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# **Study of Sheep Meat Production Value Chains in the Kyrgyz Republic and Export Capacity to the EAEU Member States**

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Full version of the paper available online:

<http://ucentralasia.org/Resources/Item/1194>

# Background

## Research Motivation:

- In 2015, Kyrgyzstan became a member of the Eurasian Economic Union (EEU)
- The possibilities for exports from Kyrgyzstan grew up in EEU countries
- One of the potentially important export goods is the lamb
- However for the export of livestock products serious obstacles exist
- Present study was conducted to study these obstacles

# Value Chain Study

- Qualitative research with elements of quantitative methods (November - December 2015)
- Four regions (cluster) - Jalal-Abad, Naryn, Issyk-Kul, Chui (including Bishkek)
- In each cluster, 12 respondents were interviewed
- 48 respondents value chain agents:
  - Farmers - sheep breeders (48%)
  - Market agents (middlemen) (33%)
  - Slaughterhouses (19%)
- “Snowball” method was used for selection of respondents method

## Farmers- Sheep Breeders

- Mixed livestock production (breeding of sheep, cattle and horses) is a common form of farming - sheep occupy an average of 56% of the total herd
- Livestock - mainly middle-aged family men with experience of over ten years, and they are the successors of family businesses; 22% have loans
- Education - mostly secondary and special (70%), higher and incomplete higher education are about 30%
- The average size of the herd - 226 sheep
- 60% of the herds - ewes, the average productivity - 85 lambs for 100 ewes
- The level of the annual litter of 40% of the total herd

## Farmers- Sheep Breeders (Cont.)

- About 30% of the sheep sold annually; also farmers use sheep for household consumption (7%); 5% of the stock lost from diseases, theft
- The sheep is the concept of "high" and "low" seasons
- "High" season - the arrival of the sheep from jailoo - the period of the mass sale of sheep
- Farmers sell two sheep group - grown lambs of the current year and older culled sheep (ewes and wethers)
- "Low" season - the winter season after the mass sale until spring
- Factors affecting the sale of sheep - need for cash, availability of forage on the market, competition on the markets

## Farmers- Sheep Breeders (Cont.)

### Price of Sheep Sold by Farmers Across Oblasts

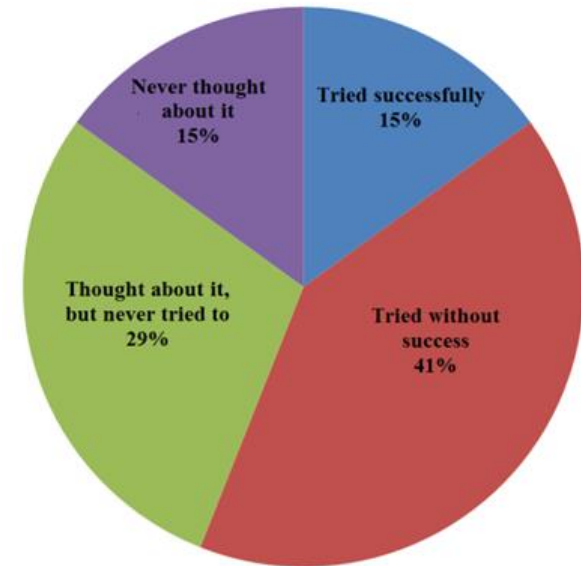
	Price per head of sheep, USD	Price per head of lamb (under 1 year), USD
Naryn	73,8	49,4
Chui	71,8	34,4
Issyk-Kul	72,4	36,3
Jalal-Abad	65,2	39,4
Average price	68,1	40,4

- Costs associated with the sheep keeping (per 1 head) - 13.1 US dollars:
  - Veterinary services - 0.9 US\$
  - Costs of village grazing - 4.5 US\$
  - The costs of stripping grazing - 3 US\$
  - Expenses for the purchase of forage - 4.8 US\$
- The costs varies from 6 to 22 US\$ by region (Naryn and Chui, respectively)

## Farmers- Sheep Breeders (Cont.)

- Market channels (farmer view):
  - Own village (56%)
  - Market agents (middlemen) (56%)
  - Livestock market (87%)
- The transactions based an oral agreement
- Documents on animals asked by 83% of buyers
- Evaluation method of animal prices - visual assessment
- The only form of cooperation between sheep farmers - the exchange of rams for cross-breeding purposes
- Optimal size of sheep herd for sale varies from 10 to 20 goals

Did you try to search for better terms of sale for your product?



