

RESEARCH ARTICLE

SUBSIDY AND CLAIM RATIO TREND OF LIVESTOCK INSURANCE IN NEPAL

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ABSTRACT

Livestock enterprise is prone to various diseases, accidental death and natural calamities. The agriculture & livestock insurance system was developed in 2069 B.S to promote and develop this sector in Nepal reducing risk in agriculture & livestock sector. The government provides an 80% subsidy on the insurance premium to motivate farmers to insure their livestock species and agriculture product and help to enhance productivity & reduce the poverty. To access the status of subsidy and claim ratio and other relevant parameters, the 14 non-insurance companies located in Kathmandu were selected purposively for data collection. The study suggested an increasing trend of sum insured amount, premium, subsidy and claim paid. The average subsidy amount was 620.0413 million. The least subsidy amount was found to be min 5.646187 million in year 2070-71 while the highest subsidy amount was 1407.618 million in year 2079-80; however, great challenge remains on government part for proper design, planning and subsidy implementation to promote equality, access credit to farmers and efficient reach to target farmers. Regarding claim ratio, the average claim ratio was found to be 65.36%. The least claim ratio was observed 45% in the year 2077-78 while the highest claim ratio was observed 105% in year 2070-71. On an average, only 65% of premium earned by insurance companies are used during claim settlement in livestock insurance 10 years period. Thus, the proper design, planning and implementation of subsidy and timely claim payment to the farmers are essential for success of livestock insurance program in Nepal.

KEYWORDS

Farmers, Livestock, Insurance, risk coverage, Claim payment, Nepal

1. INTRODUCTION

Agriculture contributes 27% of Gross Domestic Product (GDP) playing an inevitable role in Nepalese economy. Livestock commodity of the agriculture sector that accounts for 25.7% of agricultural GDP, also plays an important role in daily human nutrition as well as national economy (Poudel et al., 2020). Livestock contribute to the Nepalese economy Nepal through uplifting the economy of the farmers. In Nepal, the estimated livestock numbers viz: 47,50,329 Cattle heads, 30,81,062 buffaloes, 53,195 yaks, 5,01,849 sheep, 1,45,41,244 goats and 6,52,05,250 poultry, Horse/Mules/Donkey 17,332 (Agriculture and Livestock Diary, 2081). Disease outbreak in livestock farming and agricultural pest has caused a serious problem on agriculture cereal crops like paddy, wheat, maize, etc. (Pandey et al., 2021). Various diseases in livestock such cause huge loss to the farmers and this risk should be minimized through insurance. It is found that the mortality rates for cattle and buffalo range between 2% to 3% and slightly higher for small animals in Nepal (World Bank, 2009).

Hosseini & Zadeh, 2011 reported that disease alone account for 78% of livestock risk. Apart from this, other livestock production risks include natural disasters such as earthquake, floods, fire, etc. Livestock risk happen suddenly causing the huge economic loss to the farmers that adversely affect their farming and living (Rahimi, 2000). A study found that Livestock are in threats of climate change (Panhi et al., 2016). Various climate change impacts on livestock include various diseases occurrence, loss of forage, water scarcity, decline in milk production etc. (Dhakal et al., 2013). Those risks in livestock enterprises needs to be addressed to support the farm income. Being a risky enterprise, the livestock sector seeks an effective risk bearing mechanism. Subsidizing agriculture insurance is practiced in many countries with an objective of achieving

social and political goals in addition to risk management (Hazzell et al., 2017). Agriculture insurance in Nepal started in 2069 B.S.

The agriculture insurance penetration is only 1.10% in Nepal which is the lowest in comparison to Asian countries (Thapa and Adhikari, 2018). This illustrates that the willingness to agricultural insurance including livestock insurance is low. At present, the livestock sector covers more than 95% of Agriculture market as compared to the agriculture insurance (NIA, 2080). Livestock enterprise is most unpredictable and vulnerable to risk due to disease, lack of veterinary services, and natural disasters such as earthquakes, floods, and landslides, droughts and accidental deaths due to fire, lightning, wild animals attack and natural death. Thus, the livestock insurance is an effective risk-bearing mechanism (Devkota et al., 2020). Apart from this, government subsidy on premium amount plays a crucial role in supporting livestock insurance in Nepal. The study is carried out with an objective to identify the status the livestock subsidy and claim ratio over 10 years period in Nepal and provide the recommendations based on those findings.

