

**IMPLEMENTATION STATUS OF SMIA
(SLAUGHTERHOUSE & MEAT INSPECTION ACT)
(1999) IN KATHMANDU**

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DEDICATION

This dissertation is dedicated to my late beloved father, Mr. Raj Kishor Lal Karna who sacrificed for my education amidst his acute basic livelihood hardships, who imbibed in me the importance of discipline, perseverance and adversity, and who was apologizing me at his final moments in this physical world for not being able to campaigning me in the voyage of life and left me with the great responsibility to be a good human.

ABSTRACT

The present research study keeps the general objective of assessing the status of implementation of Slaughterhouse and Meat Inspection Act (1999) in Kathmandu metropolitan city of Nepal. The research design is descriptive and analytical, and it uses both the quantitative and the qualitative approach to meet its objectives. Similarly, the sampling design is purposive and the populations under questionnaire survey are the meat occupationals and the consumers, and those under interview survey are the key informants. This research proposes two hypotheses as its guideline – one relates to measure the statistical associations of the awareness among the meat occupationals and the consumers with the implementation of SMIA (1999) and constitutes quantitative aspect of the study while the other relates to evaluate the contingency of the regulatory infrastructures on the implementation of this legislation which constitutes qualitative aspect of the study.

The results of the present study establish that awareness among the meat occupationals has weak but positive association with implementation while the awareness among the consumers has negative association with the process of implementation; and the regulatory infrastructures have strong contingency on the implementation of SMIA (1999). It shows that the problems in the process of implementation stems out from within the regulatory infrastructures which constitute the part of the supply side of the veterinary regulatory services of the government of Nepal. The findings of the research study further reveal that the legislation is not officially enforced in spite of its promulgation of more than a decade. Although some of the major key achievements during this period – rising level of awareness among people, strengthening of demand for the execution of the statute, policy advocacy, formulation of Slaughterhouse and Meat Inspection Act (1999) Implementation and Monitoring Committee, gaining political commitment and special budgetary provisions – suggest that the SMIA (1999) is in the process of enforcement which awaits a formal official announcement through notification in Nepal Gazette. The most relevant causes behind non-implementation of the legislation in KMC are identified as the decade-old political turmoil and the resultant state of political transition of the country and her unstable governments, insufficient coverage of

awareness among the population, inefficient regulatory management of available physical infrastructures, socio-cultural factors, and deficiency of SMIA (1999) in specifying the competent authority, envisaging the concept of food safety, and in devising a solid framework for regulatory networking and coordination among key stakeholders both under the government agency and the non – government agency.

Based on these findings, the present research arrives on the conclusion that government of Nepal is continuously enduring to create favourable regulatory environment for the implementation of SMIA (1999) in Kathmandu metropolitan city. However, the research remarks that government of Nepal requires incorporating necessary adjustments and corrections in its present strategies and programmes beforehand implementing SMIA (1999)

- 1) Regulatory management of the entire slaughterhouses and slaughter-place available in KMC by framing a regulatory model.
- 2) Officially enforcement the legislation for which necessary amendments in the existing SMIA (1999) is inevitably essential so that the competent authority is specified, concept of food safety is incorporated, and a clear regulatory framework for networking and coordination among the government and non-government agencies is envisaged.
- 3) Specifying land for the establishment of industrial estate in Kathmandu metropolitan city
- 4) Continuing the programmes for the development of new meat establishments and improving the existing establishments.

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2. Consumers' Choice and Practice of Meat Preservation
3. Slaughterhouse: An Unsolved Mystery in Nepal
4. Observations and Inferences

ACRONYMS

| | |
|---------|---|
| AM | Ante – mortem Inspection |
| PM | Post – mortem Inspection |
| CA | Competent Authority |
| CFRL | Central Food Research Laboratory |
| CLDP | Community Livestock Development Project (Earlier TLDP) |
| DG | Director – General |
| DLMP | Directorate of Livestock Market Promotion |
| DLS | Department of Livestock Services |
| DLSO | District Livestock Service Office |
| FD | Frequency Distribution |
| F/Y | Fiscal Year |
| GoN | Government of Nepal |
| KMC | Kathmandu Metropolitan City |
| LSTED | Livestock Service Training and Extension Directorate |
| MI | Meat Inspector |
| MOAC | Ministry of Agriculture and Cooperatives |
| MS | Meat Supervisor |
| MT | Metric Ton |
| OIE | Office International des Epizootics (World Organization of Animal Health) |
| OKMC | Office of the Kathmandu Metropolitan City |
| PIL | Public Interest Litigation |
| SMIA | Slaughterhouse and Meat Inspection Act |
| SMIAIMC | Slaughterhouse & Meat Inspection Act (1999) Implementation & Monitoring Committee |
| SMIR | Slaughterhouse and Meat Inspection Regulation |
| TLDP | Third Livestock Development Project |
| VEC | Veterinary Epidemiology Center |
| VPHO | Veterinary Public Health Office |

TERMINOLOGIES AND DEFINITIONS

| | |
|-----------------------------------|---|
| Competent Authority | Competent authority is the government agency which is authorized to manage implementation of the law. |
| Meat Establishments | The part of regulatory infrastructures which are tangible in nature and related to butchering operations and meat retailing. Example: slaughterhouse, slaughter-shed, meat market, and the retail meat shops. |
| Meat Occupationals | The persons who are professionally concerned with meat production, processing and whole selling or retailing of meat. |
| Regulatory Infrastructures | The physical structures such as slaughterhouse and slaughter-place, and meat shops, and the soft structures such as legislation, budget, human resources, and programmes and activities related to institutional coordination, and monitoring and supervision |

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I would like to express my sincere gratitude to NOMA-MPPG programme for providing me the opportunity to pursue master's degree education in the field of public policy and governance. I am grateful from the core of my heart to Prof. Dr. Tek Nath Dhakal of Public Administration Campus (PAC), Tribhuvan University (TU) who accepted me under his guidance to accomplish the present thesis work.

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I would like to thank my beloved mother Mrs. Shail Devi Kayastha and my maternal uncle Mr. Badri Narayan Lal Karna who took confidence in me and have always been great sources of inspiration right from my childhood. Let me anticipate that the study has been possible due to my beloved wife Mrs. Shweta Karna who efficiency managed the family during my outness and sacrificed her own academic pursuits to make me successful student in this programme. Thank you so much, Shweta! I am equally thankful to my children namely Miss Anjali Karna, Miss Anamika Karna and Master Aashutosh Karna who were deprived of my love and affection during my study period.

Last but not the least, I am grateful to all the non-teaching members of Department of General and Continuing Education, North South University, Bangladesh as well as those of PAC, Nepal for their earliest administrative convenience availed to me. I highly acknowledge my colleagues Mr. Bhakta Bahadur Pande and Mr. Mizanur Rahman Bhuiya for supporting me in various ways during my Bangladesh life; and the key informants who put their valuable resources in making the present research study successful.

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CHAPTER ONE: INTRODUCTION

1.1. BACKGROUND

One day I went to purchase goat meat from the local market of Birendranagar municipality of Surkhet district where I was posted as Veterinary Officer 10 years ago in District Livestock Service Office. I asked a retailer who personally knew me as a government veterinarian, the price of meat and enquired into the adequacy of meat. He whispered in my ear saying that the meat presently available in his shop is not suitable for me because he has mixed meat of she-goat with the meat of he-goat. Instantaneously I thanked the retailer for his honesty but cursed him for his fraudulent practice. A similar painful circumstance met with me unfortunately again with the case of goat meat but this time in Kathmandu metropolitan city. In 2008 AD, I went to purchase goat meat from Khicha Pokhari, a local market of Kathmandu valley and returned with one kilogram of meat @ NRs. 350.00 (~USD 4.8) per Kilogram. After cooking, I with my family sat for dining; just chewing a single piece of meat and sensing repulsive palatability; I asked my wife to dispose off the entire cooked meat. My kids and my wife got disappointed for not even eating a single piece of meat. I cursed myself for being cheated, at least as a professional of Veterinary Science. With these bitter experiences, we decided to consume goat meat either from known retail outlet or just on the eve of festivals or important social events. These two events which are related to fraud and spoiled meat respectively hit my mind to explore the status of implementation of Slaughterhouse and Meat Inspection Act (1999) in Kathmandu metropolitan city.

1.2. STATEMENT OF THE PROBLEM

Nepalese parliament passed Slaughterhouse and Meat Inspection Act (SMIA) in 1999 to manage and regulate meat sector of the country. Since then, Department of Livestock services (DLS) has made several efforts to implement the statute in Kathmandu metropolitan city. In spite of such efforts are in place, consumers are compelled to eat unhygienic and inadequate meat; they are bound to live with the risk of meat borne diseases; and various cases of frauds precipitate from

time to time (Joshi et. al, 2003; TLDP, 1999 & 2003; Sankhi, 2008). The prevailing situation of meat businesses in KMC has several implications.

The demand of meat and meat products are higher than the existing supply for which Nepalese meat industry depends on import of live animals as well as frozen meat from neighbouring countries to meet especially the demand of red meat (TLDP, 1999 & 2003). Based on estimates of the then population growth at 2.3% and per capita increment in the consumption of meat at 2.2 percent, Third Livestock Development Project estimated the demand for meat in 1999 was 189,700MT while the supply from domestic sources was 174,400MT (TLDP, 1999:1). In this vein, fewer literatures maintain that the prevailing supply deficit is not only due to deficit number of food animals in Nepal but also due to non-acceptance of locally produced meat by the resident expatriates and the foreign tourists. Although there are many cases go unreported, an official report of Central Quarantine Office maintains that Nepal imported 250,686 heads of buffaloes and 351,105 heads of goats and 115.16MT of frozen meat during F/Y 2006/07 (VEC, 2006:105) which indicates drainage of huge capital for the exchange of live animals and meat.

There is dearth of research activities on meat borne diseases; it is occasional and isolated in nature, and the results of most of them remain as undocumented findings. Some of the literatures report the prevalence of bacterial, viral and parasitic diseases as meat borne zoonoses¹ in Nepal. Some of them are brucellosis, tuberculosis, anthrax, taeniosis/cysticercosis and echinococcosis / hydatidosis (Joshi et al, 2003:123). Few literatures argue that the effect of zoonoses might be little through meat consumption in Nepal due to superior cooking style – frying the meat and then cooking in the pressure cooker – nevertheless, it does not rule out the absence of the spore forming pathogens and possibly their in-built toxins in the cooked meat. Regarding the presence of pathogenic microorganisms, Gautam 2005 cited in Sankhi (2006:110) has detected *Salmonella* Spp in buffalo meat, mutton and chicken; and *Escherichia coli* has been reported as the predominant bacteria followed by *Staphylococcus* and *Salmonella* Spp, and other bacteria of Enterobacteriaceae family in raw meat obtained from buffalo, goat, pig and poultry in Kathmandu valley (Shrestha et al 2003:116). A similar finding has been reported for meat and some of the meat products like sausage, dried buffalo meat, Kachila (spiced minced buffalo meat), Chhoyela (Smoked, spiced and boiled buffalo meat), Sekuwa (grilled goat meat), and

¹ It is a phenomenon under which some of the diseases are communicable to humans and animals due to meat handling and consumption.

fried meat (CFRL, 1996/97 cited in TLDP, 1999:31). Some of these reported bacteria are potent producers of toxins which causes death of humans. Given these situations, it is apparent that the meat and meat products procured, processed and marketed in the capital is unsafe for human consumption posing potential public health hazards.

A similar major concern of meat sector in Kathmandu valley is pollution of environment due to the waste products of meat emitted from slaughtering and dressing operation. A report of TLDP reveals that 78.78MT waste products are discharged daily from the total animals slaughtered in Kathmandu valley (Sankhi, 2006:110). As the slaughter sites are lacking proper drainage channels as well as waste disposal system, waste materials are disposed into municipality waste tank, street and rivers (ibid:109). It has been documented that 58.8% of total such wastes was heaped in the street of Bhaktapur district, one of the common valley cities of Kathmandu (Joshi & Oleson, 1999 cited in Sankhi, 2006:109)..

1.3. RESEARCH QUESTIONS

- I) Whether SMIA (1999) has been enforced in Kathmandu metropolitan city?
- II) What is the perception of meat occupationals and the consumers towards implementation of SMIA (1999) in Kathmandu metropolitan city?
- III) What are the various provisions/mechanisms of GoN for supporting the implementation of SMIA (1999) in Kathmandu metropolitan city?

1.4. RESEARCH HYPOTHESES

1. Awareness among meat occupationals and consumers helps implementation of the SMIA (1999) in Kathmandu metropolitan city.
2. Provision of sufficient regulatory infrastructures supports the implementation of SMIA (1999).

1.5. SCOPE AND LIMITATION OF THE STUDY

The present study intends to ascertain whether or not SMIA (1999) is enforced in KMC by comparing the various provisions, and the programmes and activities of the government with the

existing situation of meat trade. The field work of this study has been carried out in various localities of Kathmandu metropolitan city. This is because of the fact that Kathmandu is the capital city of Nepal with rapid urbanization and the grave situation of its environment including its heavily polluted rivers. Other reason for which the present study takes Kathmandu valley as a case is due to the fact that the monitoring initiatives doing well in other cities are applied with the least in Kathmandu (Sankhi, 2006:111) which reveals the existence of some of the hidden causes. Similarly, another proposition for selecting Kathmandu is that the main outlets for buffalo meat are concentrated in the areas where Newar communities are more; and Kathmandu is considered congregation of this ethnic group (TLDP, 1999:13), and buffalo meat trade is highly unorganized in comparison to poultry and goat meat (TLDP, 1999 & TLDP, 2003). Additionally, studying the implementation of SMIA (1999) in KMC provides a model for its subsequent implementation in other urban settings of the country.

The present research study is constrained with several limitations. First, the field work is limited to few areas of KMC so the findings may not be generalized over national level. Second, the study explores the relationship of awareness among meat occupationals and the consumers with the implementation of SMIA (1999); the socio-cultural perspectives of policy implementation dynamics and the relationship between economic status of meat occupationals and the implementation are not explored due to time limitation. Third, the study does not explore possibility of political economy behind the implementation of this Act.

1.6. SIGNIFICANCE OF THE STUDY

The present study finds a great opportunity to carry out research in the area of meat business in KMC with particular emphasis to ascertain the implementation status of SMIA (1999). Various findings of this study are helpful in bridging the knowledge gap existing in the available literatures related to execution of meat legislation in Nepal. Besides, the study opens up various dimensions for the research activities regarding policy implementation process in meat sector in the country. Additionally, the present research establishes and tests a model which can be useful for the competent authority for the enforcement of SMIA (1999) in various locations of Nepal. Finally, the government authority can have the opportunity to bring necessary adjustments in its

existing policies, strategies, and programmes and activities based on the various findings of the present research study.

1.7. ORGANIZATION OF THE STUDY

This thesis consists of six chapters. Chapter one starts with introduction of the present research study. It consists of background of the study, research problem, research questions and the hypotheses, scope and limitation, and significance of the study, and organization of the study. Chapter two presents theoretical contextualization of the study with the description of the variables and analytical framework. Similarly, chapter three describes the methodology of the present study with research as well as sampling design, and data processing and analysis plan. Chapter four describes the salient features of SMIA (1999) with reference to enforcement and inspection. Chapter five contains findings of the study with major inferences derived from the discussion. The thesis ends with chapter six which consists of summary and conclusions of the research study.

CHAPTER TWO: LITERATURE REVIEW

2.1. INTRODUCTION

Although academic studies on the implementation of SMIA (1999) is much less in Nepal, available scholarly writing and reports of the projects operated under Department of Livestock Services, and the prevailing programmes and practices of DLS (Central government) as well as that of the Office of Kathmandu metropolitan city (Local government) shows contrasting scenario related to enforcement of SMIA (1999) – a situation hard to determine whether the legislation has been implemented or yet to be implemented. Therefore, the general objective of the present research study is to ascertain whether SMIA (1999) is implemented or not implemented in Kathmandu metropolitan city.