Issyk-Kul region focused on the sale of sheep in the summer resort season, since autumn - sales decline until the spring



## Market Agents (Middlemen)

- Market agents - middle-aged married men with experience of more than ten years; 73% of them are business owners; motivation of business - profit earning
- Almost half of them have higher or incomplete higher education (47%)
- Two-thirds of the agents doesn't have officially registered businesses; the rest prefer to take a patent
- Middlemen no hiring workers on a permanent basis
- Equity capital is sufficient for half of the intermediaries, the others take credit or have an investor; 13% work only on credit capital

## Market Agents (Middlemen) (Cont.)

- Middlemen operate mainly on the household basis
- Facilities for keeping animals (155 m<sup>2</sup>), storages and utility rooms - the main basis of the business operation
- 74% of entrepreneurs have one vehicle; 20% have two cars, half of the cars - trucks; refrigerators doesn't report
- "High" season characterized by increased sales level - more than 50 sheep per week on average; "low" season - 20
- The middlemen bear the cost of transport of animals and their content (about 3 US\$ per 1 sheep)
- Net margin for 1 animal at the "high" season is about 10%, and during "low" season - 9%

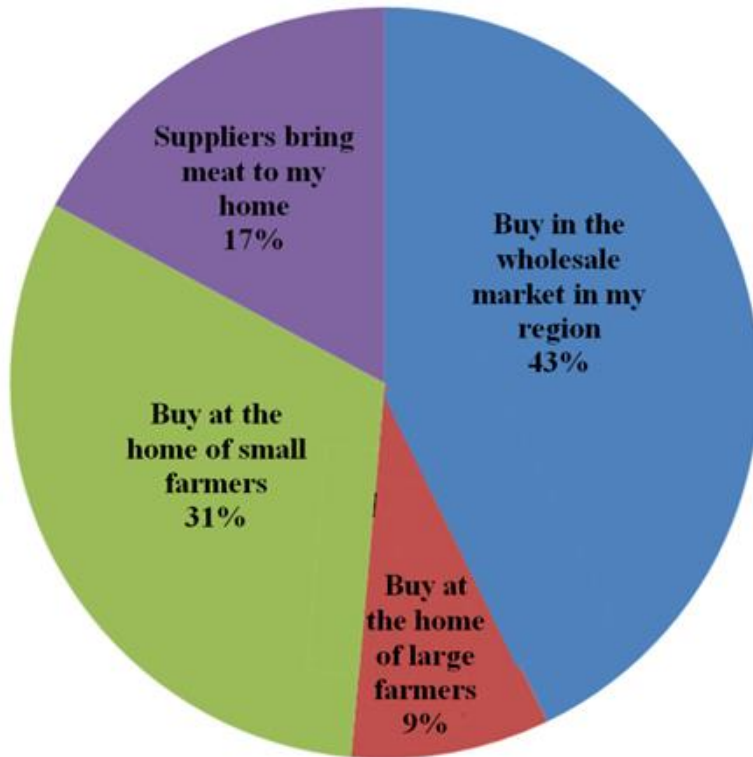
## Market Agents (Middlemen) (Cont.)

- The purchase and sale prices varies across the regions:
  - "High" season - 76 and 88 US\$
  - "Low" season - 104 and 118 US\$
- Average gross income market agent is about 450 US\$ per week in the "high" season and 200 US\$ per week in the "low" season
- In Issyk-Kul season also shifted towards the summer tourist period
- The highest profitability among middlemen reported in Jalal-Abad, the lowest in Naryn
- In Jalal-Abad, the average size of the sheep herd for sale is much higher than in other regions, and travel expenses consequently lower