2. AGRICULTURE, LIVESTOCK AND HERBS INSURANCE

According to the statistical information on Nepalese Agriculture 60.4% of population are engaged in agriculture sector in Nepal. Majority of the population involved are female (72.8%) and male (60.2%). The agriculture, livestock and herb insurance in Nepal helps to prevent the future economic loss through insurance of agriculture commodities, livestock breeds and herbs. The agriculture insurance in Nepal not only promote farmers for increased food production but also plays a significant role in minimizing risk associated with adverse conditions and maintain financial stability of farmers (Pandey et al., 2022). It protects farmers from loss due to various vulnerable conditions. The insurance of such sectors

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is guided by Agriculture, livestock and Herbs directive 2079. In Nepal, the concept of Agriculture insurance developed in 2069 B.S. Magh 1 to bring commercialization in agriculture sector and prevent the future economic loss through natural calamities as well as disease, pests and wild animals (Agriculture, herb and livestock Chinari, 2081)

2.1 Risk Coverage by Agriculture, Livestock and Herbs Insurance In Nepal

The risk covered by the insurance are fire or fire related loss, storms and hurricane or tornado related loss, heavy rainfall, unfavorable rainfall, hailstorm and snow related loss, drought, fog and sheetlahar related loss, natural calamities like flood, landslide and soil erosion related loss, earthquake related loss, lightning related loss, accidental or accident-causing related loss, Death due to attack by wild animals related loss and disease related losses.

2.2 Risk that are not covered by Agriculture, Livestock and Herbs Insurance in Nepal

The risk that are not covered in case of Agriculture, Livestock and Herb Insurance in Nepal include Indirect losses due to agriculture, livestock and herbs insurance, loss due to destruction of the insurance product under certain unavoidable circumstances by government of Nepal, loss due to irradiation and infrared or through its contamination, loss due to use of atomic bombs, chemicals or using weapons causing loss of human lives, loss due to army conflict, war and foreign attack, attack within the country itself.

2.3 Things to be considered during Buying Insurance Policy

- Acquire complete knowledge on dos and don'ts and facilities prior to insurance
- Get information regarding policy renewal and understand the conditions where the claim amount is given or not.
- Ensure that you get all information regarding the product you are getting insured.
- Fill the proposal form by self or in case of illiterate, support of insurance agent should be taken.
- Proposal form clearly and duly filled should be submitted along with the technical form.
- Get the authentic copy of payment or receipt after premium payment by farmers is must.

2.4 Process involved in Purchase of an Agriculture, Livestock and Herbs Product

- Select the non-life insurance company
- Fill the proposal form by self or with help of Insurance agent
- Ensure the animal is/are healthy prior to insurance verified by technician
- Submit the proposal form along with the technical form
- Company underwriting team reviews all the documents
- Determine the premium based on the type of product to be insured
- Premium payment by the farmers
- Receive the receipt of product coverage
- Insurance product purchased
- Insurance risk coverage starts.

2.5 Claim process in Agriculture, Livestock and Herb Insurance

- Inform to company regarding the loss of the insured animals/crop via telephone, fax, email, SMS or in written form.
- Completely filled Claim form.
- Provide original copy in case of total loss while photocopy in case of partial loss.
- Collect the signature, contact number including signature of each neighbor.