Some of the literatures claim that SMIA (1999) has not been enforced till to date (TLDP, 1999; Joshi et al, 2003; Pant, 2007; Parajuli, 2007; Joshi, 2009). Similarly, Chief of Veterinary Public Health Office (VPHO) under DLS laments that not a single clause of the SMIA (1999) had been implemented yet. “The consumers are forced to have substandard meat, which is harmful to their health”, He adds. “About a dozen committees were formed to look into the matter but to no avail” (See [The Himalayan Times, 17 November 2009](#)). However, inferences made from few of the literatures along with personal experience of the researcher for more than 10 years in the DLS suggest opposite view. As my memory recalls as one of the participants of first batch training on Meat Inspection organized by DLS at the venue of District Livestock Service Office (DLSO), Makawanpur district in 2001, the then Director – General of the DLS in course of highlighting the general objective of the training maintained that government of Nepal is preparing to enforce SMIA (1999) in Hetauda municipality. Therefore, the trainees of this course would be able to bear the added responsibility of meat inspection after completion of the course. In this vein, some of the unpublished literatures (in Nepali) maintain that SMIA (1999) was legislatively enforced from BS Baishakh 1, 2060 (April 2002) and technically enforced from BS Ashadh 27, 2060 (June 2002) in Hetauda municipality with the consent of the municipality office. Just after two months of the enforcement of the statute, the authority temporarily lifted various provisions of SMIA (1999) required for inspection and enforcement as per its article

(16)² related to exemption in the month of September 2002 when Nepalese celebrates “Bada Dashain”³. The same literature further puts that, since this abeyance, the situation has turned into non-enforcement of the Act in the municipality till to date”. In spite of failure of the enforcement of the legislation in Hetauda municipality, Department of Livestock Services has tried several times by formulating statute implementation committee to enforce the legislation in KMC in the subsequent years.

However, the claim of Sankhi (2006) that the present monitoring initiatives to monitor and inspect the hygienic management of slaughter-sites/places and meat shops has been found effective in other cities of the country are applied with the least in Kathmandu (Sankhi, 2006:111) implies that the meat legislation has already been implemented in Nepal including KMC or at least if not, compels to interrogate “How do come the practices of monitoring and inspection of various meat establishments in Kathmandu or other urban settings of the country in absence of official enforcement of SMIA (1999)? The statement of Joshi et al. (2003), one of the disclaimers of non-implementation of SMIA (1999) justifies this query positing that the municipalities are the local governments’ authorities responsible for managing meat marketing for which some of them have established committees for meat hygiene, and have started to inspect and stamp the meat (Joshi et al., 2003:122). While it is clear from their statement that the Act is implemented in some locations of the country; it does not clearly deliver the message over whether KMC practices inspection and stamping of meat? If not, otherwise, their statement compels to ask whether such committee is limited in black and white or it really works?; Whether there is lack of coordination between DLS and the KMC if, suppose for an instance, such practices were in place in KMC in an attempt to the implementation of the present meat legislation?; and is it possible that a multi-sectoral issue like meat is regulated only by local body? Furthermore, the survey of the same scholars carried out among 150 butchers in Kathmandu regarding pre- and post-mortem animal inspection, meat inspection, and slaughterhouse examination by the government authorities reveals that 16% of them responds that sometimes, either the veterinarian or municipality sanitation, and health personnel came for meat inspection (*ibid*). Their survey findings once again justify the enforcement of SMIA (1999)

² It provides that the Act shall not be considered to prohibit slaughtering of animals at any place, by any method or consuming meat with skin according to culture, religion and rituals during festivals or special ceremonies.

³ It is national festival of Nepal, which is celebrated for 10 days. During the festival, Goddess “Durga Bhawani” is worshipped with sacrifice of various food animals as offerings.

in Kathmandu valley amidst their controversy statements or otherwise provokes to argue – if the legislation was not enforced, who were those veterinarians, according to the butchers, sometimes go to inspect various meat business operation? Whether they were veterinarians of the government veterinary department or the veterinarians recruited by the office of Kathmandu metropolitan city?

Although it is of little scope, the credit for initial exploration of meat implementation issue goes to Joshi et al. (2003) who have approached the butchers to know the situation of implementation of SMIA (1999) in Kathmandu metropolitan city. However, their survey is lacking concerted effort for which they have failed to give any conclusion regarding the issue, and most part of their studies has been deviated towards exploring the issue of zoonotic diseases. Their survey finding seems to be biased because it lacks validation by supplementary data. The insights into the aforementioned literatures therefore, suggest that both of the central and the local governments are serious over the issues of prevailing butchering system, operation of meat marketing practices, and overall, the meat trade in Nepal including Kathmandu metropolitan city. Moreover, the present study does not consider the literature conflict as an issue as it finds good opportunity to study the status of the implementation of SMIA (1999) in Kathmandu metropolitan city.

2.2. CONCEPTUAL STRUCTURE

The present research study hypothesizes that awareness among meat occupationals and consumers, and provision of sufficient regulatory infrastructures helps and supports implementation of SMIA (1999) in KMC respectively. Therefore, there are two sets of independent variables – 1) awareness on the part of meat occupationals and consumers, which is beyond the control of legislation and therefore it constitutes non – statutory part, and 2) regulatory infrastructures, most of which, of course, primarily stems out from within the legislative policy constitute statutory part of the study.

2.2.1. DEPENDENT VARIABLE

The dependent variable of the present research study is implementation status of SMIA (1999) in Kathmandu metropolitan city. An implemented status of SMIA (1999) in KMC implies that the enforcement activities are in place. The present study considers the existence of the following practices to map the extent of implementation of the present meat statute – 1) Registration of Meat Establishments. The provision of license or registration of infrastructures or business as a whole provokes the authority for restriction, suspension, or revocation if the licensee does not meet requirements embodied in SMIA (1999) and SMIR (2001) (Nathan, n.d.:3). Furthermore, registration of meat establishments creates a powerful enforcement device which can serve as an important information tracking function for program monitoring (ibid). Slaughterhouse and Meat Inspection Act (1999) is said to be implemented when the various meat establishments like slaughterhouse and other butchering sites, and the meat shops operating in KMC are duly registered through the process of licensing as specified under rule (5) of SMIR (2001). Conversely, the present study infers to the fact that the cases of either non-registration or no renewal of registration of the meat establishments means these businesses are operated illegally and therefore, the statute is not implemented. 2) Ante-mortem Inspection (AM). The clinical examination of food animals before slaughtering is called AM inspection, and it is concerned with three main areas: public health, animal health and animal welfare (Gracey et al 1999:190; Herenda et al. 1994:1-2). The ante-mortem examination of animals represents 50% of meat inspection and it improves meat quality by making PM examination more efficient (Kotwal and Agrawal, 2007:128). This is due to the fact that the judgment of a food animal that it is fit for slaughter is initially made on the basis of AM findings. The provision of a veterinary inspection of the live animals prior to slaughter is a basic legal requirement of most meat inspection system (Gracey et al 1999:189) and lack of practice of AM inspection therefore implies that SMIA (1999) is not enforced. 3) Post mortem Inspection (PM). It refers to any procedure or test conducted by a competent person on all relevant parts of slaughtered animals for the purpose of judgment of safety, suitability and disposition (Zade & Khan, 2007:73). Once a food animal qualifies the requisites of AM inspection i.e. the animal is clinically healthy, it is passed for slaughter; and the subsequent examination of the internal organs of the butchered animals is carried out to rule out occurrence of any disease or the condition. The judgment to declare that

the carcass is fit and passed for human consumption or it is conditionally held or condemn is made on the basis of PM findings. An already implemented status of SMIA (1999) confers that the practices of both the AM and the PM are adopted in KMC before channeling the meat for retailing purpose. 4) Monitoring and Supervision (M & S) of Meat Establishments. Monitoring and supervision are the processes of evaluating the status of the programme to ensure that the goals and objectives are met (Nathan, n.d., 8). These are chief enforcement and inspection activities carried out by the CA based on which it is ensured that there is continuing compliance with various requirements of the legislation (See Russell, 1990 & Cohen, 1998). The traditional approach to compliance monitoring and enforcement consists of periodic inspections by government employees, warning letters or notices for some or most violations, followed by additional warnings, or various legal proceedings (Russell, 1990:248). Monitoring and supervision therefore ensures that the operations of various meat establishments are carried out in congruence with the regulatory standards and that any deviation from the specified procedure is considered offensive and subject to punishment and penalty. Based on these literatures, the status of SMIA (1999) is ascertained as implemented when the practice of M & S of meat establishments is in place in Kathmandu metropolitan city.

2.2.2. INDEPENDENT VARIABLES

2.2.2.1. AWARENESS AMONG THE MEAT OCCUPATIONALS AND THE CONSUMERS

A law is framed under the prevailing socio-cultural context of the regulated population; nevertheless, it largely undermines the inherent characteristics of the regulated population. This aspect remains beyond the control of legislation and therefore, a separate study becomes inevitable to evaluate their effect on the implementation of a policy. The present study keeps that when professionals involved in meat enterprise are educated and their awareness level is high, a self improvement is possible. Similarly, when consumers are well known to the effect of unhygienic meat on their health and how meat legislation can protect their basic rights concerned with food safety and so their health, they demand for enforcement of SMIA (1999). In short, the present research argues that the awareness among both of the populations bears relationships

with the enforcement of SMIA (1999). As a matter of fact, meat occupationals working at various levels – butchering operation, transportation of meat and meat retailing – are the key stakeholders regulated under meat inspection regime.

The present research study puts a logical sequence maintaining that creation of awareness among them is possible through the provision of training on meat related issues – meat production technology, meat-borne diseases and public health concerns, and various statues concerned with regulation of meat sector. With the new knowledge, they gain a great deal of information regarding the diseases which are contracted by them during butchering operation and handling of meat, and how various code of practices when adopted in their businesses protect them and the consumers from such diseases. As a result, they have willingness for improvement in their existing business situation and adopt scientific method of meat production.. Consequently, their businesses run in comparatively high turnover leading to their increased standard of livelihood; they gain elevated social prestige, and so develop positive attitude and confidence in the SMIA (1999). Ultimately, they respect the meat statute avoiding arbitrariness to their businesses. A measurement of training is made on the basis of their frequency of exposure to training and its type they receive either through government or non-government agencies.

With these things in hand, they develop positive attitude towards a system of slaughterhouse-oriented meat production because they are now confident in the fact that hygienic meat production is only possible through such system. A slaughterhouse is a scientifically designed place with all the requisites for hygienic meat production and confirms mandatory AM inspection and butchering of animals in slaughterhouses; ensures PM examination and stamping of meat; procurement of meat without skin with its preservation through cold chain; and after all, the enhanced level of sanitation and hygiene at all the steps of meat production chain. Besides, they know the benefits of such system of meat production in terms of getting rid of extra burden involved in butchering operation and waste disposal, reduction in recurring expenditure in their business; and less chance of loss in their businesses due to maintenance of homogeneity in price of meat. To summarize, various knowledge regarding the hygienic meat production and the legislation, and an understanding of slaughterhouse operation will provoke the meat occupationals to comply with various provisions of SMIA (1999). Conversely, absence of any

knowledge implies that they would resist as well as disregard the law which in turn, confers that SMIA (1999) is not implemented in Kathmandu metropolitan city.

A similar proposition also holds true in case of consumers. Creation of general awareness among them is possible when the regulating agency arranges various programmes through mass media related to essentials of hygienic meat production and deleterious effect of unhealthy meat on human health. Such programmes of the government or its non-government partner agencies enable the consumers to know various ways of meat becoming contaminated, and rendering them unhygienic and unfit for consumption; and meat-borne diseases and various features as well as aspects of quality meat. Furthermore, their exposure to the content of SMIA (1999) is important in acquainting them about good practices involved in transportation of food animals and meat, sanitary and hygienic management of butchering places and operations, importance of AM and PM inspections, and proper waste disposal system involved during meat procurement. Therefore, a shift in consumers' knowledge from the traditional meat consumption preference to the scientific understanding of quality meat provokes them to change their preference over type of meat. They preferably know and have confidence in the fact that the meat produced from the slaughterhouses is essentially frozen and without skin because they are procured, preserved, and channeled for retailing as per accepted standards. Based on these arguments, the present study uses the preference of consumers of KMC towards frozen meat without skin as a ranking of the extent of their awareness and implies that they are aware. Similarly, the study uses their preference regarding place of meat purchase as another aspect of ranking their awareness. Accordingly, this study assumes that awareness among the consumers is high when they purchase meat only from registered meat shops which can be either cold stores or improved hygienic meat shops. Any meat purchased warm, with skin and from openly-run or unregistered meat shops infer that they are not aware; the demand side of enforcement is rather weak; and that various provisions of SMIA (1999) related to enforcement and inspection is not implemented in Kathmandu metropolitan city.

2.2.2.2. ROLE OF REGULATORY INFRASTRUCTURES IN PUBLIC POLICY IMPLEMENTATION

REGULATORY INFRASTRUCTURES

The independent variables employed herein the present research study are grouped under the statutory set of variables which are collectively referred as Regulatory Infrastructure. It typically comprises Policy Decisions of SMIA (1999), Resources which are further sub-divided into physical infrastructure and budget, and technically competent staffs, Institutional Networking and Coordination, and Monitoring and Supervision of the meat establishments. Regulatory infrastructures consist of both the tangible and the non-tangible structures essential for the execution of a regulatory policy. A description of infrastructures implies that the physical structures of a regulatory infrastructure is termed as tangibles (Bhattacharyay, 2009:2) which constitutes refrigerated transportation and storage facilities, market infrastructures, infrastructures for sale of meat (NCDA&CS, 2007), and slaughterhouse and slaughter-place for meat inspection service. A similar understanding of infrastructures maintains that soft infrastructures are non-tangibles that support the development and operation of hard infrastructure such as policy, regulatory, and institutional frameworks; governance mechanisms; systems and procedures; social networks; and transparency and accountability of financing and procurement systems (Bhattacharyay, 2008 cited in Bhattacharyay, 2009:2). Relevant to the latter, Du (n. d.) maintains that the ideal list of infrastructures in meat inspection service constitute a program organized and administrated by the national government, staff to ensure enforcement, government control of competent qualified inspectors, and administrative and technical support for the program (Du, n. d.:1), and the institutional networking and coordination, and monitoring and supervision.

PUBLIC POLICY IMPLEMENTATION

Public policies, according to Dye, are whatever the governments choose to do or not to do and as such they may regulate behaviour, organize bureaucracies, distributes benefits, or extract taxes – or all these things at once (Dye, 2004:1). The typology laid by Lowi (1964) for government

policies incorporates both the intent of a policy and the policy making process; and accordingly he describes three types of government policies – distributive, redistributive and regulatory type (Lowi, 1964 cited in Lavis, J. N., Ross, S. E., Hurley, J. E. et al, 2002:127). A regulatory policy is a governmental decision as to who will be indulged and who will be deprived on the basis of some general rule (ibid). It constrains or encourages certain activities by regulating behaviour, process and actions within the framework of constitution. Slaughterhouse and Meat Inspection Act (1999) is a regulatory policy of government of Nepal. The present research study opts to examine whether various provisions of this legislation has been implemented in Kathmandu metropolitan city.

Policy implementation is the execution and delivery of public policies by organizations or arrangements among organizations (Henry, 2007:281). It involves all the activities designed to carry out policies enacted by the parliament of a country (Dye, 2004:50). These organizations must hire personnel, draw up contracts, spend money, and perform tasks (ibid). Furthermore, policy implementation encompasses those actions by public and private individuals or groups that are directed at the achievement of objectives set forth in prior policy decisions (Van Meter & Van Horn, 1975:447). The question of execution of any kind of policy arises after the goals and objectives are established by prior policy decisions; it takes only after a policy is formally legitimized and funds are granted (ibid: 448).