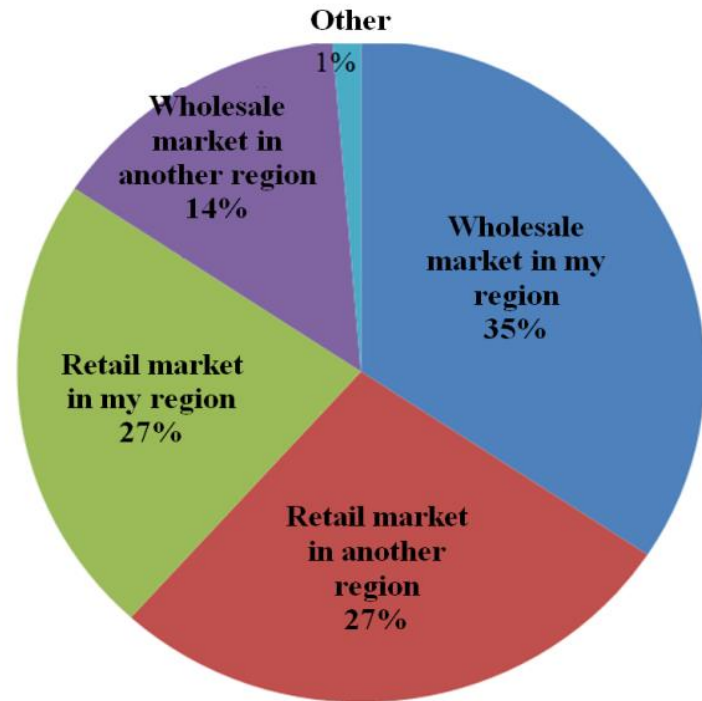
# Market Agents (Middlemen) (Cont.)

- Purchasing and Sale Channels

## a) Purchase



## b) Sale



## Market Agents (Middlemen) (Cont.)

- The key factors at sale are price, exterior and well-fed
- of the sheep, season, location and sales channels
- All transactions done in cash, regular customers have the opportunity to buy on credit
- Animals are sold alive, but also can be slaughtered by request
- Deliveries of sheep in Kazakhstan carried several years ago, however, stopped with the entering of Kazakhstan in Customs Union after 2010-2011
- Shipments were made to the border zone in the Chui Oblast, where Kazakh dealers buy sheep and transfer them across the border
- Currently, there is no supply of sheep due to the substantial devaluation of the Kazakh currency; supply of horses and cattle still profitable

# Slaughterhouses

- Managers and owners of slaughterhouses - married middle-aged man, with experience from 3 to 5 years (67%)
- Higher education and specialized secondary education in 44% in both cases
- The motivations are profit - making and discovering of a personal potential
- The business officially registered in 67%
- Slaughterhouse usually works not only with sheep (33%), but also with the cattle and horses
- Butcheries are not only slaughtering of animals but also carry out the delivery of meat

## Slaughterhouses (Cont.)

- The slaughterhouses employs from 3 to 10 people on a permanent basis
- Slaughterhouses don't operate with credits
- Infrastructure includes:
  - Facilities for keeping animals
  - Slaughtering line(s)
  - Sewage facilities
  - Sharpening equipment
  - Scales
  - Storerooms
- Refrigeration equipment missing
- Slaughter capacity is small - 67% can process up to 20 sheep per day, the remaining- up to 50 sheep

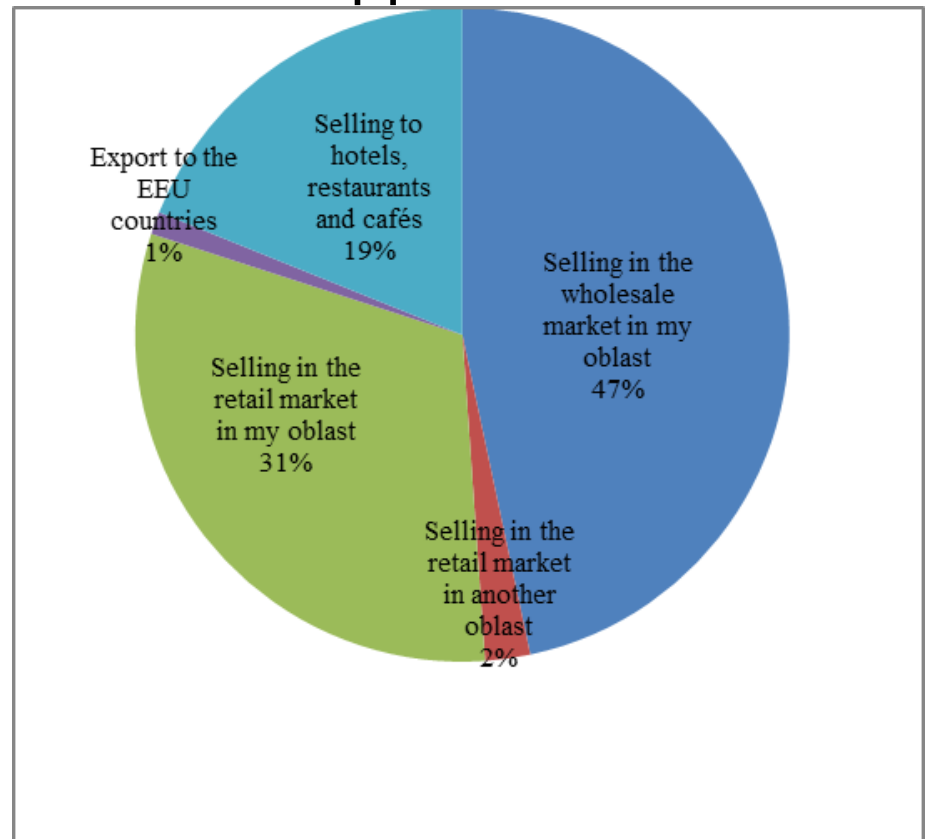
## Slaughterhouses (Cont.)