- Certification by institutions; local level, local Ward office that provide agriculture and livestock services
- Assessment of loss (Agriculture, livestock and herbs directive, 2079)
- Below 5 lakhs of sum insured- Assessment by company itself
- Above 5 lakhs of sum insured -Assessment by loss assessor must be done
- Loss assessor should enclose the 1 video clip of at least 1 minute and 5 photographs captured from different angles along with loss assessed report.
- In case the loss assessor is assigned, the company should assign the loss assessor within 7 days of loss reported
- The loss assessor should provide the report within 15 days from the assigned time
- The company after checking all the relevant documents should provide claim amount payment within 35 days of report submission by loss assessor

2.6 Subsidy by Nepal Government

The Crop and livestock regulation was executed in 2069 B.S to promote the insurance activities in effective way. The Nepal government introduced the subsidy in premium amount to promote and develop agriculture & livestock insurance in Nepal reducing risk in agriculture & livestock sector. Currently, the subsidy government provides in premium amount is 80%.

2.7 Hassle in Claim Disbursement

Although, there is subsidy in premium amount, the timely payment of claim is delayed by most of the insurance companies. Apart from this, the government budget constraints and reverifying process for agriculture & livestock policies verified by Nepal Insurance Authority, lack of human resources creates hassle in timely verification by concerned institutions and thus makes the process lengthy for subsidy disbursement. Also, there are misleading information in the policies that needs to be inspected for verification which further makes the subsidy disbursement process lengthy.

3. MATERIALS AND METHODS

3.1 Study Area

The 14 non-insurance companies located in Kathmandu were selected purposively for accessing the sum insured, premium, premium growth rate, subsidy, subsidy growth rate and claim paid amount over 10 years period.

3.2 Data Collection

Ten years data from 14 non-life insurance companies were collected in specified excel format to assess the trend of sum insured, subsidy and claim ratio in livestock insurance in Nepal.

3.3 Data Analysis

Data collected was analyzed using data analytical tool python and descriptive statistics were obtained and graphs were generated.

4. RESULT AND DISCUSSIONS

4.1 Policy Number

The average policy number for 10 years period was 1,27, 075. The least policy number was found to be 983 recorded in year 2070-71 while the maximum policy number was 6,35,628 in the year 2078-79. The policy number were found to be in increasing trend year wise from Year 2070-71 to Year 2078-79 followed by decrease in the year 2079-80 as illustrated in Figure 1. The increase in policy number indicates the increase in adopting livestock insurance during these years. Increase in livestock insurance may be due to increase in awareness programs in rural areas by insurance authority and all the concerned stakeholders such as companies, organizations including private and public relevant to insurance sector. While, the major reason behind the decrease in policy issued in year 2079-80 was due to prolonged delay in subsidy release by Nepal Government.

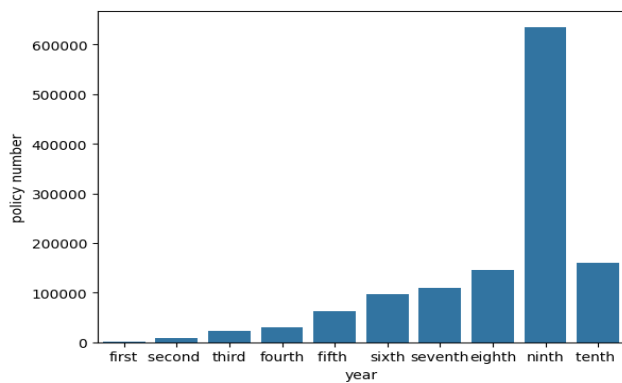


Figure 1: Bar graph showing livestock policy issued or sold over 10 years period

*** first=2070-71, second=2071-72, third=2072-73, fourth=2073-74, fifth=2074-75, sixth=2075-76, seventh=2076-77, eighth=2077-78, ninth=2078-79, tenth=2079-80

4.2 Sum Insured Amount

The average value of sum insured over ten years was 18155 million. The least sum insured was 2956 million, while the highest sum insured was 39460.77 million. The sum insured was at increasing trend from the year 2070-71 to 2079-80 as represented in Figure 2. The highest sum insured was in the year 2079-80 while the least sum insured was found in year 2070-71.