Although various scholars suggest that the implementation process may vary according to policy type (Ripley & Franklin, 1982; Rimmerman, 1986; Peterson, Rabe, & Wong, 1986; Ingram, 1987 cited in Lester et al, 1987:209); researches conducted in the area of implementation of public policies have followed the top-down and bottom-up approaches (e.g., Sabatier, 1986; Linder & Peters, 1987 cited in Lester et al 1987:202; Najam, 1995 & Pülzl & Treib, 2006). Scholars also opine that none of these approaches is complete (e.g. Sabatier, 1991; Najam, 1995); and selection of an appropriate approach depends on comparative advantages in hand (Sabatier, 1986). The proponents of top-down approach are Van Meter & Van Horn (1975) who undertook the first effort to devise an analytical framework; and Sabatier & Mazmanian (1980) and Edwards (1980) who also gave their respective models to study implementation of a policy (Lester et a., 1987:202-203 & Najam, 1995:13). Besides, Linder and Peters (1987) are also advocates of top-down approach (Najam, 1995: 13). The model of implementation devised by Van Meter & Van Horn (1975) implicitly applies only to the programmes which seek to

distribute goods and services i.e. distributive policy and neglects the large number of programs which seek explicitly to regulate the behavior of private actors (Sabatier & Mazmanian, 1980:540). The present research study has mostly used the descriptions laid in the framework devised by Sabatier & Mazmanian (1980) because it is comprehensive and specific in the identification of variables particularly with respect to the manner in which statutory characteristics affect subsequent events (ibid: 538). Besides, it has also captured the dynamism of implementation by focusing on socio-economic conditions, public opinion, and other factors affecting the implementation process (ibid).

Top-down approach is useful where there is a dominant public programme in the policy area under consideration and where a single public agency clearly dominates the field (Sabatier, 1986:36). He further posits that this approach is preferred where there is a dominant piece of legislation structuring the situation at least, moderately well (ibid: 37). In line with his proposition, the present study finds it rational to start with the view of top-downers because SMIA (1999) primarily aims at safeguarding public health and at ensuring social welfare instead of economic development (ibid: 42). Therefore, an interventionist role of government becomes inevitable to protect the health of its population and to ensure social welfare. The leading role of the government is also evident from the far reaching implication of this legislation in relation to the promise of Nepal's obligation to comply with Sanitary & Phyto-Sanitary (SPS) Agreement of World Trade Organization to which she has been signatory for the last five years. The *Terrestrial Animal Health Code* of World Organization of Animal Health, one of the sister organizations of WTO defines the veterinary services of a country or group of countries as the National Veterinary Administration whose mission is largely to control and prevent the animal diseases and to control quality of veterinary services (Vallat & Mallet, 2006:390). In achieving the mission, sanitary certification is the core official accomplishment for the cross-border trade, which is issued under the responsibility of the government of the exporting country (ibid).

Slaughterhouse and meat inspection Act (1999) is a well-structured piece of legislation which envisages various policy decisions (ibid: 22) related to enforcement and inspection, and it primarily targets to change the behavior of meat entrepreneurs (Sabatier & Mazmanian, 1980:539). Policy implementation is a complex mechanism involving a wide number of actors and factors. To begin with the study of extent of implementation of SMIA (1999), the present research study starts with the evaluation of its capability in identifying competent authority and

various stakeholders, and in ensuring participation of various actors through agency networking with the existence of functional coordination. This is due to the fact that a policy is a starting point for the process of implementation (Van Meter & Van Horn, 1975:459). In this vein, Sabatier & Mazmanian (1980) rightly posit that a statute provides legal structure to shape the entire implementation process through its selection of the implementing institutions; through providing legal and financial resources to those institutions; and through regulating the opportunities for participation by non-agency actors in the implementation process (Sabatier & Mazmanian, 1980:544). In short, the present study assumes that various policy decisions envisioned in the SMIA (1999) has contingency on its implementation.

It is inferred from the description of Sabatier & Mazmanian (1980) that various kinds of resources are essential for the enforcement of a statute. An organization needs various inputs, appropriate process and technology to convert them into outputs. The office of SMIA (1999) implementing authority requires both the human resource and the non-human resources for its implementation. The various human resources are the staffs working in the various level offices of competent authority. They are organization's work force who frequently look into matters of implementation such as examining its effectiveness; investigating the problems associated therein; devising appropriate alternative methods to mitigate these problems; employing the appropriate tools and technologies to make the course of implementation run smoothly; and making recommendations as an approach to incrementalism for necessary amendments in the policy. For the shake of SMIA (1999), they chiefly constitute Meat Supervisors, Meat Inspectors and the staffs responsible for M & S of various meat establishments in Kathmandu metropolitan city. It is essential that the various offices of the CA have sufficient number of these staffs with competency sufficient to accomplish various statutory activities envisaged in the present meat legislation – the requisites which constitute some of characteristic features of the policy implementing agency (Van Meter and Van Horn, 1975). The non-human resources considered in the present research study constitute various meat establishments e.g. slaughterhouse, slaughter-places and the meat retail shops, and the budget available to the competent authority. Availability of sufficient number of scientifically-designed butchering sites and retail meat shops in KMC ensure that any meat-related activities are carried out through licensed establishments with the compliance of various standards set forth by national standard setting bodies. Besides, their operational status is also essential to understand that SMIA (1999) enjoys the status of

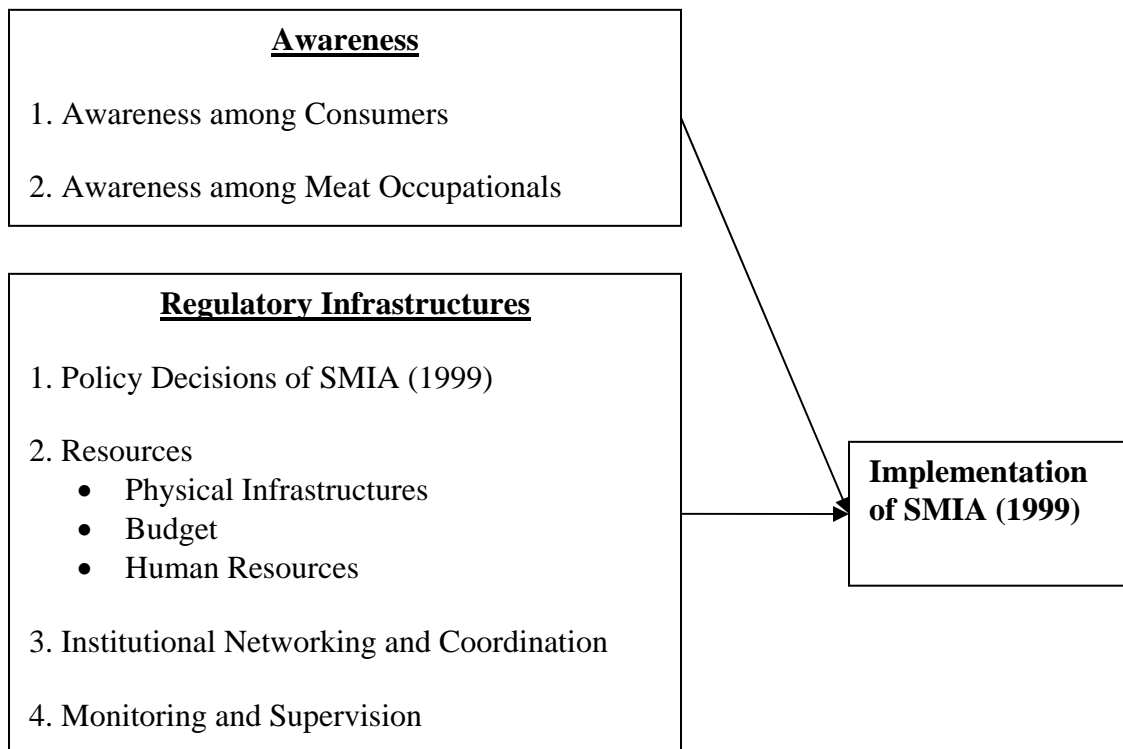
implementation. This is due to the fact that the available structures are not in functional stage means the problems lies somewhere in other part of implementation framework. In the same way, Sabatier and Mazmanian (1980) maintains that money is obviously necessary to hire the staff and to conduct the technical analyses involved in the development of regulations, the administration of permit programs, and the monitoring of compliance (Sabatier & Mazmanian, 1980:545). Provision of budget for the establishment of new physical structures, improvement of existing structures and for monitoring and supervision of various establishments involved in meat trade is of paramount importance.

Besides, the aforementioned factors in place, implementation of most of the public policy is not possible through one agency rather it is a multi-sectoral responsibility. It requires a complex system of networking of various stakeholders which have their own interests. All of them require performing duty in their own jurisdiction. In this vein, Fudge and Barrett (1981) rightly submit that the relationship between policy and action could not be regarded as a simple transmission process but rather must be viewed as a complex assembly job involving the fitting together of different interests and priorities (Fudge & Barrett, 1981:251 cited in Najam, 1995:13). The proponents of bottom – up model further posits that while a legislative perspective is necessary; an interorganizational structuring is indispensable in implementation analysis (Hjern, 1982:308). The bottom-up approach of Hjern et al (1978) identifies the network of actors involved in service delivery in one or more local areas and asks them about their goals, strategies, activities, and contacts. It then uses the contacts as a vehicle for developing a network technique to identify the local, regional, and national actors involved in the planning, financing, and execution of the relevant governmental and non-governmental programs (Hjern et al., 1978 cited in Sabatier, 1986:32). The regulatory mechanism envisaged in SMIA (1999) obviously helps to develop the framework for institutional networking among the government line agencies as well as non-government agencies for optimum regulation; it is made functional by various stakeholders involved under this network. Beforehand the implementation of SMIA (1999), the office of the CA requires formulating a committee in which job description of the new stakeholders and the assignment of new responsibilities to existing organizations are specified (Dye, 2004:50). They all then work according to their permit programmes and arrange several meetings through the committee for the purpose of effective coordination through the process of

discussion, bargaining and negotiation, and exchange of information. The decisions ultimately taken by the committee is implemented in course of achieving the stipulated goal.

Furthermore, the institutional networking and coordination also makes the process of monitoring and supervision manageable. Monitoring of compliance is a strong device to measure the extent of implementation of the present meat statute, which requires to be carried out on regular basis. Similarly, the nature of M & S must fit its objective. The practice of M & S by the CA helps to know the clear picture of the extent of compliance of various requirements of SMIA (1999) by the meat occupationals. Similarly, it also helps to recognize the population who come to defy with the compliance and therefore, a decision over sanctioning of punishment through warning or penalty is taken to discourage similar mistake. Effective monitoring and supervision is said to be in place when it is carried out in line with its objective periodically and due penalty is issued against a guilty.

Figure 1: Analytical Framework



CHAPTER THREE: RESEARCH METHODOLOGY

3.1. INTRODUCTION

A research can be conceptualized as the process of reducing our uncertainty about important phenomena or questions (Sofaer, 1999:1103). Similarly, research methodology is a way to systematically solve the research problem (Kothari, 2004:8). According to him, a researcher requires to prepare a research design once s/he has formulated the research problem (ibid: 14). He further puts that decisions regarding what, where, when, how much, and by what means concerning a research study constitute a research design that he defines as the arrangements of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure (ibid: 31). The various purposes of different researches may be grouped into four categories – Exploration, Description, Diagnosis and Experimentation (ibid: 14). The present research study intends to ascertain the status of implementation of SMIA (1999). As the study aims at finding the causal relationships among different variables employed in its conceptual structure with the use of primary data generated through various types of survey methods, the broad research design of proposed study is descriptive type (ibid). Furthermore, the study shall arrange, collate, and analyze various data collected from the field condition and therefore, the typology of present research is descriptive cum analytical.

3.2. METHOD

In solving various kinds of queries during the process of research needs to use certain methods. A research method is a technique a researcher uses in the course of conducting research. In short, research methods are all those methods which are used by the researcher in the way of studying research problem (Kothari, 2004:8). Researchers apply both of the methods for doing research in social science – the quantitative and qualitative method (e.g. Firestone, 1987; Devers, 1999; Patton, 1999; Sofaer, 1999; Sale et al., 2002). Quantitative studies are usually based on a positivist paradigm which assumes that there are social facts with an objective reality apart from the beliefs of individuals (Firestone, 1987:16). This kind of research seeks to explain the causes

of changes in social facts primarily through objective measurements and quantitative analysis (*ibid*). Additionally, the ontological position of the quantitative paradigm advocates that there is only one truth, an objective reality that exists independent of human perception (*Sale et al. 2002:44*). Therefore, the goal should be to measure and analyze causal relationships between variables within a value-free framework (*Denzin & Lincoln, 1994 cited in Sale, 2002:44*). Conversely, qualitative research is often based on a phenomenological study for which it is rooted in a phenomenological paradigm which holds that reality is socially constructed through individual or collective definitions of the situation (*Taylor & Bogdan, 1984 cited in Firestone, 1987:16*). It is more concerned with understanding the social phenomenon from the actors' perspectives through participation in the life of those actors (*ibid: 16-17*). With quantitative method, as matter of approach, a quantitative researcher employs experimental or correlational designs to reduce error, bias, and other noise that keeps one from clearly perceiving social facts (*Cronbach, 1975 cited in Firestone, 1987:16*) whereas in the prototypical qualitative study, a researcher approaches with ethnography which helps the reader understand the definitions of the situation of those studied (*Goodenough, 1971 cited in Firestone, 1987:16*).

Perceiving the strengths as well as shortcomings of either of the methods, the present research study applies both the quantitative and the qualitative technique to justify the various relationships envisaged in its proposed analytical framework. The logic behind using both techniques is that the causal relationship between the awareness among both the meat occupationals and the consumers, and the implementation of SMIA (1999) requires using quantitative method while the contingency of regulatory infrastructures on SMIA (1999) can not be established quantitatively and it needs qualitative approach. This is due to the fact that SMIA (1999) is a regulatory policy; and its content, and various strategies and programmes for its implementation is beyond the knowledge of general public. Therefore, they cannot provide any information regarding these issues for which a researcher needs to depend on the information and the opinion provided by key informants whose number are nominal. Moreover, the present study emphasizes on exploration of substantial amount of facts rather than debating the preference of method because these are merely tools; integrating them will allow the study to answer a wide range of queries of great importance (*Carey, 1993 cited in Sale et al. 2002:44*).

The logic applied herein the study in using qualitative approach is further justified on two grounds. First, the intent of the study is to know the status of implementation of SMIA (1999) in

Kathmandu metropolitan city. Implementation process includes a series of phenomena with various aspects of dynamisms; all of them are not possible to objectively quantify in a policy research with limited time frame. For example, the government of Nepal has been continuously endeavouring for the enforcement of SMIA (1999) in KMC for the past decade but the situation of meat trade is largely as it was ten years ago (Joshi et. al., 2003; Sankhi, 2006 & 2008; TLDP, 1999 & 2003). It is obvious that government agencies and non-government agencies must have accomplished activities which might have brought phenomenological changes during this period in course of implementation of the meat legislation which need careful description and analysis. Therefore, application of qualitative method shall help in searching the rich descriptions of these chronological phenomena related with meat legislation which will enhance understanding of the context of events as well as the events themselves (Sofaer, 1999:1102). Second, qualitative method is of great value in studies of policy making, of policy implementation, and even of policy consequences (ibid: 1106). Qualitative methods have been used to document the perspectives and interactions among multiple stakeholders particularly in the context of policy research (ibid).

3.3. DATA COLLECTION TECHNIQUE

The present study requires generating both the numerical data through quantitative technique and the factual data using qualitative method. The study employs two methods of data collection; survey methods and the content analysis. The latter will help to study various policy decisions of SMIA (1999) in evaluating its ability in regulating meat business in Kathmandu metropolitan city. In addition to the primary data, the study also requires secondary literatures to use the secondary data to relate the findings of the present study. For this purpose, various available journals, project reports, annual technical reports of various institutions under government and non-government agencies, newspaper archives, and other relevant documents shall be studied and analyzed.