- In the "high" season the workload reaches up to 60 heads per day, while in the "low" season only ten heads
- Average weight of live sheep about 40 kg, meat output is about 60% of the live weight
- The purchase price is US\$ 71 per head in the "high" season and \$ 96 - in the "low" season
- Gross profit - 10% in the "low" season, 12% in the "high" season
- Main requirements - meat quality, health standards, price and ability to deliver to the buyer
- The price on meat and services is fair according to the opinions of more than half of butchereries
- Workshops can sell the meat and provide services on credit for permanent clients



## Slaughterhouses (Cont.)

- Wholesale markets - the primary source of supply of sheep, deliveries from farmers and suppliers are also important
- Channels also sell sheep based on sales at the wholesale and retail market in the region, as well as direct delivery to hotels, cafes, and restaurants
- Shipments to other areas and export are rare
- Slaughterhouses operate as centers for the provision of services, and do not carry out purchase of sheep in large quantities



# Main Conclusions on the Value Chain

- The traditional way of doing sheep business
- Small scale production
- Decrease of breeding qualities
- Serious technological constraints
- The lack of the economies of scale
- The lack of the export

# **Veterinary and Epizootic Conditions - Conclusions**

- State veterinary system in Kyrgyzstan is at an unacceptable level
- Absence of the effective animal control
- The system seriously underfunded for many years
- Veterinary legal framework does not support the actual execution
- As a result of the epizootic situation dangerous - the number of cases is not reduced
- Veterinary checks of EEU bodies were not satisfactory due to the huge number of violations of both domestic laws of the Kyrgyz Republic, as well as the requirements of the EEU

# Potential Export Markets: Kazakhstan and Russia

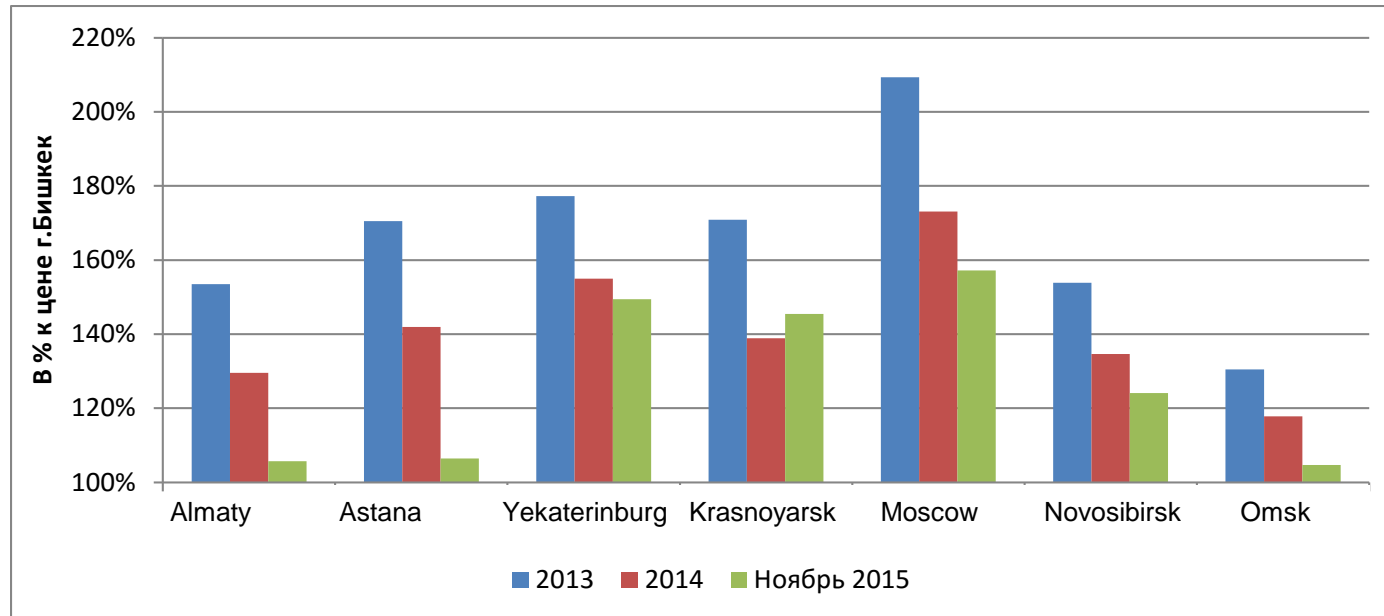
## Production and Consumption of Sheep and Goat Meat in Kazakhstan and Russia

