



Prospect of Livestock Market (Meat) in North East States of India with Special Reference to Pork

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Abstract

The purpose of this paper is to indicate the scope of small enterprises or startups in fresh livestock product which are broadly in unorganized sector and at small scale. Secondary data is analyzed with the application of simple average and forecasting method with 95% level of significance. Increased urbanization and changed consumption pattern both in rural and urban areas explain the scope of extended marketing chain for commercializing the livelihood sources. The steady contribution of livestock sector in the economy and the increasing trend of meat consumption is increasing the prospect of livestock(meat) market in North East part of India. Development initiatives are taken exclusively in this area specially for the tribal population by the Government of India, but the initiatives need to be integrated and should not be only supply centered but must be market centric. The market participation in the form of traders, retailers and processors in the changed situation can give a sustainable livelihood opportunity to the local population with the innovation of localized chain.

Keywords: Forecast, Innovation, Livestock, Marketing Chain, Meat, North Eastern States, Production and Consumption Trend, Small Enterprises

Introduction

Among the defined economic activity under agriculture, forestry and fishing the percentage share of livestock in GVA (at current prices) is the only sub sector which is showing a steady increase from 4.1 percentage to 4.9 % during the last 5 years (2013-14 to 2017-18). Remaining sub sectors like crops, forestry and logging, fishing and aquaculture are either showing a gradual declining trend or a constant trend. According to estimates of the Central Statistics Office (CSO), the value of output livestock sector was about Rs. 9,17,910 crores at current prices during 2016-17 which is about 31.25% of the value of output from agricultural and allied sector. At constant prices the value of output from livestock was about 31.11% of the value of the output from total agriculture and allied sector. New enterprises in livestock sector is dependent on changing consumption and production pattern which functions through marketing chain.

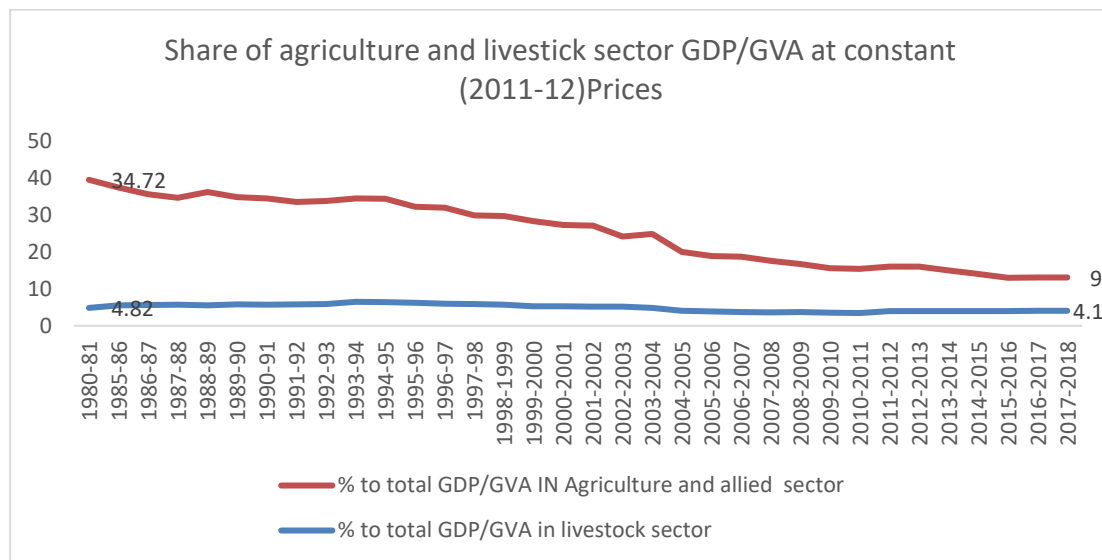
Marketing chain is a series of value addition stages which are complex in structure and which are driven by supply and demand factors. A study on the prospective scope in marketing and value chain of livestock products can give a new dimension of innovative enterprises in food industry with special reference to pork. In pig marketing chain as other livestock chain also operate through series of chain actors. With time the pig sector is gradually becoming a significant sector keeping the pace of growth in entire livestock sector. The significance of the enterprises in food sector can be understood from the 72nd NSSO report on 'Key Indicators of Household Expenditure on Services and Durable Goods'. It indicates that, food expenditure in hotels accounts for more than 65% of the budget-share among expenditure on all the services availed by the households in all-India level in both rural and urban sector along with transport services, repair & maintenance of selected items, hotel lodging charges, etc and communication. To specify, the food expenditure in hotel and restaurant includes expenditure on tea/coffee shops, from hotels, restaurants, cafeterias, dhabas, parlours, bars, parathas/puris/samosas/patties/burgers/other fast food, ice-cream vendor, fruit juice seller, chaat seller, bhel puri seller, etc. Monthly per capita expenditure (in ₹) on food expenditure in hotels for each quintile class of UMPC (Usual Monthly Per Capita Expenditure) for rural and urban areas with repair & maintenance of selected items, hotel lodging charges etc. also indicates a positive scope of enterprises in the given sector.