Based on its analytical framework and the proposed hypotheses, present study develops various sets of questionnaire to approach various populations under survey. The logic of using survey method of data collection lies in the fact that survey methods and qualitative interviews account for the vast majority of methods employed in the articles (Bryman, 2006:102). In its

most general meaning, the term survey refers to systematic data collection about a sample drawn from a specified larger population (Schwarz et al 1998:143). Survey method is basically a quantitative method, final product of which is survey statistics i.e., percentages, means, measures of association and the like (ibid). According to them, various elements of survey comprise concepts and population which helps a researcher to design data collection technique interface. The concepts help the researcher to generate specific questions which leads to finalize mode of data collection after final pretest while the determination about the population helps design the researchers the sampling frame and ultimately the sample design (ibid). Similarly, research in Social Science also widely uses various survey methods. An examination of the research methods and research designs employed suggests that on the quantitative side, structured interview and questionnaire research within a cross-sectional design tends to predominate while on the qualitative side, the semi-structured interview within a cross-sectional design tends to predominate (Bryman, 2006:97). The present study as uses both the quantitative and the qualitative method, adoption of survey method is therefore appropriate. The study employs two types of survey methods – questionnaire survey and interview survey – questionnaire survey has been designed using both the open ended as well as the close-ended questions to approach both the meat occupationals and the consumers. The logic behind serving both kinds of questions to them is to mitigate the weakness of either of the question types. Similarly, interview method of survey is used to approach the key informants who are in some way or others concerned with implementation of SMIA (1999). The interview is preferably semi-structured type because the study intends to explore the hardcore events of the implementation. As the key informants have the long experience of working in their respective field of expertise, their inputs as well as insights are worth to this study. However, the logic of using semi-structured interview lies in the fact that they might be ambitious in putting their opinion.

Besides, the proposed study opts to use content analysis method to examine the strength of various policy decisions elaborated in the SMIA (1999) supporting its implementation in Nepal. The consequence of content analysis helps testing the causal relationship between the policy decisions of the present statute and its implementation. It is the research method for the subjective interpretation of the content of text data through the systematic classification process of coding and identifying themes or patterns (Hsieh and Shannon, 2005:1278 cited in Zhang, 2006:1). Similarly, others define content analysis as a research method for making replicable and

valid inferences from data to their context, with the purpose of providing knowledge, new insights, a representation of facts and a practical guide to action (Krippendorff, 1980 cited in Elo & Kynga's, 2007:108). Kolbe and Burnett (1991) while talking about the benefits of content analysis method in consumers research maintain that it can assess the effect of environmental variables (e.g., regulatory, economic, and cultural) and source characteristics (attractiveness, credibility and likeability) on message content (Kolbe & Burnett, 1991:144). However, the present study is not related to consumer research; nevertheless SMIA (1999) is a regulatory policy which is supposed to shape the process of its own enforcement. For the purpose of this study, qualitative method of content analysis will be used because it will help us produce descriptions or typologies (Zhang, 2006:1) which means that the perspectives of the producers of the text could be better understood by the investigator as well as the readers (Berg, 2001 cited in Zhang, 2006:1). The present analysis covers both the manifest content and the latent content (Elo & Kynga's, 2007:108) wherever applicable. The reason behind analyzing the latent content of the present meat legislation is to explore its silent message (Catanzaro, 1988; Robson, 1993; Morse, 1994; Burns & Grove, 2005 cited in Elo & Kynga's, 2007:108).

Under quantitative study, the study surveys a total of each of the 35 samples from the meat occupationals and the consumers because a quantitative method requires 30-50 samples for statistical representation of the data. Similarly, interview survey is carried out to 10 key informants. The sampling design applied herein the study is purposive sampling which is a type of non-probability sample design and suitable in a comparatively small enquiry (Kothari, 2004:59). It is judgment sampling where a researcher purposively choose the particular unit of the population for constituting a sample on the basis that the small mass that s/he selects out of a huge one is representative of the whole (ibid: 59). The logic behind choosing non-probability sample design is for the convenience in collecting data and facts in field condition. To be more specific, the argument is that the meat occupationals and some of the respondent consumers are largely illiterate. The former generally refrain to respond queries that are related to general information on their businesses, income, and social orientation of their businesses; they come to the psychological understanding that sharing such information might harm them. Therefore, to ensure a situation of belief to exist so that they share the researcher relevant information, this study needs deliberate judgment for which a key person is identified who is known to both the researcher and the respondents. A similar kind of logic behind choosing key informants applies

because the designer of a study fairly understands regarding the existing situation. In case of the issue of implementation of SMIA (1999), the researcher of the present investigation as a veterinarian professional working under DLS well knows the relevant central and local government organizations, and other stakeholders concerned with its implementation process. The description of the key informants is given in annex 1.

3.4. VALIDATION OF DATA

As the present study employs technique of triangulation for data collection so it employs the same for data validation. Triangulation is broadly defined as the combination of methodologies in the study of the same phenomenon (Denzin, 1978:291 cited in Jick, 1979:602). Campbell and Fiskel (1959) developed the idea of multiple operationism opine that more than one method should be used in the validation process to ensure that the variance reflected is that of the trait and not of the method; triangulation is largely a vehicle for cross validation when two or more distinct methods are found to be congruent and yield comparable data (Campbell and Fiskel, 1959 cited in Jick, 1979:602); for example – mixing the use of survey data with interview is a more profound form of triangulation (Olsen, 2004:3). She further puts an example – for social class studies, for instance, a methodological pluralist would examine qualitative data on how it feels to be working-class; quantitative data on the flows of resources between classes or on their asset base; and policy documents in order to see how policies interact with or define social classes (Olsen, 2004:4).

The study employs cross-checking of the data by matching and contrasting the data obtained from among the various population under study. Similarly, the past research findings will be used to collate, compare and describe the data gathered from the field work. Similarly, the facts collected through interviews shall be cross-checked and validated through the various published documents of the government and non-government agencies as well as the existing programmes and practices of the GoN for the implementation of the SMIA (1999), the data obtained through content analysis of the legislation, and the response of both the meat occupationals and the consumers.

3.5. DATA PROCESSING AND ANALYSIS PLAN

The primary data are organized, collated, processed, and analyzed in the course of research work. Data processing is done with the use of Statistical Package for Social Science software package. The analysis of data starts with quantitative measurement of associations between awareness among meat occupationals and the consumers and the implementation. The sample size for collecting data from both the consumers and the meat occupationals in the present research study is nominal and therefore, the measurement of relationship between the variables is done with the use of cross tabulation method of bivariate analysis (Kothari, 2004:138). Furthermore, the data obtained from questionnaire survey of the meat occupationals and the consumers are ordinal in nature for which cross tabulation method of bivariate analysis has been preferred. Besides, the nature of relationships between the independent variable and the dependent variable will be substantiated with the supplementary data collected through the survey of key informants and the secondary literatures because the correlation, if any, found through cross tabulation approach is not considered powerful form of statistical correlation (ibid: 138-139). The study of relationships between regulatory infrastructures and implementation uses qualitative approach for which simple arithmetic tools; the percentage and average are used wherever applicable.

The steps involved in data processing through SPSS software involves – 1) Coding of the data followed by data punching in SPSS format. 2) The measurable indicators for the dependent variable in both of the cases are computed to obtain a single variable because of ease in analyzing the relationships. The newly computed dependent variable in case of meat occupationals is “Enforce” and in case of consumers is “Implm”. 3) After this step, a frequency distribution of newly computed dependent variables in both cases is obtained on the scale of 4 – 8 as the preferences of both the respondent populations are in terms of “Yes” (coded as 1) and “No” (coded as 2). 4) The newly computed dependent variables are then recoded into different variables and the recoded variable is “EnforceR” in case of meat occupationals’ data tabulation and “ImplmRec” in case of consumers’ data tabulation. The reason behind recoding the computed variables into different variables is to obtain a median value; and based on this a scale of high implementation recoded as 1 (6 through 7) and low implementation recoded as 2 (8) has been developed to explore the extent of implementation of the statute under study. The reason behind rating high implementation on the scale start only from 6 but not from 4 lies in the fact

that both the respondent populations have replied a “No” for the practices of AM and PM inspection in Kathmandu metropolitan city. 5) Finally, cross tabulation of the independent variables in both cases by recoded dependent variables has been done and the data has been obtained.

CHAPTER FOUR: MAJOR HIGHLIGHTS OF SLAUGHTERHOUSE AND MEAT INSPECTION ACT (1999)

4.1. INTRODUCTION

Until 1999, various legislations related to the issue of food safety and so the issue of public health were Food Act (1966) (Karki, 2002:10; MOAC & ADB, 2002:54; Pant, 2007:23) and Consumer Protection Act (1998) (Pant, 2007:28). The intent of Food Act (1966) is ensuring safe food supplies to the consumers (Karki, 2002:10); and article (7) of it specifies food standards, maximum pesticide residue limit, extraneous residue limit and microbial limit for several food products (Pant, 2007:24) and the issue related to adulteration in various types of foods. This legislation however does not describe anything specific regarding meat and meat products except for the purpose of labeling where the manufacturer requires mentioning the species of animals from which the meat or meat product is procured [Article 18.6 (e)]. Similarly, Consumer Protection Act (1998) prohibits production and sale of any sub-standard product or service that affects health of the consumers negatively (Pant, 2007:28). It also includes the consumer goods, which are made of any diseased or disease-generating animals or birds or harmful vegetation (ibid: 28). Although it is concerned with the food quality and human health, most part of the law is concerned to the unfair trading practices (ibid: 28).

Various issues related to meat – hygiene and wholesomeness, adequacy (adulteration, fraud and nutritional quality standard), public health concerns and environmental pollution – are largely remained unaddressed for a long. Such situations are also partly aggravated either due to inability of the aforementioned legislations in envisaging specific mandate to a particular agency or due to incongruence between the specific programme performance by government organizations and the responsibilities specified to a particular organization in various Nepal Acts or due to feeble institutional networking and coordination among agencies. For example, meat related business is chiefly programmed through DLS in Nepal and the responsibility of meat under food safety regulation has been put under the responsibility of Department of Food Technology and Quality Control. Keeping in view the aforementioned shortcomings at legislative, institutional and programme level, parliament of Nepal passed SMIA (1999) (Published by HMG/Nepal as published notification of Ministry of Law & Justice in Part (2);

Section (48), Appendix (78e); dated BS 2055.12.8.2) to separately deal with the regulation of meat business in the country with the following objectives –

- Safeguarding public health and welfare.
- Prohibiting adulteration in meat and meat products.
- Maintaining appropriate standard of meat by preserving healthiness and obvious quality of meat.

4.2. KEY PROVISIONS OF SLAUGHTERHOUSE AND MEAT INSPECTION ACT (1999)

4.2.1. DEVELOPMENT AND REGULATION OF PHYSICAL INFRASTRUCTURES

Various physical infrastructures identified throughout the SMIA (1999) and the SMIR (2001) are transportation facilities, slaughter-place and slaughterhouse, and retail meat shops. Among them, the slaughterhouse and the slaughter-place are the infrastructures related to meat production chain because examination of live animals, butchering operation and PM inspection of killed animals are carried out in these places. Similarly, the transportation facilities and the meat shops are related to both the animal and the meat marketing chain because transportation of meat from either the slaughterhouse or the slaughter-place to the market, and wholesaling and retailing of meat through meat shops takes place after production of meat. The present research study considers the slaughterhouse and the slaughter-sheds, and the meat shops as the meat establishments.

To operate the slaughterhouse and the slaughter-place, article (9) of the legislation requires that slaughtering of animals is carried out in slaughterhouse; and where no slaughterhouse is available, slaughtering is carried out at the place (slaughter-place) specified by the Meat Supervisor (MS) (article 9.2). To develop the butchering structures, a slaughterhouse can be established both in government sector (article 4.1) and in the non-government sector by due permission of GoN to private individual or agency willing to establish met settlements (article 4.2). The statute however, remains silent over the issue of development of slaughter-place; it does not specify whether government agency or non-government agency or a joint venture develops this infrastructure. Similarly, the latent spirit of both pieces of legislation implies that infrastructures related to transportation and meat marketing is developed, operated

and managed through non-government initiations, and regulated through the competent authority. The various provisions stipulated in SMIR (2001) prescribe standards to operate the slaughterhouse (Rule 4), slaughter-place (rule 6) and meat shops (rule 8). To ensure that illegal and arbitrary meat trade is not in practice and compliance with various proscribed standards is in place, this legislation makes provisions for the regulatory management of these meat establishments. Accordingly, article (3) of SMIA (1999) requires obtaining a license by an individual or a non-government agency to establish slaughterhouse or to operate meat business. Similarly, article (5.1) provides that the individual or agency interested to establish slaughterhouse or to operate meat business requires applying to the specified authority in the proscribed format.

4.2.2. INSPECTION AND ENFORCEMENT

4.2.2.1. ANTE-MORTEM AND POST MORTEM INSPECTION

The purpose of AM and PM inspections are safeguarding public health by ensuring that only healthy live food animals are passed for slaughter and that the meat is duly inspected and stamped before channeling to the market. To accomplish the task of AM and PM inspection, the legislation makes provision for specifying or appointing the Meat Inspector (MI) (article 6). The incumbent may be appointed by GoN must have qualified bachelor degree in Veterinary Science (article 6.1) and to work as MI, he requires obtaining license from Department of Livestock Services (rule 17). Similarly, the government may specify Meat Supervisor to accomplish the duty of MI in absence of the incumbent (article 7.2). The SMIR (2001) also provides that the private individuals or agencies require managing MI at its own cost (rule 3.5).

Slaughterhouse and Meat Inspection Act (1999) provisions for testing of live animals intended for slaughter (article 8). Accordingly, article (8.1) describes that AM inspection shall be carried out in slaughterhouse or at the place as specified by the MS if slaughterhouse is not available in an area. Accordingly, the MI marks the animals found suitable after AM inspection and allows them for slaughter (article 8.1), or the incumbent may prohibit butchering of the animals found sick (article 8.3). In the same way, the slaughtered animals are subjected to pass PM inspection (article 10). The Meat Inspector has the right to partially or completely forbid the sale of meat found with any wrong or the meat which is found diseased upon inspection (article

10.1). The incumbent requires providing the meat with clearly visible stamp or marking on the carcass (the body of animals after slaughter) to declare it as pass and to issue permission for sale (article 12.1). The various provisions made under article (10) and (12.1) of SMIA (1999), and rule (4.5) in SMIR (2001) are in line with the requirements described by Gracey et al. (1999) who maintain that it is the duty of inspection staff to arrange for stamping of the carcasses when passed, or condemned, and to ensure the proper disposal of the latter (Gracey et al. 1999:247).

4.2.2.2. LEGAL PROCEEDINGS

The purposes of these provisions are to find out the rule violators and to prove their wrong deed before punishing them by sanctioning penalty to them; and to provide them opportunity for justifying themselves innocent through court procedures (Nathan, n. d.). Slaughterhouse and Meat Inspection Act (1999) and Regulation (2001) make various arrangements pertaining to legal proceedings. Accordingly, His Majesty Government of Nepal shall be plaintiff on case under this Act (article 19). Similarly, article (20) is concerned with investigation of a law suit and its filing – the Meat Inspector shall investigate the case under this Act and he shall file the petition to the authority specified to look into the case after accomplishment of the investigation of the crime (article 20.1). Rule (18) of SMIR (2001) provides that the MI shall be specified by HMG/Nepal. The personnel authorized to investigate the crime of the case under article (20.1) may take advice from the government lawyer (article 20.2). Similarly, the judicial authority for case related to fault and hearing related appeal under this Act shall be specified (article 21); and pursuant to this article is Rule (19) of SMIR (2001) which elaborates that Chief District Officer (CDO) shall be the “Case Trying and Settling Authority” who shall have the authority both for the initial as well as final administrative hearing. The SMIR (2001) also makes the provision of an appeal through its rule (20) according to which an appellant dissatisfied over the decision of CDO under sub-rule (19) may appeal in appellate court with 35 days of issuance of the decision.