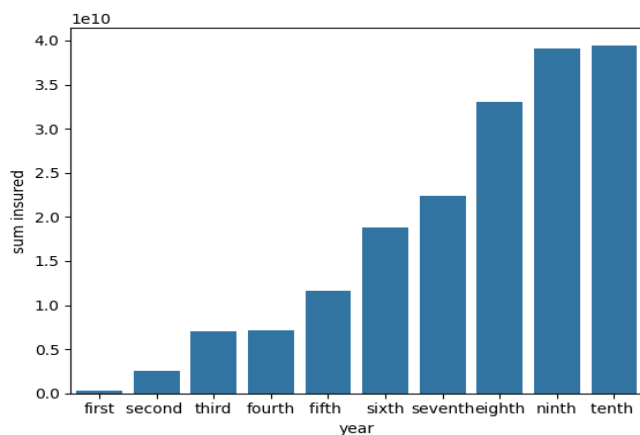


Figure 2: Bar graph of Sum insured amount over 10 Years period

*** first=2070-71, second=2071-72, third=2072-73, fourth=2073-74, fifth=2074-75, sixth=2075-76, seventh=2076-77, eighth=2077-78, ninth=2078-79, tenth=2079-80

4.3 Premium Growth Rate

The average value of premium growth rate is 178 and the standard deviation was 365.40. The highest premium growth rate observed was 1144% in year second (2071-72) while the least growth rate obtained was 4.73% in year fourth (2073-74) clearly illustrated in Figure 3.

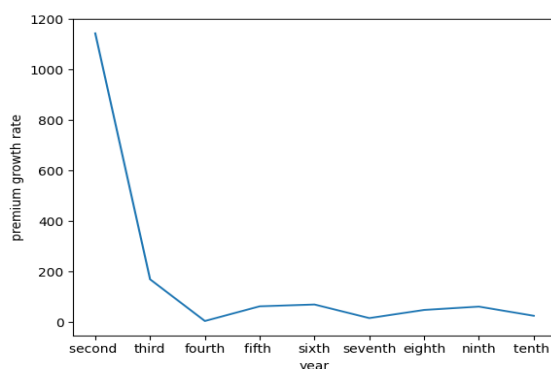


Figure 3: Line graph showing premium growth rate of livestock insurance over 10 years period

*** first=2070-71, second=2071-72, third=2072-73, fourth=2073-74, fifth=2074-75, sixth=2075-76, seventh=2076-77, eighth=2077-78, ninth=2078-79, tenth=2079-80

4.4 Subsidy Amount

The average subsidy during 10-year period was 620.0413 million. The least subsidy was found to be min 5.646187 million in year first (2070-71) while the highest subsidy was 1407.618 million in year tenth (2079-80). There has been the increasing trend of government subsidy in livestock insurance over the 10 years period which is illustrated by Figure 4. The government has been providing the subsidy; however, they are unable to allocate the subsidy on need basis or based on categorization as small farmers and commercial farmers. Agriculture insurance has challenges during design, delivery and administration of insurance contracts that farmers are interested to buy (Hazell et al., 2016). Thus, the proper design and implementation of subsidy has been great challenge for the government to ensure that the subsidy reaches the target group.

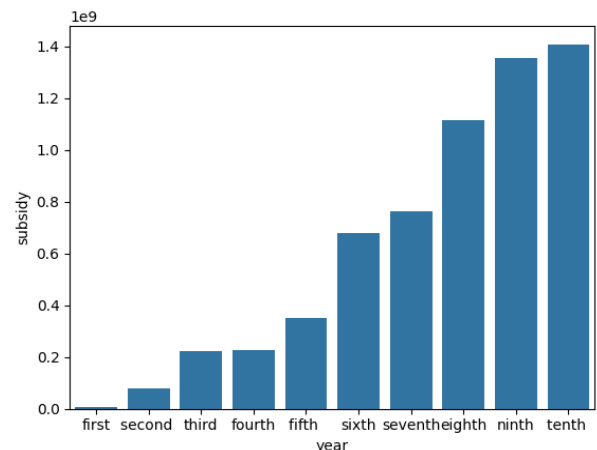


Figure 4: Bar graph showing the livestock subsidy over 10 years period

*** first=2070-71, second=2071-72, third=2072-73, fourth=2073-74, fifth=2074-75, sixth=2075-76, seventh=2076-77, eighth=2077-78, ninth=2078-79, tenth=2079-80