In this sector specifically population from tribal belt is found to be relatively active and women is found to be more involved in the post production stage. A comprehensive overview of pig markets and trend in India with special reference to North East states will indicate the scope of the sector along with its challenges and opportunities. In last two decades the demand for livestock products are accelerating and significant shift towards the animal protein in the consumption pattern of urban population is observed. A comprehensive overview of livestock production and consumption will be made in this paper to understand the changes in demand and supply pattern of livestock market. North East states like Mizoram and Nagaland is dominated by Scheduled tribe population where more than 95% in rural areas are from the given social group. In urban areas Nagaland has slightly less concentration (80%) of ST population relative to Mizoram. In Assam there is combination of population from different social groups as here almost 55-60% are from other categories in both rural and urban areas. In Arunachal Pradesh and Meghalaya more than 75% of population are from defined tribes in rural and urban areas respectively (NSS Report No. 514: Household Consumer Expenditure among Socio-Economic Groups: 2004-05).

Studies indicate that in North East India the livestock centred enterprises have higher prospect of growth in small to medium scale enterprises within livestock value chains. As per 6th economic census 2013, there are 1.27 lakh establishment related to livestock and 51005 establishments (CLFMA of India, national association of Indian livestock sector,2017). The livestock employs 2.17 lakh (217347 numbers) people in Assam. This is 77% of total employment created by agricultural establishments (excluding crop production and plantations). The figures very clearly give a strong possibility of commercial livestock in Assam which can be further deduced for other North East states. This will not only fulfil the requirements of the transformed market but it will also generate employment through entrepreneurship.

Production Pattern

With the changing scenario both in the supply and demand section, it becomes appropriate to discuss the marketing chain of a livestock product. Diversification in livelihood along with gender equity has become the key requirement for the sustainable growth. Studies indicate that in developing country the demand for meat and milk may grow by 50% in 2050 (Alexandrators and Bruinsma, 2012).



Basic Animal Husbandry Statistics 2019, Ministry of Fisheries, Animal Husbandry and Dairying

Figure 1: Share of agriculture and livestock sector GDP/GVA at constant (2011-12) prices

Fig. 1 indicates a steady growth of livestock sector in almost last 3 decades whereas the agriculture and allied sector is consistently declining. This clearly indicates the steady performance of the livestock sector relative to declining contribution from agriculture and allied sector.

Table 1: Forecasting of agriculture & allied sector and livestock sector (% of total GDP/GVA)

Year	Forecast (Agri and allied sector)	Forecast (Livestock sector)
2019	8.22	4.03
2020	8.05	3.97
2021	7.87	3.91
2022	7.7	3.85
2023	7.53	3.79
2024	7.36	3.72
2025	7.19	3.66
2026	7.02	3.6
2027	6.85	3.54
2028	6.67	3.48
2029	6.5	3.41
2030	6.33	3.35

Table 1 clearly reflects the steady growth prospect of livestock sector. With the forecast value it can be predicted that future growth trend is relatively steady in livestock sector as compared to agriculture and allied sector. With the 95% confidence interval the lower confidence bound for agriculture and allied sector is estimated – 23.30 (negative value) in 2030 whereas the livestock sector the value is 2.21 in the given year. The value indicates the expected change with the normal distribution. Above discussion clearly indicates the steady growth prospect in livestock sector relative to agriculture and allied sector.