4.2.2.3. MONITORING AND SUPERVISION

Monitoring of a programme means to evaluate the status of the program to ensure that program goals and objectives are met (Nathan, n.d.:8). Monitoring activities such as government

inspections and enforcement activities such as sanctions, remedial actions, and other mechanisms are designed to punish and/or bring a firm into compliance (Cohen, 1998:2). The authority through its institutional mechanism monitors the status of enforcement of an Act – whether implementation of the programme is efficacious and sustainable (Nathan, n. d.: vi); checks into whether regulated party or group comply with standards (ibid: 31); where do the things go wrong and why; and whether the monitoring shall be carried out as corrective measure or preventive measure.

Article (15) of SMIA (1999) provisions for the authority to enter – Meat Inspector or Meat Supervisor may inspect the live animal or the meat or may collect sample of meat by entering in the slaughterhouse or at meat selling place at any time. Similarly, Rule (12) of SMIR (2001) specifies function, duty and right of Meat Supervisor. The incumbent require bearing the following duties –

- Inspecting the slaughterhouses and the slaughter-places from time to time and issuing directives as required;
- Supervising meat inspection related activities and activities related to whether or not the cleanliness and disinfection is carried out through appropriate method;
- Supervising meat selling places and means of transportation;
- Availing information to the license issuing authority about stopping of the operation of slaughterhouses or meat selling places when it is found during supervision that they are not operated in accordance to SMIA (1999) and SMIR (2001); and
- Recommending for dismissal of the license of MI with appropriate justification when the incumbent is not found to accomplish his/her duty in accord with the Act and the Regulation.

4.2.2.4. SLAUGHTERING OF ANIMALS IN SPECIFIED PLACES

Article (9) of SMIA (1999) specifies places for carrying out butchering operation. Animals found appropriate for slaughtering after AM inspection shall be slaughtered in slaughterhouse however, no slaughtering shall be carried out on the day legally declared prohibited for carrying out butchering operation (article 9.1). Similarly, a slaughtering may be carried out at places specified by the MS in the area devoid of slaughterhouse (article 9.2).

4.2.2.5. PUNISHMENT AND PENALTY

Incorporation of penalty is rather an integral part of legislation. A dictionary meaning of penalty refers to a punishment for breaching a contract, law, promise or a rule. The nature and extent of punishment depends on the amount and severity of crime in the eyes of a law. A penalty is sanctioned against person who deviates from acceptable standards of human behaviour (Cassese, 1998:10). The policy decisions envisaged in a statute are acceptable standards to which the entire population needs to comply with. Any activity which is against these standards is identified as a crime and is punishable as specified in the law (Example, Cassese, 1998; Tatum, n. d.).

Article (17) of the legislation under present study prescribes various levels of penalty in case of violation of any provision specified herein. According to article (17.1), the violators of the article (8.1); article (8.3) specifying that the MI shall prohibit slaughtering of animals declared diseased as per article (8.1), article (9.1 & 9.2); article (11.3) described below or article (12.2) shall be penalized with the sanction of NRs. 5000.00 for the first time breaching of these provisions and NRs. 10,000.00 or imprisonment for one month or both in case of the second time onward violation of these provisions. Similarly, article (17.2) prescribes that the violators of article (3); article (11.1) related to article (2a) described below; or (11.2) or article (13) shall be charged with NRs. 10,000.00 for the first offense and NRs. 20,000.00 or a term of 3-month imprisonment or both for the second term offense onward.

4.2.3. FORBIDDEN ACTIVITIES

The law is a means for planning and directing social change (Nathan, n.d.:2). It is an instrument for regulating human conduct by compelling compliance with standards established by the government to protect and promote the well being of its people (ibid). Therefore, almost all the legislation specifies that the regulated population or group shall not carry out certain activities which are beyond generally accepted social norms and technical standard. The various intents of such provisions maintained in SMIA (1999) and SMIR (2001) are two folds – 1) to ensure that consumers are not sold with the meat procured from diseased animals or the meat spoiled due to microbial contamination; and 2) consumers are not cheated for the cause of adulteration or other form of fraud.

4.2.3.1. SELLING OF MEAT

Article (11); (12.2); and (13) of SMIA (1999) prohibit the sale of meat under certain circumstances. For example, article (11.2) specifies that meat procured from animals died due to disease or animals undergone natural death; and article (11.3) requires that sale of meat with skin is forbidden except for poultry, local as well as improved breed of pigs and wild pig, and that much part of meat or head or legs essential to recognize the species of animals. Similarly, article (12.2) prohibits sale of unstamped meat by meat sellers. The article (11.1) also prohibits sale of meat except that specified in article (2a) which provides definitions of various terminologies for the purpose of SMIA (1999). One of the terminologies, the “animal” is defined as castrated or uncastrated male of goat (buck), sheep, chyangra (wild goat), local, exotic and wild pig, buffalo bull, rabbit or as female of buffalo, goat, sheep, wild goat, local, exotic and wild pigs or rabbit judged fit for meat procurement, and this terminology covers male or female species of poultry, duck, pigeon or any animals or birds tamed for meat purpose. This terminology precludes cow, bullock and bull.

4.2.3.2. ADULTERATION AND OTHER FORMS OF FRAUD

Oxford Advanced Learner’s Dictionary describes adulteration as a process of making food or drink less pure by adding another substance to it. Adulteration in meat involves substitution of costly or superior quality with cheaper, undesirable or inferior quality meat (Sharma, 1999:88). The intent of meat legislation or other similar pieces of law is to safeguard the interest of consumers related to economy and religion (Barai et al. 1992:71 & Sharma, 1999:88), and health (Sharma, 1999:88; Wiley, 1899).

Describing various categories of cases of adulteration, Wiley (1899) maintain that one of objectives of fraudulent practice is usually more to be regarded from a monetary point of view than as prejudicial to the public health (Wiley, 1899:152). Meat adulteration has been taken for granted as inevitable (Barai et al. 1992:69) and the main reason for this is an excess of demand over supply (ibid: 69; Shears, 2008:118). Inter-species meat adulteration is common in many parts of the world (Barai et al. 1992:69; Sharma, 1999; Shears, 2008), and deceives consumers by replacing expensive meats with cheaper alternatives (Barai et al. 1992:69). The substitution of one species of meat with other is common on the ground of similar pigmentation, for example,

beef and mutton, or poultry and pork (*ibid*: 69). The substitutions generally practiced are mutton for goat meat, beef for buffalo meat, rabbit meat for chicken etc. (Sharma, 1999:88).

To prevent such practices, article (13) of SMIA (1999) concerns with the prohibition of fraud and adulteration – article (13.1) specifies that nobody shall sale meat claiming one species of meat for other species of meat or nobody shall sale meat by mixing two different species of meat; and article (13.2) prescribes that no substance shall be mixed to change the obvious quality or taste, or to increase the weight of meat is forbidden.

4.2.3. AGENCY NETWORKING

Although it is not specific, nevertheless, the present meat statute has envisaged a linkage between the government sector and non-government sector over some of the issues. Rule (3) of SMIR (2001) envisages possible networking among private agency or individual, local body and DLSO for the establishment of slaughterhouses in private sectors. Additionally, rule (17) for the provision of sub-rule (5) under rule (3) highlights networking among private veterinarian, local bodies and the DLS for deployment of Meat Inspector. A procedural linkage among the private individual or agency, local body, and the DLSO is also evident for the operation of meat trade as under rule (5); and a networking between Meat Supervisor (Central government official) and the local body has been envisaged through rule (6) for the specification of slaughter-place. Regarding the networking among agencies for the purpose of enforcement and inspection of the present statute, rule (11 & 12) of SMIR (2001) provide linkages among meat occupationals, MI (Staff deployed by private slaughterhouse) and Meat Supervisor. Similarly, networking among MI, government lawyer, CDO and the Appellate Court has been envisaged for the provision of quasi-judicial or judicial hearing of any law suit under this statute.

CHAPTER FIVE: RESULTS AND DISCUSSIONS

This chapter deals with findings of the various surveys methods employed in the present study, and their discussions and analyses. It presents the results of the field work carried out among the meat occupationals and the consumers followed by the findings obtained from the survey of key informants.

5.1. AWARENESS AMONG MEAT OCCUPATIONALS

A questionnaire survey was conducted among the meat occupationals to know their perception towards implementation of SMIA (1999) in Kathmandu metropolitan city, the result of which is presented in table 1.

5.1.1. TRAINING

The frequency distribution in table 1 shows that 57% of the respondent meat occupationals among their entire population not receiving any kind of training related to hygienic meat production reply that SMIA (1999) is implemented in Kathmandu metropolitan city. It is astonishing that no population under present study has got any kind of training amidst availability of government and non-government training providing institutes. Livestock Service Training and Extension Directorate (LSTED), one of the directorates of Department of Livestock Services, along with its five Regional Training Centers, arranges training for the meat entrepreneurs. The directorate mostly working as per its own annual programme also works in coordination with projects working under the department. The various types of training arranged by this institute for the meat traders are – Business plan preparation and slaughterhouse/slab operation, Hygienic meat production and processing for meat entrepreneurs, Quality control & compliance along with the meat value chain, Slaughtering, dressing skills and hygienic meat shop operation for meat entrepreneurs, Slaughterhouse design, and Product development and diversification of meat products. Besides arrangement of training courses, other activities carried out by LSTED are field visit/experience sharing of meat sector program, and workshop on food safety & hygienic practices in animal products and good laboratory practices for quality control

of meat and milk production (Annual Report, CLDP, 2008/09:133-139). Similarly, one of the key informants provides that NZFHRC initiated working as an NGO from 1990 has so far trained 450 heads including meat occupationals and consumers, and the technicians working under DLSOs from various development regions of the country.

Table 1: Frequency Distributions for the Relationship between Awareness among Meat Occupational and Implementation of SMIA (1999)⁴

| S. N. | Independent Variables | | Dep. Variable: EnforceR |
|-------|--|----------|-------------------------|
| 1. | Exposure to training on hygienic meat production | Yes: 0% | 57% |
| 2. | Knowledge on effect of spoiled meat on human health | Yes: 97% | 59% |
| 3. | Knowledge about SMIA (1999) | Yes: 57% | 65% |
| 4. | Whether system of slaughterhouse-oriented meat production good | Yes: 71% | 52% |
| 5. | Improvement in meat business | Yes: 91% | 56% |

Note: [n = 35. The figures in percent are rounded.]

⁴ The corresponding questions for the various types of variables are as follows –

Questions related to measure Independent Variable

- Whether you have received any training on hygienic meat production from any organization?
- Do you know about the effects of spoiled meat on human health?
- Do you know about Slaughterhouse and Meat Inspection Act (1999)?
- Whether a system of meat production and marketing where a slaughterhouse procures meat and it supplies wholesale cuts to your shop in timely manner with good margin of profit is good to you?
- Do you feel the need of any kind of improvement in the existing situation of your business establishment?

Questions related to measure Dependent Variable

- Whether your business is registered?
- Is there practice of examination of live animals before slaughter?
- Is the body of food animal after slaughter inspected and stamped by Meat Inspector?
- Whether your business is monitored and supervised by any organization?

In this vein, seventy percent of the key informants submit that these organizations though provide various kinds of training to meat entrepreneurs; their intake is much less for which most of them remains deprived of the opportunity. The stance laid by them is in line with the data available in the annual reports of CLDP and training directorate; latter organizes these training at the rate one course per quarter with an intake of on average 15 participants (See Annual Reports, CLDP & LSTED).

Moreover, the present finding suggests that there exists negative association between awareness of meat occupationals and enforcement of SMIA (1999). Meat occupationals in spite of their non-exposure to any type of training mentioned above say that the legislation is implemented. The situation can be explained on the basis of their education level as shown in table 2 which shows that 74% of them are literate i.e. their education level is below class X. Given their non-exposure to training and lower level education, they have never seen the scientific operations involved in slaughterhouse-oriented meat production system; they are unknown to the scientific management of butcherries and meat shops; and they are ignorant to the code of practices and proscribed standards to be adopted at various levels of meat production and marketing. Therefore, they operate meat business based on their traditional know-how over meat production and trading system. Furthermore, that their know-how and belief over orthodox method of meat production is good has been aggravated due to acceptance of meat procured under such system by the consumers.

Table 2: Educational Status of Meat Occupationals in Kathmandu Metropolitan City

| Level of Schooling | Percent Meat Occupationals | |
|--------------------|----------------------------|--------|
| | Male | Female |
| Class X | 9 | 11 |
| Literate | 51 | 23 |
| Illiterate | - | 6 |
| Percent Total | 60 | 40 |

Note: [N = 35. Figures in the percent are rounded]

5.1.2. KNOWLEDGE

The frequency distribution in table 1 depicts that 59% of the meat occupationals among 97% of their population having knowledge on the effect of hygienic meat on human health reply that the meat statute under study is implemented. Similarly, the FD for the relationship between knowledge of meat occupationals about SMIA (1999) and its implementation status reveals that 65% of the meat occupationals among 57% of their population known to SMIA (1999) put that this legislation is implemented in Kathmandu metropolitan city. Although the present findings shows weak but positive associations between awareness of meat occupationals with the implementation of SMIA (1999), nevertheless, other findings of the present study and those available in literatures make it hard to believe that the statute has implemented status. It has already been discussed that none of the meat traders under the present study has got any kind of training on meat related issue. Although they keep knowledge on the ill effect of unhygienic meat to public health nevertheless, they lack knowledge on how meat is rendered to spoilage? What are the causes of contamination of meat? Additionally, the entire meat occupationals known to SMIA (1999) put that they have simply heard the name and are ignorant to its inner content. This shows that they have superficial knowledge which is inadequate to make them understood the various technical and policy dynamics of meat statute implementation.

Registration of meat establishments is one of the basic indicators that suggest the extent of implementation of SMIA (1999). The present survey reveals that only 54% of meat traders have registered their butcheries and the meat shops as shown in table 3. Furthermore, it is also not necessary that these establishments are registered due to implementation of meat statute. It can be argued on the basis of one of the notices of Department of Public Health and Social Welfare, OKMC that maintains “It is requested that a necessary arrangement is made for the renewal and registration of meat shops by availing the concerned with the specified application form and a copy of approved minimum standards for meat shops as per the decision taken for the provision of implementation of SMIA (1999) in Kathmandu metropolitan city” (See Notice issued by DPHSW, OKMC; dispatch no.: not available; dated BS Bhadra 24, 2064 (September 10, 2007)). The hardcore of this notice clearly reveals that KMC has initiated the process of renewal and registration of meat shops only since a couple of years for the purpose of implementation of the SMIA (1999). Furthermore, the word “renewal” implies that meat shops

found registered during the study might be registered before this notification. In this line, one of the key informants who is also a Member – Secretary of SMIA (1999) implementation and monitoring committee (SMIAIMC) opines that no meat traders have registered or renewed their establishments after this notification to date. Therefore, it is not astonishing to argue that neither the knowledge of respondent meat occupationals nor the planning of KMC for implementation of SMIA (1999) is responsible for the registration of their meat businesses under study; rather it is the revenue generating policy of GoN which has compelled them to legalize their businesses.

Table 3: Legal Status of Meat Shops in Kathmandu Metropolitan City

| Duration of Meat Business (Years) | Legal Status | | Total (%) | Remarks |
|-----------------------------------|----------------|--------------------|-----------|-------------------|
| | Registered (%) | Non-registered (%) | | |
| 0 – 10 | 42 | 56 | 49 | Registered in KMC |
| 10 – 20 | 5 | 19 | 11 | Registered in KMC |
| 20 – 30 | 11 | 6 | 9 | Registered in KMC |
| Ancestral | 42 | 19 | 31 | Registered in KMC |
| Total (%) | 54 | 46 | 100 | |

[Note: N = 35. The figures in percent are rounded.]