	2010	2011	2012	2013	2014
Kazakhstan					
Output, thousand tons	142,9	149,5	153,8	156,4	161,9
Consumption, kg per capita	6,5	7,6	6,6	6,9	6,7
Russia					
Output, thousand tons	184,6	189,0	190,4	190,0	203,9
Consumption, kg per capita	0,9	1,0	1,0	1,2	1,5

- Import and export in Kazakhstan are small (several hundred tons)
- Russia imports 9-10 thousand tons of lamb a year for 50-60 million US\$ USD. (About 5% of its domestic production)
- Kazakhstan market closer and potentially more attractive, since in Russia, the lamb is not consumed widely

# Potential Export Markets: Kazakhstan and Russia (Cont.)

Ratio of Sheep Meat Prices in Several Cities of Kazakhstan, Kyrgyzstan and Russia



- However, the sharp weakening of the exchange rate in Russia and Kazakhstan make potential exports of lamb in the nearest future weak
- In addition to economic reasons, animal diseases have led to a ban on imports of livestock products in Russia and Kazakhstan, since 2007

## Potential Export Markets: Kazakhstan and Russia (Cont.)

- For the cancellation of the ban on import of animal requires some major changes from the state:
  - laboratory equipment, personnel training, improving regulatory frameworks, animal identification, timely vaccination, the restoration of effective veterinary control
- As well as by private enterprises:
  - timely veterinary care, appropriate equipment manufacturing facilities in the slaughter shops and meat processing plants, improving the technology used production and processing of meat
- It will require significant investment and time to implement these measures

# Problems and prospects of production and export of lamb in Kyrgyzstan

- Production problems and value chain of livestock and meat
- Domestic institutional constraints associated with the current level of development of agriculture in general
- Technical barriers to exports of lamb to EEU countries
- External macroeconomic factors.

## Production/ Technology Problems

- The traditional character of agriculture - focus on domestic consumption - mutton with a high fat content – no market in developed countries
- Small-scale production – low productivity. Overuse of village pastures combined with underutilized remote pastures
- Lack of capital constrained to technological solution of the problem - the mass slaughter of livestock in the fall, followed by freezing and gradual selling throughout the year



## Institutional Constraints

- Animal identification system for sheep realistically unreachable in the nearest decade
- No practical steps for the introduction of a veterinary zoning
- Insufficient level of vaccination
- Pasture reform has not resulted in improved management, pasture degradation continues
- Veterinary situation shows massive ignoring of legislation in the production and processing in meat sector

# Технические и макроэкономические барьеры

## Technical barriers

- Ban on exports of meat due to the current epizootic situation
- Extreme modernization of veterinary systems and investments by the state and the private sector can make a difference

## Macroeconomic barriers

- The devaluation of the Russian and Kazakh currencies makes the investment unprofitable
- Kazakh lamb cheaper than Kyrgyz since 2016
- Continued instability of the economies of the main trading partners - Russia and Kazakhstan - negatively affect the export prospects of Kyrgyzstan

# Recommendations

- Support for large manufacturers - access to technology and capital, investments in the trainings and technologies, responsibility for the condition of pastures and livestock veterinary transfer to the large producers
- Improving veterinary control system
- Develop a strategy to promote the export of meat to the markets of developed countries

Thanks for the attention!