4.5 Subsidy growth rate

Regarding the subsidy growth rate, the average value of subsidy growth rate was 190 and standard deviation 420. The highest subsidy growth rate was 1300% in the year second (2071-72) while the least subsidy growth rate was 1.95% in 2073-74. This is clearly illustrated by the line graph in Figure 5.

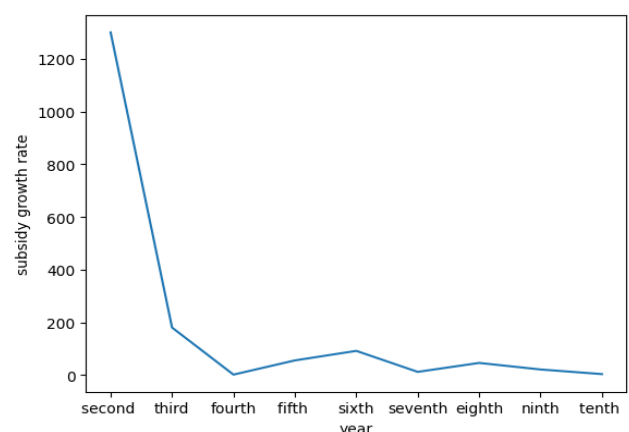


Figure 5: Line plot showing subsidy growth rate over 10 years period

*** first=2070-71, second=2071-72, third=2072-73, fourth=2073-74, fifth=2074-75, sixth=2075-76, seventh=2076-77, eighth=2077-78, ninth=2078-79, tenth=2079-80

4.6 Claim Ratio

The average claim ratio in livestock sector was found to be 65.365 % over 10 years period while the standard deviation was found to be 21.9 % The least claim ratio was 45 % while the highest claim ratio was 105 %. The

least claim ratio was observed in the year 2077-78 while the highest claim ratio was observed in year 2070-71 as clearly illustrated by Figure 6. The claim ratio indicates the total claim paid to premium earned by insurance companies. It is found that during 10-year period farmers are receiving only 65 parts out of 100 parts of premium collected by insurance companies. This indicates 65% of the premium earned by insurance companies is used to settle the claims of farmers.

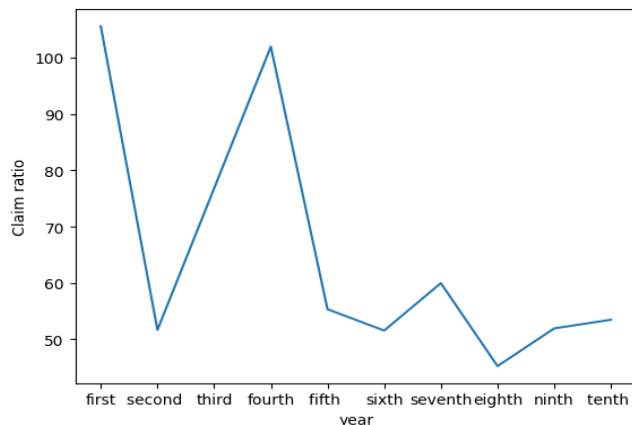


Figure 6: Line plot showing Claim ratio of livestock insurance over 10 years period

*** first=2070-71, second=2071-72, third=2072-73, fourth=2073-74, fifth=2074-75, sixth=2075-76, seventh=2076-77, eighth=2077-78, ninth=2078-79, tenth=2079-80

4.7 Premium and Claim Paid

The Figure 7 below illustrates that the claim paid and premium earned over a period of 10 years showed that there is slight positive correlation between these variables. Although, there is slight positive correlation, the claim paid is not in line with the proportionate premium earned over those years.