Similarly, practices of ante-mortem and post mortem inspection are the most important hallmarks for enforcement of a meat statute. The entire population of meat entrepreneurs and the consumers, and the entire key informants in the present survey reply that there are no practices of examination of live animals before butchering as well as examination of slaughtered animals or its meat in Kathmandu metropolitan city. In line with absence of AM and PM inspection, various literatures also maintain that there is no AM or PM meat inspection system to reduce the likelihood of diseased animals being slaughtered and the meat sold (TLDP, 1999:28). Joshi et al. (2003) further claim that the sick or parasite-infected animals serve as a source of infection to humans as well as other animals is prevailing due to lack of implementation of the meat inspection act and resultant absence of meat inspection (Joshi, 2003:119). More and more, it is quite clear from the aforementioned discussions that the meat occupationals' view for the non-

occurrence of AM and PM examination and implementation of SMIA (1999) in KMC are contradictory to each other.

The similar point of contradiction in the views of meat occupationals is also evident from the statement of 66% of them who reply that their establishments are never monitored and supervised. In this line, all of the key informants also opine that M & S is not carried out by any agency in Kathmandu. Forty percent of them even strongly put that neither OKMC nor does DLS have legal authority to carry out such activities; any M & S of meat business by any organization will be an illegal practice because GoN has not enforced SMIA (1999). They further add that if any government agency finds any wrong in the meat shops or at the butchering sites; neither it can not compel the meat occupationals for improvements nor can penalize them. A counter idea regarding this argument precipitates from the opinion of 20% of the key informants who maintain that the M & S carried out either by OKMC or DLS or any similar organization can not be illegal because both the Consumer Protection Act (1998) and the Food Act (1966) confer authority to them to carry out M & S of edible commodity and meat essentially falls under food category. Even more, they claim that it is not essential that SMIA (1999) necessarily ensures the right to carry out monitoring and supervision of meat establishments. The stances of these key informants imply two important arguments – 1) Awareness among meat occupationals does not have any impact on carrying out M & S rather it is subject to the discretion of the regulating agency. 2) Monitoring and supervision is not influenced by the statutory requirement of the SMIA (1999). Later is also justified through the information laid by a few key informants who opine that the M & S of meat establishments in KMC is not effective.

5.1.3. ATTITUDE AND WILLINGNESS

The present research study has explored the attitude of meat occupationals towards a system of slaughterhouse-oriented meat production and their willingness for bringing improvements in their meat establishments. The FD for the relationship between their attitude towards slaughterhouse-oriented meat production system and the implementation of SMIA (1999) shows that 52% of the meat traders among 71% of them supporting this system reply that SMIA (1999) has been implemented in Kathmandu. Similarly, the FD for the relationship between their

willingness for brining improvement in their business and the implementation shows that 56% of the meat occupationals among 91% of their total population willing to improve their business state that the meat legislation is enforced in Kathmandu. The present results again establish feeble but positive associations of awareness among meat occupationals with implementation of SMIA (1999) in Kathmandu metropolitan city. It is however again argued that the stance of meat occupationals that meat legislation is implemented in KMC comes again from their own view and interest as cross-checking of their view declares that SMIA (1999) has not been implemented in KMC till date.

The reason behind positive perception of meat occupationals towards slaughterhouse-based system of meat production is primarily due to their self-oriented attitude. It can be justified from the result of table 4 against a question asked to them regarding how can be such system good to them?

Table 4: Causes of Slaughterhouse-oriented Meat Production System being good to the Meat Occupationals

| Features of Slaughterhouse-based Meat Production | Percent Respondents |
|---|----------------------------|
| Fewer nuisance | 68 |
| Fixed as well as maximum profit | 48 |
| Hygienic meat production | 40 |
| Homogeneity in price | 36 |

[Note: 1. N = 35. 2. The number of respondent meat occupationals with good perception towards slaughterhouse – based meat production = 25 and bad perception = 10. The figures in percent are rounded.]

It is clear from table 4 that majority of the meat occupationals perceiving the system of slaughterhouse-oriented meat production is good is mostly due to economic reason and reduced physical burden, and less due to the shake of hygienic meat production. They are rather ignorant to the technical and the legal aspect of slaughterhouse-oriented meat production system. For example, product of such a system is essentially frozen meat without skin which is still not

preferred by a sizeable number of consumers in Kathmandu metropolitan city. In the present research study survey, sixty percent of the meat occupationalists state that consumers in KMC still does not seek to eat frozen meat while 34% of them opine that the consumers ask for frozen meat only in scarcity. Similarly, forty percent of them opine that consume still seeks meat with skin and 31% of them says that consumers seek both meat with skin and without skin. In the same way, forty-three percent of the consumers opine that they prefer fresh meat and 51% prefer both the fresh and frozen meat; and 48% of them prefer to eat meat with skin and 28% of them prefer to eat both meat with skin and meat without skin. From these findings and discussions, it is clear that meat occupationalists' positive perception towards slaughterhouse system of meat production and their view of implementation of SMIA (1999) based on this perception is due to their inadequate knowledge over technical and legal requirements of slaughterhouse-oriented meat production system.

Similarly, meat occupationalists' response that the meat statute has been implemented on the ground of their willingness towards bringing improvements in their businesses is again not convincing and is subject to biasness. This study argues that their response is very personal to them; they do not want to unravel the hidden cause behind the implementation dynamics of SMIA (1999) developed from their part. Any improvement in meat business incurs extra cost to the meat traders which results into hike in the price of meat. As a result, the overall transaction in their business will fall down in Nepalese context because purchasing power of consumers will be reduced with the resultant rise in price of meat. In this vein, TLDP (1999) also maintains that the economic circumstance of the consumers force them into least cost mentality which works against quality improvement in meat sector (TLDP, 1999:32). These arguments induce to ask "why should meat occupationalists improve their business when consumers are not ready to purchase meat produced in hygienic condition, which is costlier than traditionally produced meat?" A similar argument can also be made from the view point of economic condition of meat occupationalists. Table 5 below presents the tentative profit earned by them showing that 83% of the meat occupationalists under the present study earns less than NRs. 50,000.00. This sum may be sufficient to maintain their livelihood, and educational and health requirements of their family; nevertheless, it is not sufficient to enable them improving their business despite their willingness because the living expense of Kathmandu is very high.

Table 5: Tentative Profit of Meat occupational from their Businesses in Kathmandu Metropolitan City

| Profit (NRs.) | Percent Meat occupationals |
|------------------------|----------------------------|
| 0.00 – 25,000.00 | 46 |
| 26,000.00 – 50,000.00 | 37 |
| 51,000.00 – 75,000.00 | 8 |
| 76,000.00 – 100,000.00 | 3 |
| < 100,000.00 | 6 |

[Note: N = 35. Calculation based on quantity of meat sale or number of animals sacrificed per month multiplied by gross income per unit minus 40% recurring expenditure which includes expense at room rent, wages of labour and related utilities. The figures in percent are rounded.]

5.2. AWARENESS AMONG CONSUMERS

A questionnaire survey was also conducted among the consumers to know their perception towards implementation of SMIA (1999) in Kathmandu metropolitan city, the result of which is presented in table 6 below.

5.2.1. KNOWLEDGE

The frequency distribution for the relationship between consumers' knowledge of spoiled meat on human health and implementation of SMIA (1999) shows that 48% of the respondent consumers among 83% of their total population known to ill effect of spoiled meat on human health say the meat statute is enforced in Kathmandu metropolitan city. Similarly, the FD for the relationship between consumers' knowledge of SMIA (1999) and its implementation shows that only 27% of the consumers among their 43% population having knowledge of the statute reply that it is implemented in Kathmandu metropolitan city. The results in both of the cases suggest negative associations between awareness among consumers with implementation of SMIA (1999). Although the result of the present consumers' survey is in sharp contrast with the finding

of TLDP (1999) that there is a lack of knowledge on, and appreciation of, the effect of poor quality, diseased, or contaminated meat on their health (TLDP, 1999:32); the reason behind negative association between awareness among consumers and the implementation of the statute seems to be due to consumers' weak demand towards the enforcement of SMIA (1999).

Table 6: Frequency Distributions for the Relationship between Awareness among Consumers and Implementation of SMIA (1999)⁵

| S. N. | Independent Variables | | Dep. Variable: ImplmRec |
|-------|---|----------|-------------------------|
| 1. | Knowledge of spoiled meat on human health | Yes: 83% | 48% |
| 2. | Knowledge about SMIA (1999) | Yes: 43% | 27% |
| 3. | Preference for frozen meat | Yes: 60% | 48% |
| 4. | Preference of meat without skin | Yes: 54% | 42% |
| 5. | Preference for purchase of meat improved meat shops | Yes: 66% | 48% |

Note: [N = 35. The figures in percent are rounded.]

⁵ The corresponding questions for the various types of variables are as follows –

Questionnaire related to measure the independent variable

- Do you know whether the unhygienic/spoiled meat affects human health?
- Do you know about Slaughterhouse & Meat Inspection Act, 1999?
- Whether you prefer to consume frozen meat?
- Whether you prefer to consume meat without skin?
- Whether you purchase meat from improved hygienic meat shops?

Questionnaire related to Measure the Dependent Variable

- Whether the meat establishments of KMC are registered?
- In Kathmandu metropolitan city, is there any practice of examining animals intended for slaughter so as to screen diseased animals before slaughter?
- Is there any practice of due inspection and stamping of the meat in Kathmandu metropolitan city??
- Whether government staffs monitor and inspect meat establishments in Kathmandu metropolitan city?

Related to the issue of awareness among consumers, sixty percent of the key informants put their opinion claiming that awareness might have increased among consumers in terms of their number but not in terms of their depth of awareness. They clarify that their knowledge of unhygienic meat causing diarrhoea, vomiting or other forms of malady does not mean that they are fully aware; most of them still neither know the technical aspect of spoilage of meat at various stages involved in meat production and marketing nor they know about the quality meat. The information of these key informants over the knowledge of quality meat to the consumers is evident from the perception of consumers towards meat business operated in KMC which is shown in table 7. While the survey results show that 54%, 57% and 80% of the respondent consumers reply that the situation of general hygiene and sanitation in the meat shops, dust and fly control in meat stalls, and personal hygiene of the meat traders are bad respectively; twenty percent of them opine that the hygiene and health of the meat they purchase is good and only 17% of the consumers stating it as bad. This shows that they do not know what does quality meat mean? In this line, the report of TLDP (1999) that consumers prefer freshly slaughtered goat meat which is marketed warm, de-boned, with skin on, and visibly bloody (TLDP, 1999:15) implies that these criteria are the hallmark of goat meat quality to the consumers.

Table 7: Consumers’ Perception towards Meat Business in Kathmandu Metropolitan City

| S. N. | Features | Percent Perception | | |
|-------|---|--------------------|------|-----|
| | | Good | Fair | Bad |
| 1. | General hygiene and sanitation in the butcheries and meat shops | 9 | 37 | 54 |
| 2. | Dust and fly control in meat stalls | 6 | 37 | 57 |
| 3. | Personal hygiene of the meat traders | 3 | 17 | 80 |
| 4. | Hygienic and healthy meat | 20 | 60 | 17 |
| 5. | Mixing meat of male and female of same species | 17 | 29 | 34 |
| 6. | Addition of coloring agents and sprinkling of water over meat | 11 | 20 | 57 |

Note: (N = 35. The figures in the table are rounded. The percent frequency of respondent not replying against feature no. 4, 5 and 6 are three percent, 20% and 14% respectively. The percent

figures for feature no. 5 and 6 do not imply that the respondent likes such situation rather they also show severity of the situations as in other features.)

Similarly, a few among the 60% key informants claim that consumers raise voices for enforcement of SMIA (1999) but their voices are neither strong nor consistent. Most of the key informants seek two reasons behind feeble voices of consumers – 1) Traditional meat consumption preference of consumers. In this line, TLDP (1999) also claim that despite of shortcomings of the existing meat production and marketing systems, it seems that people adhere to it out of habit and are reluctant to change their buying and consuming habit (TLDP,1999:17), and 2) Ignorance of consumers regarding their right of food safety. A few of the key informants blame that consumer’ right activists and their societies have largely failed to make the public known to their right on food security and food safety that is in line with TLDP (1999) which maintains that consumers lack knowledge about their right or the standards consumers have a right to expect (TLDP, 1999:32). Related to the issue of consumers’ right, also 20% of the consumers reply that meat occupationals do not respect their demand and they behave rudely when complaining them regarding inferior quality of meat. Fourteen percent of them further state that the meat entrepreneurs do not allow two-way communication as they reject any kind of allegation to their business and even threaten the consumers in such cases. In this line, TLDP (1999) again maintains that although there is close physical association between butchers and their customers, they are institutionally very much isolated (TLDP, 1999:27).

In sharp contrast to the information of the aforementioned key informants, one of the ten key informants claims that advocacy campaign for the implementation of meat statute by the department, NGOs and the consumers’ forum with the arrangement of interaction forums, workshops and seminars are carried out in major urban settings of the country including Kathmandu. In the initiation of civil society, so far two cases of public interest litigation have been filed in the court; and the government is making arrangements for the implementation of SMIA (1999) in Kathmandu metropolitan city according to the court order. The detail of the law suits related PIL has been presented in box 1.

Box 1: Strengthening of Demand for Enforcement: The Poor Judiciary and the Defensive Government

Majority of the key informants agree that the efforts of various agencies towards implementation of SMIA (1999) has strengthened consumers' voice which has created demand for its enforcement. This kind of change has developed in two steps. Firstly, various agencies under DLS such as DLSOs, VPHO and CLDP, OKMC and NZFHRC have organized a lot of seminars, workshops, interaction forum, meetings and training in the past to make the consumers and the butchers, processors, retailers and traders aware towards meat borne diseases. Secondly, this has created the situation of empowerment through knowledge dissemination regarding nutritious value of meat, meat related public health issues, and prevention and control of various zoonotic diseases. Consequently, consumer forum filed a petition in the court for the implementation of SMIA (1999) in the country in general and in Kathmandu metropolitan city in particular (Based on interview with Jyoti Baniya; dated 27 February, 2010).

Some of the literatures record that the first ever demand for enforcement was raised by the meat entrepreneurs – the shareholders of the private sector slaughterhouse, the Quality Meat Product Ltd. of Thankot. They filed petition in Animal Health Directorate, one of the directorates of Department of Livestock Services to enforce SMIA (1999) in Kathmandu metropolitan city on BS 2060. 6.13 (August, 2003). Only then, demand for enforcement has been raised from the individuals, which is described as follows.

Advocate Jyoti Baniya dweller of KMC – 11, Kathmandu district filed a writ petition (Writ No. 267/846) in the Appellate Court, Lalitpur in BS 2061 (2004 AD) against eight central government offices including DLS and its directorates and the ministries, and four LBs including KMC as per article (6) of Consumer Protection Act (1998); in response to which the Appellate Court issued various writ orders in the name of HMG and its various level offices (Thapa, 2008:40-41) to effectively manage the issues raised by the petitioner. He further presents that another Advocate Bhoj Raj Air, a permanent resident of Mahendra Nagar municipality – 4 and presently resident of Kathmandu metropolitan – 35 for the cause of Society for Activities related to Human Right, Environment Law and Good Governance and for his own welfare filed a writ petition (Writ No. 3180) in the Supreme Court, Kathmandu in the same year against various ministries including MOAC, and DLS and its directorate, and five LBs including OKMC alleging that these government agencies have not implemented SMIA (1999) shall be implemented. In response to their writ petition, the Supreme Court issued writ orders in the name of the aforementioned organizations to make arrangements according as the demand of the petitioner (ibid: 42 – 43).

In response to both of the cases of Public Interest Litigation, Department of Livestock Services wrote arguments in response to courts' order that in the face of lack of basic infrastructures how to implement the decision of court and that the intent of the department is also to implement SMIA (1999) as early as possible. The defensive logics of the government were also realized by the court and rejected allegation made through the PIL later on (based on interview with Krishna Prasad Sankhi, dated: May 1, 2010; Thapa, 2008:43).

