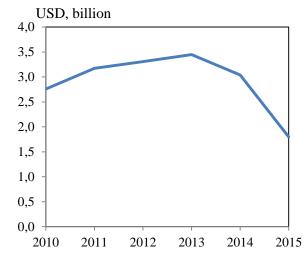


Figure 7. Retail fur sales in Russia (billion)

Source: Federal Statistics (2016)

The figure shows an increasing trend in the beginning of the period, and a decrease in the latest years. The fur retail sales seem to follow the same trend as the import of fur garment - cf. figure 6.

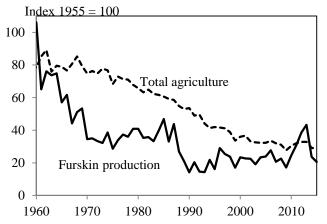
#### How to cope with decreasing prices

The fur farmers and the fur industry all over the world seem to face the same challenges: Prices are volatile, and they are decreasing compared to the inflation. Farmers "terms of trade" - the prices of fur skins compared to input costs - is also decreasing. Under these circumstances fur farmers have to optimize and to find ways to make money in the long run.

The long-term price change for fur skins follows the same development as other agricultural products: The prices increase at a very slow rate, which is often less than inflation.

If several costs are included, a more precise and comprehensive picture of the change in the terms of trade emerges. In the following, feed, capital and wage costs are combined and weighted according to their share of the total costs in the accounting result for Danish fur farmers. The change is presented in Figure 8.

Figure 8. Terms of trade for the Danish fur farmers and for agriculture in total, 1955-2015



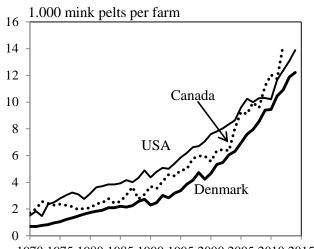
Source: Author's calculations based on Kopenhagen Fur (2015c) and Fodercentralen for Holstebro og Omegn (several years), Statistics Denmark (2016), L&F (2016) and NaturErhvervstyrelsen (several years).

Figure 8 shows the change in the terms of trade for the entire agricultural sector and the fur sector for the period 1960-2015. It is interesting to see that the trend over the whole period is almost identical: the terms of trade for agriculture as a whole and the fur sector fell from an index of 100 in 1995 to approximately 20-25 in 2015. In other words, the price of input factors increased 4-5 times more than the sales price.

Prices and productivity play an important role for farmers around the world: Productivity - along with innovation and quality - is an important tool to improve farmers' competitiveness.

Therefore, structural development can be considered a proxy for - or connected with - productivity. Through structural development economies of scale can be utilized, and this also creates improved productivity.

The structural changes almost follow identical global trends, indicating that global drivers push the structural development ahead. As figure 9 shows, the size of mink farms follows similar trends in so different countries as United States, Canada and Denmark.



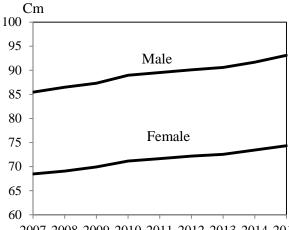
*Figure 9. Size of mink farms (number of produced mink pelts per farm)* 

1970 1975 1980 1985 1990 1995 2000 2005 2010 2015

Source: Own calculations based on Statistics Denmark (2016), Kopenhagen Fur (2016a), USDA (several issues) and Statistics Canada (several issues)

Another estimate for the development of productivity can be seen by the fact, that the size of fur skins grows bigger year by year as a result of continuous and systematic breeding. The size of the fur skins can be used for a partial productivity measurement in terms of output (size of fur skin) per partial input (fur animal). As seen in Figure 10, the size (length) of fur skin is increasing year by year.

Figure 10. Average size (length in cm) of Danish mink pelts sold by Kopenhagen Fur, 2007-2015



2007 2008 2009 2010 2011 2012 2013 2014 2015

Source: Own calculations based on Kopenhagen Fur (2016a)

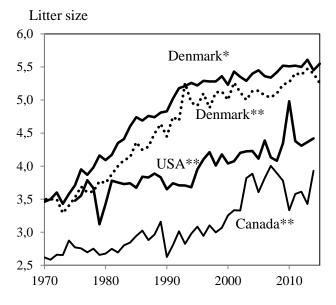
The figure shows an almost parallel development of the size of skins for male and female mink animals. In both cases, the annual growth (increase in partial productivity) is one per cent per year.

Another way to illustrate increasing productivity is by measuring the litter size. The Danish data are reported by each fur farm, while data from other countries are calculated as the number of skins sold compared to the number of breeding females.

The figures are not directly comparable from country to country, as factors such as survival rate, increasing or decreasing number of breeding females (whereby the number of sold skins changes) affect the results in some countries, while the Danish results are unaffected.

However, the development over time may be used as an expression of a trend in partial productivity. Data for Denmark, USA and Canada are shown i Figure 11.

Figure 11. Mink production: Litter size



\* Registered new born mink puppies per mink female \*\* Produced mink fur skin per mink female

Source: Own calculations based on Kopenhagen Fur (2016b), USDA (several issues) and Statistics Canada (several issues)

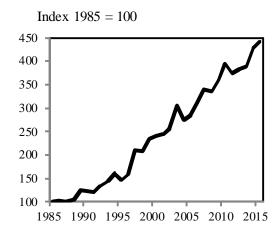
Figure 11 shows data for 3 different countries, and for Denmark litter size is measured both as new born mink puppies per mink female and produced mink fur skin per mink female. Data for Denmark illustrates an almost identical trend with an average annual increase of about 1 per

cent. Data for USA Canada show a similar trend, although the annual increase is lower. However, litter size is increasing and it contributes to a higher productivity year by year.

With regards to processing, grading and sorting taking place at Kopenhagen Fur, productivity gains are ongoing, and a significant streamlining of their sorting system has been implemented. Ongoing investments in the development of new technology have made it possible to sort without increasing labor costs. Among other things, investments have been made in X-ray technology for sorting, and Kopenhagen Fur is working on a system to vacuum pack pelts so that they can be transported more efficiently.

Kopenhagen Fur has also achieved significant increases in productivity. Today, Kopenhagen Fur grades around 25-30 million mink pelts per season, but the number of employees in the sorting department has only increased modestly during the latest 10-12 years, when only approximately 12 million pelts were being sorted. Labor productivity, the number of sorted pelts per employee in the sorting department, thus rose significantly in the period (See Figure 12).

*Figure 12. Increase in labor productivity in the sorting department of Kopenhagen Fur, 1984/85-2014/15* 



Source: Author's calculations based on data from Kopenhagen Fur (2016c).

As the figure shows, labor productivity increased from index 100 to index 450 in the period. In the period shown, there was an average annual increase in labor productivity of 5.1 percent. The figure only shows part of the development in productivity at Kopenhagen Fur, and there are of course other inputs than labor. However, the development illustrates that significant rationalization and productivity improvements can be made in key areas.

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