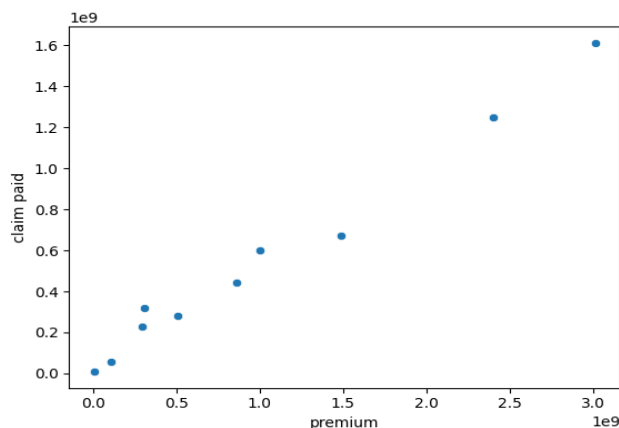


Figure 7: Scatterplot showing the premium and claim amount paid over 10 years period

*** first=2070-71, second=2071-72, third=2072-73, fourth=2073-74, fifth=2074-75, sixth=2075-76, seventh=2076-77, eighth=2077-78, ninth=2078-79, tenth=2079-80

5. CONCLUSION

In agriculture insurance, livestock being most vulnerable enterprise possess risk to various diseases, accidental deaths, attack by wild animals, natural calamities and disease conditions. The smallholder farmers in Nepal face serious economic loss due to disease condition, natural disasters and accidental deaths. To compensate such losses and provide financial security, the livestock insurance and government subsidy on premium plays a significant role. Further, the government subsidy motivates the farmers to increase livestock production and thus helps in economic upliftment of farmers and making them financially stable. It also links them with the credible Bank and agriculture credit programs for access to loans and helping them to cope with the disasters through subsidy. The findings of the given study suggested that there is increasing trend of government subsidy from year 2070-71 to 2079-80.

In addition to this, the policy sold are at increasing trend from year 2070-71 to 2079-80. The increasing subsidy and number of policies issued over years except in year 2079-80 suggest that there is an increase interest in livestock insurance adoption by the smallholders as well as commercial farmers in Nepal. The farmers have been benefitted by the government subsidy as they are willing to take more risk in the livestock enterprise and such subsidy have facilitated the access to bank and other financial institutes for credit purpose and have also supported them in disaster related losses. Regarding claim ratio, the average claim ratio in livestock insurance is found to be 65.36%. This indicates that only 65% of premium earned by companies are used for claim settlement. Despite the increase in government subsidy over years, there was decline in policy sold in year 2079-80. The major reason behind the decrease in policy sold is linked with the delay in subsidy release by government time and again and insurance was at halt during that period.

The agriculture insurance possesses serious challenges when it comes to policy design, delivery and delivering the insurance product contract to the farmers that are willing to buy the product. The challenges are even more when subsidizing insurance product comes. The subsidy is more directed to commercial farmers who lobby politically and thus subsidy is over utilized by the large farmers rather than the smallholders' farmers. Thus, it requires careful consideration in the design and implementation of subsidies otherwise, they would prove unnecessarily expensive, create inequality which in turn undermine the insurance program, distort markets and resource allocation decisions.

To overcome this challenge, subsidy amount capping should be done based on the necessity of farmers, target the subsidized insurance to a segment of smallholder farmers, access to credit and then insurance should be channelized through credible institutions that link insurance to credit, access to input supplies and can identify and efficiently reach intended target group of farmers. The government should have long term vision regarding subsidy design and planning. In addition to this, awareness regarding livestock insurance and subsidy amount capping and link the insurance with the credible banks and agriculture credit programs to facilitate the credit to target groups is inevitable. Further, this study can be a milestone for future studies regarding subsidy and claim ratio trend in livestock insurance in Nepal.

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DECLARATION OF INTEREST

There is no conflict of interest regarding authorship.

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