5.2.2. PREFERENCE

The frequency distribution for the relationship between consumers' preference over frozen meat and implementation of the meat legislation shows that 48% of the respondent consumers among 60% of their total population preferring frozen meat state that SMIA (1999) is implemented Kathmandu metropolitan city. The FD for the relationship between consumers' preference over meat without skin and implementation shows that 42% of the respondents among 54% of their population having preference for meat without skin reply the statute is implemented. Similarly, the relationship between consumers' preference for purchase of meat from improved hygienic meat shops and implementation shows that 48% of the consumers among their total population of 66% choosing to purchase meat from improved meat shops say that meat legislation is implemented. These findings establish that there are negative associations between awareness among consumers and implementation of SMIA (1999) in Kathmandu metropolitan city.

The reason behind non-association can be argued on the basis of further analysis of the data over consumption preference of consumers for various types of meat. Their preference for frozen meat and the practice of meat preservation has been dealt in box 2 below which shows that a faulty way of preservation of meat renders it spoiled and repulsive to the consumers. This may be one of the causes why consumers are reluctant to accept frozen meat in Kathmandu. For the preference of consumers towards meat without skin, while 46% of the total consumers under present survey completely dislike meat without skin, twenty – eight percent prefer meat without skin and 26% of them eat both of them. This suggests that there is still sizeable number of consumers in KMC who prefer meat with skin over meat without skin. In line with the present finding, thirty – percent of the key informants also opine that the consumers of Kathmandu still enjoy traditional preference over the type of meat. They have strange preference over meat consumption; some of them ask for skinned meat; some of them for skinless meat; some need meat with internal organs; and some asks for warm meat while some for frozen meat. One of the key informants among them even claim that if a meat shop with comparatively good sanitation and hygiene level sells meat without skin under fridge at justified price and another retail shop operated nearby this shop sells freshly butchered meat with skin, consumers would prefer the latter one. In support of the stance of this key informant, forty percent of the consumers under the present survey opine that due to their mistrust in frozen meat available in meat stalls, they

generally purchase goat meat available in their locality where a he goat is slaughtered at open place once in a week and the meat is sold on cost sharing basis among families. This information is in line with Joshi et al (2003) who maintain the prevalence of cost sharing system of goat meat production in village weekly markets (Joshi et al, 2003:120). The overall findings and information available in the literature, and the subsequent discussion suggest that consumers are still not fully aware due to which a shift in their traditional preference and taste over meat to scientifically procured meat is very difficult which ultimately hinders the process of enforcement of SMIA (1999).

Box 2: Consumers' Choice and Practice of Meat Preservation

The results of present consumers' survey shows that 60% of the consumers can prefer frozen meat and 40% of them are strictly adhered to the taste of fresh meat. In former case, ninety – four percent of the consumers in reality eat both fresh and frozen meat. The consumers preferring to eat fresh meat put that frozen meat is not juicy for which such meat is not palatable; frozen meat is harmful to health because it is stale and not of good quality. However, scientific studies show that freezing has little, if any, effect on the eating quality of red meat (Gracey et al., 1999:107). This study finds these results very interesting which unravel three important aspects – 1) The frozen meat can be popular in Kathmandu metropolitan city on two grounds. First, there is increasing number of middle-class families along with the resident expatriates in Kathmandu who have created a steady demand of quality meat (Joshi et al., 2003:121); and freezing as such, is one of the methods of preservation of meat essentially constitutes one step in quality assurance programme of meat (See Gracey et al., 1999; TLDP, 2003:42). Second, the response of 40% of meat occupationals that consumers prefer frozen meat implies that 40% of consumers going to purchase meat to their shops ask for frozen meat. However, these meat retailers also reply that among these forty percent, eighty – six percent of them seek frozen meat only in face of scarcity. Moreover, it can be inferred from these data and information that if alternative to frozen meat is not available in KMC market, consumers would certainly accept frozen meat because Nepalese in general are keen meat eaters (TLDP, 1999). 2) Among the total respondent meat occupationals, ninety – four percent of them keep fridge. It is very pertinent to argue that if most of the consumers are reluctant to purchase frozen meat, why do they keep fridge in their shop? On asking over this query, the entire meat occupationals answered that they need to provide frozen to cater the demand of very few regular consumers who ask only frozen meat. Furthermore, they also need fridge to preserve the remaining part of wholesale cuts which are not sold within hours of procurement. To keep the confidence of the consumers that the meat they dispense to them is fresh and warm, they thaw frozen meat for long as if it resembles fresh, and then sell it. The practice of warming, freezing and thawing (warming) of meat renders the meat spoiled (See, Gracey et al., 1999:107). Therefore, it may be argued that consumers' aversion to frozen meat seems justified with the prevalence of such practice. 3) The Slaughterhouse and Meat Inspection Regulation (2004) has made provision of cold storage at slaughterhouse level (See rule 4) but it has failed to identify the necessity of cold storage facility in meat retailing shops while mentioning the conditions to be abide by the meat sellers (See rule 8). It indicates that this provision is incorporated in the present meat legislation beforehand enforcement of the Act.

5.3. REGULATORY INFRASTRUCTURES

This part deals with the contingency of various regulatory infrastructures on the implementation of SMIA (1999) in Kathmandu metropolitan city. It constitutes qualitative evaluation for which 10 key informants were surveyed to obtain data. The results, their analyses and descriptions, and major issues identified are described below.

5.3.1. POLICY DECISIONS OF SMIA (1999)

A statute envisages clear policy statements over various issues. Regarding SMIA (1999), the entire key informants opine that it keeps some of the major discrepancies. Asking whether the present meat statute can regulate meat business in Nepal, fifty percent of the key informants opine that it is capable; forty percent of them opine that it can not, and 10% replied that he is not sure. Similarly, the entire key informants differ in opinion over the issue of competent authority – forty percent of them claim that the local bodies or the ministry of local development is the chief enforcing agency; each of the 20% of them opine that DLS, and both the DLS and the LBs respectively are the competent authority, and 20% of them argue that the provision of CA is not clearly stipulated in the present meat legislation. In all, forty percent of them suggest that the technical responsibility for the enforcement of meat legislation lies in the DLS as it has promulgated it and also as the department is responsible for the development management of livestock services in Nepal.

Similarly, the entire population of key informants state that the present legislation has also failed to identify some of the most relevant key stakeholders. Majority of them submit that it has not identified civil society (consumers' societies and meat professionals' organization), Department of Food Technology and Food Quality Control, Department of Health, mass media, and Federation of Nepalese Chamber of Commerce and Industries. One of the key informants further points out that the present SMIA (1999) has a serious fallacy because it has not envisaged the concept of food safety for which it has not succeeded to identify these agencies as stakeholders. He adds "Issue of food safety requires agencies, and relevant programmes from all the actors of development – the state, private and civil society sectors. The statue lacks framework for agency networking. Therefore, it is the foremost necessity that the concern of

food safety is made the central theme of present legislation” (Based on interview with Shubb Narayan Mahato; dated: February 8, 2010).

Moreover, key informants having confidence in SMIA (1999) for its capability to regulate meat business put that the legislation has never been enforced in the country for which the experience gained from either failure or success story has never been realized; and the strength or the weakness of the Act has never been made the issue of a policy debate. However, one of the key informants claims “In an effort to trace out the status of implementation of some of the Nepal Acts related to hygiene and sanitation, and the possible deficiencies in these Acts as obstacles of their enforcement, National Zoonoses and Food Hygiene Research Center carried out policy debate including SMIA (1999) through organization of training workshop on meat quality, food safety, safe drinking water supply, housing and sewerage plan” (Based on interview with D. D. Joshi; dated March 5, 2010). The workshop has analyzed contents of these Acts and has recommended nine points of amendments in SMIA (1999) claiming that these recommendations are essential to make the present statute updated, clear and its implementation easy and effective (NZFHRC, 2007: 155-156) –

- There should be a provision in SMIR (2001) maintaining that GoN exempts cent percent taxes when construction materials and technology essential for slaughterhouse establishments are imported from abroad.
- A provision is made which should stipulate that it is the duty of LBs to help, coordinate and avail facilities to party establishing slaughterhouse including non-government sector for selecting appropriate site, managing sewerage, constructing concrete roads up to the slaughterhouse; making the meat traders and the consumers aware for essentially slaughtering animals in slaughterhouse and not consuming meat procured from animals slaughtered anywhere respectively; and protect the environment around the slaughterhouse.
- Keeping other provisions as usual under rule (5) of SMIR (2001), the process of issuing license to the meat trader is made easy by authorizing the LBs to look into the case.
- Local bodies are made independent to take decision over availing concession in the charge incurred in obtaining license or added facilities to the meat traders.

- Omitting the current provision of official procedure to reach the department by making provision that the activity to be accomplished by MI is managed through LBs and that by MS managed through District Livestock Service Office.
- The Investigation of law suit and filing of case is done by the MI appointed by local bodies.
- The authority for the quasi-judicial hearing needs to be shifted from Chief District Officer to an independent Tribunal on Animal Slaughter and Meat Inspection. The tribunal is managed by both the LB and the DLSO on cost sharing basis and is appointed with Meat Specialist. This is due to the fact that the current provision has been found ineffective on the ground of lack of specialist knowledge to and busy schedule of Chief District Officer.
- A defendant appeals in appellate court when the incumbent is dissatisfied with the decision of the tribunal.
- The authority for the execution of Code of Practice and the Directives as per rule (21) of SMIR (2001) shall be kept jointly to the DLSO and the local bodies (municipality).

The recommendations laid by NZFHRC (2007) are in sharp contrast with the findings of the present study. Its recommendations mostly advocate to delegate more power to the local bodies and to avail facilities to the parties willing to involve in meat businesses which are obviously right propositions, nevertheless they have not touched the hardcore deficiencies of the present meat statute. Therefore, it is evident from the present data that no government agency is taking leading role to enforce the statute in KMC as the competent authority is an anonymous issue in SMIA (1999).

5.3.2. RESOURCES

The various resources essential for supporting the implementation of SMIA (1999) are – physical infrastructures and budget which constitute non-human resources and staffs which is human resource.

5.3.2.1. PHYSICAL INFRASTRUCTURES

The physical infrastructures – slaughterhouse and slaughter-sheds, and meat shops – are prerequisites for the production of hygienic meat and implementation of meat legislation. Regarding this issue, the present research study finds that 90% of key informants claim lack of these structures in Nepal. Additionally, they blame that government has failed to avail basic requisites like specific zone for the establishment of these structures, live animal markets and supply of ample of wholesome water. They further submit that it is very difficult to commercialize and manage the meat sector of KMC until the government specifies location for meat industrial estate. In this vein, forty-three percent of the meat occupationals put “Due to non-provision of specific area for meat business, we have operated our businesses in room on rent. We fear to invest for improvement in our meat shops in spite of our willingness because when we initiate improving the hygienic level of our shops with marble and glass fitting, the house-owner either escalate the rent with a mindset that our businesses run in huge profit or worse to the situation, they force us to evacuate their houses”. Similarly, twenty percent of the consumers also put that there is haphazard settlement of slaughtering-places and meat shops in Kathmandu metropolitan city. It is natural that consumers, due to their traditional preference and least-cost mentality, purchase meat from open places if meat is retailed everywhere in the city. They further state that the regulating agency also faces difficulties in monitoring such haphazard meat shops. Justifying the situation of physical infrastructure, Joshi et al (2003) in course of describing about the present situation of animal slaughtering and meat marketing system in Nepal claim that there is practically no infrastructure to accommodate the slaughter and sale of meat in both the rural and the urban areas of the country (Joshi, 2003:120). In the similar vein, Sankhi (2006 & 2008) further put that the infrastructures and facilities, either in live animal markets and their transportation or in meat establishments are much less than national and international standards and guidelines (Sankhi, 2006:107 & Sankhi, 2008:8).

Department of Livestock Service through its projects – Third Livestock Development Project which is already phased out and Community Livestock Development Project which is running in its final year – has supported the construction slaughterhouses and slaughter-slabs; improvement/establishment of meat shops, establishment of live animal collection center; and improvement of live animal markets in all the development regions of the country (CLDP,

2064/65 & 2065/66). Two of the key informants further inform that Quality Meat Product Ltd. of Thankot was supported through TLDP with equipment worth of NRs. 4 million (Based on interview with Bal Krishna Khadgi; dated February 27, 2010 and Prabin Man Shakya; dated: April 23, 2010), and Kakani Slaughterhouse and Valley Cold Store, Balaju of KMC were each supported through CLDP with equipment worth of NRs. 2.5 million. (Annual Report, CLDP, 2065/66). Similarly, Kathmandu Metropolitan City in collaboration with PPPUE of UNDP, Water Aid Nepal, and Centre for Integrated Urban Development has established a slaughter-shed at Hyumat of Kathmandu metropolitan city (Based on interview with Dinesh Shahi; dated: February 10, 2010) however, slaughtering at Hyumat is still carried out on the river bank (See photograph 8 in Annex 6). Therefore, the views of some of the consumers and the meat occupationals, and the key informants suggest that the physical infrastructures are insufficient to support the implementation of SMIA (1999) in Kathmandu metropolitan city. Besides, the government has largely been incapable in managing available slaughterhouse operations including partnerships ventures, a detail of which has been given in box 3 below.

Box 3: Slaughterhouse: An Unsolved Mystery for Government of Nepal

In Nepal, there are four slaughterhouses. The first ever scientifically designed slaughterhouse was established under the assistance of DANIDA in the industrial estate of Hetauda municipality, Makawanpur district in 1977. It was managed by Nepal Industrial Development Cooperation during which it could never run above three percent capacity. It was completely closed down in 1984/85 AD (Joshi et al, 2003:120 & TLDP, 1999:11) and these days rehabilitated under private sector ownership (ibid). The second slaughterhouse established in Bhaktapur district (part of common valley including Kathmandu) under the assistance of GTZ in 1991 is now being used for other purposes (TLDP, 1999:11). The third one was Quality Meat Products Ltd. of Thankot constructed in 2003 under PPP at the expense of NRs. 98 million (USD1.36 million @ 1USD = NRs. 72.00). It had a capacity of slaughtering 75-100 buffaloes per shift (Sedai, 2006:27); operated its business for a couple of years; then it was closed due to internal conflict among its promoters (Unpublished report, CLDP), and finally sold due to managerial weakness of the government. Nowadays, this structure is used for purpose other than meat production (Based on interview with Bal Krishna Khadgi; dated: February 27, 2010). The fourth slaughterhouse was a project worth of NRs. 100 million (USD1.39 million) which was established at Kakani is not functional due to Maoist intervention (ibid) or it could not come in operation (Sedai, 2006:37). The latter three slaughterhouses are located around Kathmandu metropolitan city. Operation of these slaughterhouses for hygienic meat production is sufficient to cater the needs of its population but unfortunately, none of them are functional as described above. These phenomena suggest that the government has been unsuccessful for the management of available slaughterhouses established under public-private partnerships amidst insufficiency of physical infrastructures.