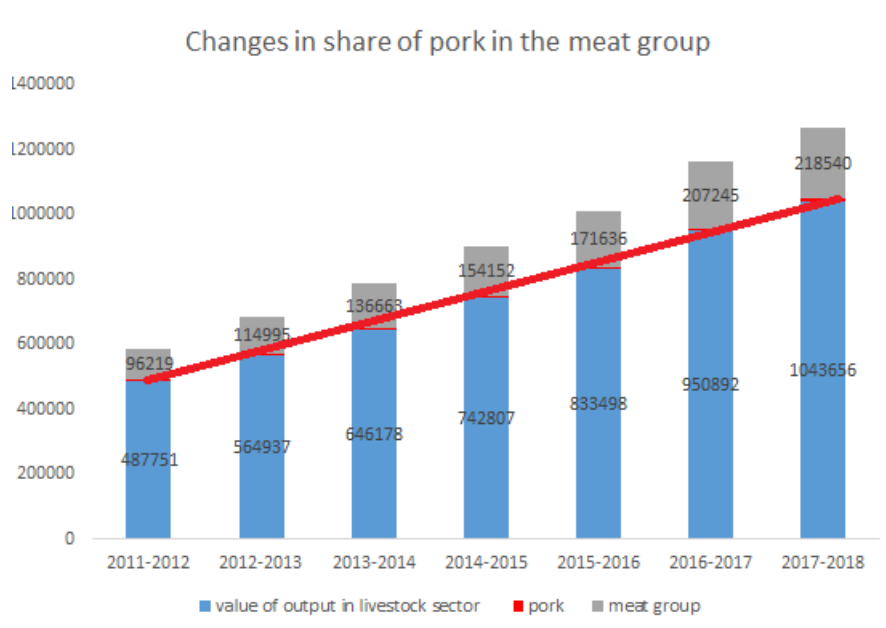
Changes in the Share of Meat Group Products

Total meat production in India has increased by 6 % in 2019 as compared to the previous year. The contribution of pig in total meat production is almost 5% which shows 2 % increase as compared to the previous year. In 2018-19 nearly 50% of meat production is contributed by poultry. Remaining are shared by buffalo, goat, sheep, pig and cattle where pig alone contributes 5% in meat production. Table 2 indicates the share of different products under the meat group varied marginally and we find almost a similar pattern of variations with marginal difference between 1-2 percentage. Livestock products shows almost a similar pattern of variations where 2015-16 shows a dip in contribution which started recovering in next year.

Table 2: Percentage share in GVA of meat group products at current prices

Year	Meat	Poultry meat	Mutton	Beef	Pork	By product	Hides	Skins	Other by products	Meat product	Total share
2011-2012	18.14	8.12	6.7	2.41	0.92	0.9	0.39	0.24	0.27	0.69	38.77
2012-2013	18.73	8.45	6.88	2.54	0.86	0.92	0.39	0.25	0.28	0.7	40.01
2013-2014	19.53	9.23	6.84	2.57	0.89	0.92	0.39	0.24	0.28	0.7	41.6
2014-2015	19.14	8.79	6.75	2.77	0.82	0.9	0.38	0.24	0.28	0.71	40.8
2015-2016	19.03	8.97	6.41	3	0.65	0.88	0.38	0.22	0.27	0.68	40.51
2016-2017	20.25	10.15	6.61	2.79	0.7	0.85	0.35	0.23	0.28	0.69	42.9
2017-2018	19.46	9.76	6.4	2.7	0.59	0.82	0.34	0.22	0.27	0.66	41.22

Source: National Accounts Statistics, CSO

**Figure 2:** Changes in share of pork in the meat group

Consumption Pattern

From 90's the difference of values of the consumption of fish, egg and meat per person of rural and urban increased from 6 to 28. But within this time period the consumption individually within rural and urban areas almost got doubled and specially in 2011 the percentage increase was higher in consumption of egg, fish and meat in rural areas (76%) relative to urban areas (71%). Change in consumption pattern can be very clearly understood through this figure which does not align with the traditional discussed pattern.

Table 3: Value of consumption of broad group of item egg, fish and meat per person

Year	Rural	Urban	Rural urban difference
1972	1.09	2.07	0.98
1977	1.84	3.3	1.46
1983	3.37	5.9	2.53
1987	5.11	8.8	3.69
1993	9.4	15.5	6.1
1999	16.14	26.7	10.56
2011	68.46	96	27.54

Source: NSSO report of 27,32,38,43,50,55 and 68th rounds

Studies indicated that in poor countries urban–rural differences in the consumption of livestock products could be due to: limited market access for the rural people; high dependence of rural households on subsistence agriculture. IFPRI on its report (2005) estimated that 76% of rural population in Ethiopia get their food from their own production whereas for urban households this is just 7%. Factors highlighted for such imbalance were, a lack of marketing infrastructure—such as cold chains—for perishable products; low level of urbanization; the nature of the product itself constraining consumption by rural households (that is, it is produced in bulk—it is largely indivisible); and a lack of rural retail markets for such products. In India, increasing percentage of (4%) urbanisation in last one decade indicates higher labour mobility which probably have influenced the shift in consumption pattern.

Livestock and Contribution in Growth

The population of livestock can be studied under three subheads, based on their contribution in growth— high, medium and low. Cattle and buffalo together share the highest percentage of (55%) of total livestock population which is followed by sheep and goat (40%) in India. Along with pig remaining livestock population consists horses, mule, donkey, camel, mithun etc. comes under the third category.

Table 4: Value of consumption of egg, fish & meat per person (for a period of 30 days by NSS Rounds) in rural and urban areas of NE States of India with percentage distribution of consumption expenditure.

NE States	55 th round (1999-2000)		68 th round (2011-12)	
	Rural	Urban	Rural	Urban
Assam	35 (8%)	70 (9%)	157 (13%)	195 (9%)
Arunachal Pradesh	59 (10%)	70 (9%)	218 (12%)	259(10%)
Manipur	34(6%)	47 (7%)	156 (10%)	144 (10%)
Meghalaya	62 (11%)	87 (9%)	198 (14%)	215(9%)
Mizoram	71 (10%)	111(10%)	202 (12%)	303 (12%)
Nagaland	102 (10%)	74 (9%)	288 (14%)	284 (12%)
Tripura	52 (10%)	90 (10%)	201 (15%)	280 (13%)
All India average	3.30%	3.13%	68 (5%)	96 (4%)

NSS Report: Level and Pattern of Consumer Expenditure 55th and 68th round

The table explicitly explains the level and pattern of consumer expenditure of North East states. It clearly portrays that the consumption value of egg, fish and meat are more than double than all India average and it continued to be a dominant item of consumption in north east states. During 2012 both in rural and urban areas the percentage of consumption is almost 8 to 10 percent higher both in rural and urban areas. Keeping in line with the consumption pattern of India, rural North Eastern states consume relatively more egg, fish and meat.

Studies (ICAR, 2014) developed and validated few traditional and indigenous pork-based product like cooked and smoked pork sausage with fermented bamboo shoot, pork pickle, pork tenderloin butterfly, ham, bacon etc. which need to get further direction for making pork farming a commercial activity. Considering the persistent demand from North Eastern region for all development of piggyery under NLM, a sub mission on Pig development in North Eastern region is initiated for diversifying the livelihood. It can be very hopeful initiatives of linking the stakeholders and sub-mission by skill development, technology transfer and extension through NLM for a sustainable livestock development.

New enterprises as a start up in pork is more feasible in NE states as in this region traditional poor consumers still prefer low-cost fresh pork from small informal markets. Small informal markets are larger in number which increases the small enterprises to withstand the vulnerable situation. It increases the possibility of the small enterprises to take coping strategy in a vulnerable situation within a short period of time. It should be noted that traditional markets generally generate more employment, because of the labour-intensive nature of their enterprises, which of course is also the basis for their low costs. Market participation of local population on the chain as retailer, trader, processor or as other required chain actors at small scale can strengthen the prospective value chain of livestock product. This can strengthen the indigenous economy in the future to innovate local products which has evolved from the economy itself rather than externally pumped or borrowed through institutional agencies.

Conflict of Interests

There is no conflict of interest.

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