5.3.2.2. BUDGETARY PROVISION

Regarding budgetary provision, most of the key informants opine that the budget is not poor if it is not sufficient rather the problem lies with the allocation of funds under specific headings and particular offices. Some of them put that the budget is rather scattered among various line agencies for which it is not sufficient. In this line, one of the key informants precisely puts that the aggregate budget of vertical organizations under DLS – CLDP, DLMP, VPHO, and LSTED for the purpose of meat sector development and creating awareness is sufficient. Similarly, the relative allocation of budget to accomplish various programmes is also not deficient but the specific programme budget in a particular office under the department is poor (Based on interview with Nar Bahadur Rajwar; dated: March 21, 2010). A few of the key informants allege that government agencies have failed to identify specific programmes for the implementation of the statute for which the budget for meat sector development is deficient. Supporting this idea, another key informant even puts that once the implementing agency has well prepared plan, strategy and programmes for the execution of the Act; the budget would not be an issue because it can be managed through donor agencies (Based on interview with Shubh Narayan Mahato; dated: February 8, 2010). His opinion is evident from the fact of some of the key informants who inform that SMIAIMC has succeeded in managing special budget worth of NRs. 33.7 million under Ministry of Finance for the purpose of construction of model abattoir under public-public partnerships (DLS and Municipality) and public-private partnerships (DLS and individual meat entrepreneurs or group of entrepreneurs) by justifying the prospect of meat cooperative in the course of enforcement of SMIA (1999). In the similar vein, the entire key informants opine that there is no provision of budget for monitoring and supervision. One among them further puts that OKMC has formulated committee for SMIA (1999) implementation, and monitoring and supervision but there is no budget for logistic support. He questions “In absence of any kind of incentive who is ready to spare his time for this purpose?” (Based on interview with Dinesh Shahi; dated: February 10, 2010).

5.3.2.3. HUMAN RESOURCES

Human resources are essential to operate and manage overall regulatory infrastructures. Seventy percent of key informants opine that the number of Meat Inspectors is insufficient in the country. Among them, twenty percent of the key informants further put that the total number of veterinarians in Nepal is less in general and in the department in particular. According to Nepal Veterinary Council, presently the total number of registered veterinarians is 570 (NVC, 2010). Similarly, Department of Livestock Services delivers services related to livestock development and extension, veterinary clinical services, and the laboratory diagnosis and quarantine management through its 2260 various level technical staffs among which only 8% are the veterinarian officers working at implementation level (Annual Progress Bulletin, DLS, 2006/07). An estimate reveals that a veterinarian has to serve about 102,695 animals and 99, 423 birds in Nepal which is probably the highest proportion between veterinarian and animals in the world (Shrestha et al., 2003:64). Justifying the dearth of veterinarian in the country, Karki (1999) estimates that Nepal has an urgent need of 1,304 veterinarians in the years to come to cope with the new responsibilities like meat inspection and traditional private veterinary practices (Karki, NPS in Vetcon, 1999 cited in Karna et al, 2008:2). More over, Office of Kathmandu Metropolitan City lacks staffs trained in Veterinary Science. Thirty percent of the informants opine that OKMC does not have a single veterinary expert for which it has to depend on other technical organizations.

Livestock Service Training & Extension Directorate has so far trained 116 Meat Inspectors among which 80% of the veterinarians are from the department and 20% from non-government sectors (Annual Reports, LSTED; F/Y 2058-2066). This data implies that the available number of MIs is virtually sufficient to serve the purpose of AM and PM inspection, and monitoring and supervision; nevertheless, eighty percent of these MIs require carrying out added responsibilities along with their usual workload. This implies that the government veterinarian Meat Inspectors do not get enough time to bear the responsibilities of meat inspection. Therefore, the claim of the majority of veterinarians that the number of MIs in the country is insufficient is justified in the light of the available data and facts. Similarly, the entire veterinarians having training over meat inspection have theoretical knowledge regarding meat

inspection; two of the key informants view that their competency is difficult to be evaluated in absence of implementation of the statute in the country.

5.3.3. INSTITUTIONAL NETWORKING AND COORDINATION

Regarding the issue of institutional networking and coordination, almost all of the key informants identify that there is absence of networking and coordination among organizations concerned with development of meat sector. More precisely, they find out lack of agency coordination at the level of resource sharing, deployment of Meat Inspectors, and monitoring and supervision. However, a few of the efforts have been made towards networking and coordination among stakeholders in the recent years. Information available from literatures and from 40% of the key informants shows that two different committees have been so far formulated over different period of time for the enforcement of the present meat statute in Kathmandu metropolitan city. In this vein, one among these key informants opines that the first committee was formulated by DLS under the chairmanship of the then Deputy Director – General through a meeting chaired by Director – General in response to the Appellate Court orders (See Box 1) on BS Chaitra 8, 2061 (April 2004) with the objective of effectively implement the various provisions of the statute as demanded by the petitioners ([Based on interview with Bodh Prasad Parajuli; dated: February 10, 2010](#)). This committee so far arranged 22 meetings with the participation of various stakeholders and made several recommendations over the issues of establishment of slaughterhouses and slaughter-places; deployment of MI and MS for the purpose AM and PM inspection, and monitoring and supervision; and creation of awareness among the meat occupationals and the consumers ([ibid](#)). One of the several meetings held on BS Ashadh 15, 2062 (June 2005) including participants from Thankot slaughterhouse and other meat entrepreneurs under the chairmanship of the then Director – General decided to enforce the present meat statute initially in 13 wards of KMC including 200 meter peripheral zone of the slaughterhouses available at Thankot and Kakani with gradual enforcement in other locations of metropolitan city ([ibid](#)). According to 50% of the key informants, most of the decisions of the committee – the awareness programmes to consumers, organizing training for meat entrepreneurs, establishment of one slaughter-shed at Hyumat of KMC, formulation of SMI Technical Directives in BS 2064 (2007 AD), and equipment and technical support to the two

newly constructed slaughterhouses and cold store – were implemented. However, the major decision regarding execution of the legislation was not implemented due to conflict over the interest of meat entrepreneurs.

Gaining experience from these endeavours, the final meeting of this committee was held in 2005 under the chairmanship of Director – General of DLS concluding that the leading role of KMC is essential to enforce SMIA (1999) in Kathmandu. At this juncture, sixty percent of the key informants put that Department of Public Health and Social Welfare of OKMC has formulated SMIA (1999) Implementation and Monitoring Committee in BS 2065 (2008 AD) including members from various government and non-government stakeholders, the list of which is given in annex 5. Forty percent of the key informants claim that the major decisions of this committee are to gaining political commitment, notification for the registration and renewal of the meat shops of Kathmandu metropolitan city, management of special budget, and creating the environment for enforcement of SMIA (1999). A few key informants state that the committee has largely failed to materialize the most vital decisions – the registration and renewal of the meat shops, and creation of overall environment for its implementation.

These findings suggest that the government is continuously endeavouring to strongly form linkages among various stakeholders, and DLS has succeeded in building inter-organizational linkage for creating awareness and development of infrastructures in 25 municipalities of the country (Based on interview with Krishna Prasad Sankhi; dated: May 1, 2010). His claim is also evident from a letter of reference of Ministry of Local Development (MLD) (dispatch no. 518; dated: April 27, 2009) to the Ministry of Agriculture and Cooperatives regarding SMIA (1999) implementation written in the name of OKMC including all the four sub-metropolitan cities and all the 53 municipalities of the country. The ministry (MLD) requests the LBs to fully cooperate the construction of physical structure (slaughterhouse); and write MOAC about the decision taken at their own disposition over creation of posts of Meat Inspector whether to create new post or get cooperation from the existing staffs considering available resources and means as per the decision taken at Secretary level. The request of MLD has been written to LBs in response to a request letter of MOAC (dispatch no. 396; dated: March 30, 2008) which maintains that Directorate of Livestock Market Promotion⁶ which is in the process

⁶ Directorate of Livestock Market Promotion is one of the directorates of Department of Livestock Services which is under Ministry of Agriculture & Cooperative.

of construction of physical infrastructure during F/Y 2065/066 in Butwal, Banepa, Itahari under partnerships arrangement for the implementation of SMIA (1999) in these areas and accordingly in others only after the establishment of slaughterhouses requests to avail necessary arrangements for cooperation in the construction work including creation of post for the Meat Inspectors by the municipalities. However, the latent spirit of the letter of these ministries suggests that institutional networking and coordination is in progress and government of Nepal is in preparatory phase to implement the present meat legislation nevertheless, their contents clarify that government has largely failed to implement the most relevant decisions pertaining to execution of the statute.

5.3.4. MONITORING AND SUPERVISION

The various key informants put their opinion in different ways on the issue of monitoring and supervision of various meat establishments in Kathmandu metropolitan city. Some of the key informants argue that M & S is not carried out and if carried out; the department is not involved so far. Conversely, fifty percent of the key informants which are also members of SMIAIMC acknowledge that M & S is carried out in KMC which is sporadic and occasional in nature. They further claim that KMC coordinates SMIAIMC to carry out monitoring and supervision of meat establishments to check into compliance of various provisions related to butchering and meat selling. However, rest 50% of the key informants argue that M & S carried out by OKMC is not technically as well as objectively verifiable, and it is rather administrative in nature because it does not have technically competent staffs for meat and meat market inspection. Therefore, the monitoring and supervision is not mandatory and technically justifiable. In this vein, thirty-five percent of the respondent meat occupationals also state that these activities are irregular and it largely satisfies the requirements related to checking and calibrating of weighing equipments rather than technically inspecting the matters related to sanitation and hygiene of their meat shops, and for the compliance of the minimum standards specified by KMC for meat businesses. Twenty percent of the key informants among the above 50% carefully put that the present M & S activity is carried out on an ad-hoc basis for which it is need-based rather than law-based; and KMC does not sanction any punishment or penalty to any wrong-doer because SMIAIMC monitors the market with an effort to corrective measure rather than preventive measure. In this

vein, the meat occupationals whose establishments are sometimes monitored also reply that they have never been penalized by any agency when they are found guilty.

The present study finds the overall situation of meat businesses in KMC is grave with several implications as discussed in box 4 below.

Box 4: OBSERVATIONS AND INFERENCES

During survey of the meat occupationals, observations of their meat establishments were also carried out; the photographs on the current practices of butchering operation and transportation involved in buffalo meat production, and meat retailing system for poultry and goat are presented in annex 6. The observation and information provided by the meat occupationals reveal that live buffaloes intended for butchering are not subjected to AM inspection; the system of PM inspection of slaughtered animal is not adopted; open transportation is followed; and there is lack of waste disposal system. While the privately-owned slaughter-shed manages the wastes of their butchering sites improperly; the butchering practices operated at river banks channel the waste materials directly in the river stream. In general, two of the slaughtering-sites shown in the photographs completely lack waste disposal system for which dogs, crows and other animals temporarily dwell around the sites. These findings of the present observation are in line with various secondary data available in the literatures. For example, [Regmi \(2001\) cited in Sankhi, \(2006:109\) & Joshi \(2009:18\)](#) maintain that the reported number of slaughtering sites for various kinds of food animals and birds is 314 in Kathmandu, among which most of them are usually unauthorized and slaughtering methods are conducted in an apparently clandestine way ([TLDP, 1999:11](#)). Similarly, most of the slaughtering sites for buffaloes are located on open banks of Bisnumati and Bagmati rivers ([Sankhi, 2006:109 & TLDP, 1999:13](#)) particularly at Hyumat, Kankeswori, Damaitole, Bhimsensthan, Chhetrapati, Ganeshsthan localities of Kathmandu Valley ([Sankhi, 2006:109](#)). These sites are unhygienic, often unpaved, poorly drained and lie exposed to the air and frequented with flies, and the buffaloes intended for slaughtering are held in the slaughtering area which contains blood, legs, heads and gut (stomach and intestine) content left over from an earlier slaughtering ([TLDP, 1999:13](#)). The water sources adjacent to the slaughtering area are often heavily polluted with raw sewage is used to clean the utensils and carcass before the wholesale cuts are transported to the market ([ibid](#)). The findings of the present observation and the literatures also reflect in the perception of consumers towards meat business in KMC as presented in table 7 above.

Such unmanaged disposal of wastes has several implications. First, the environment of the city contains high level of microbes in the form of dusts and droplets leading to aerosol mode of transmission of meat borne zoonotic diseases. Second, the careless drainage of wastes in river water causes heavy pollution of river water for which there is risk of transmission of pathogens for a long distance and emergence of new diseases in remote areas. The overall effect of this practice can render the control of disease outbreak very difficult. Third, solid meat wastes help maintain urban-sylvatic cycle of dreadful rabies due to interaction among the stray dogs and the wild carnivores like fox and jackal which may create complication for its control. Fourth, the wastes disposed off in such a manner emit pungent smell which frequently creates societal conflicts among the local residents of the area with the business as well as with the public authorities creating lack of confidence in the government.

CHAPTER SIX: SUMMARY AND CONCLUSIONS

6.1. EXECUTIVE SUMMARY

The present research study has been carried out with the general objective of ascertaining implementation of Slaughterhouse and Meat Inspection Act (1999) in Kathmandu metropolitan city. The study has proposed two hypotheses – hypothesis 1 involves quantitative study to test the association of the awareness among the meat occupationals and the consumers with the implementation of the SMIA (1999). Hypothesis 2 concerns qualitative study to evaluate the contingency of regulatory infrastructures on the process of implementation. The theoretical set up of the study has used both the top-down and the bottom-up model of public policy implementation to know which one of the approaches is effective in case of implementation of this statute. The research design of this study is analytical and descriptive while the sampling design is purposive. The research methodology has used technique of triangulation based on which validation of data has been carried out. In response to the quantitative analysis, the study has surveyed the populations of the meat occupationals and the consumers through questionnaire to measure the associations between awareness among them and implementation. Similarly, for the purpose of qualitative analysis, the key informants have been surveyed through interview to evaluate the contingency of regulatory infrastructures on the implementation of SMIA (1999). The present study draws the following conclusion based on the results obtained through various surveys, and the subsequent discussions and analyses.

6.2. CONCLUSIONS

6.2.1. AWARENESS AMONG THE MEAT OCCUPATIONALS AND THE CONSUMERS

Awareness among meat occupationals has weak but positive association with implementation process of the present meat statute. However, various other findings of the survey with consumers, key informants, and even meat traders, and the information available from the literature shows that the Act as such is not officially implemented in Kathmandu metropolitan

city. Therefore, it is concluded that the view of the meat occupationals that the statute is implemented is absolutely based on their low level of education, and traditional knowledge and practices. Conversely, awareness among the consumers has negative association with the implementation of SMIA (1999). In their view, the meat statute is not enforced yet in Kathmandu metropolitan city.

6.2.2. REGULATORY INFRASTRUCTURES

The various regulatory infrastructures have strong contingency on the implementation dynamics of SMIA (1999). The results of the present study suggest that policy contents envisaged in meat legislation have some of the serious deficiencies – the statute has not specified competent authority, some of the important government and non-government stakeholders, and has failed to provide strong functional regulatory framework. Similarly, the numbers of physical facilities – slaughterhouses/sheds and hygienic meat shops – are not sufficient to manage the butchering and retailing of meat in scientific way. The available slaughterhouses are not in operation; some of them are used for purposes other than meat production while others have serious managerial weaknesses. Moreover, the budgetary provision is also not encouraging. There is no allocation of money for monitoring and supervision in any office of the competent authority. The available programme budget are scattered among so many agencies for which it is not sufficient in a particular office of competent authority. In the similar way, the number of technically competent staff is not encouraging if not deficient. This is due to the fact that the available government veterinarians are though trained for meat inspection; they are laden with various kinds of departmental mandates that do not leave them free to work specially for meat inspection. Similarly, their competency can not be justified as they have not been practically involved in meat inspection.

The networking and coordination among various stakeholder agencies are in process however, the decisions taken by the SMIAIMC has not been implemented successfully. Due to this reason added with the lack of budget, monitoring and supervision is not carried out regularly and effectively. It is carried out in the form of surprise check and largely satisfies the administrative requirements; corrective in nature rather than preventive for which no wrong doers are penalized. Moreover, it has been found that regulatory infrastructures possess very

strong contingency on the policy dynamics of SMIA (1999) in Kathmandu metropolitan city. Based on these findings, the present study finds that the implementation process of SMIA (1999) are weak both at supply side and the demand side. Therefore, a mixed approach of backward mapping and the forward mapping is essential to effectively implement this legislation.

The study logically derives that SMIA (1999) is not enforced in Kathmandu metropolitan city which is in line with Joshi et al. (2003) who put forward meat inspection practice in Nepal maintain that the SMIA (1999) regulates conditions for slaughter but it is not officially implemented yet (Joshi, 2003:122); Parajuli (2007) who claims that this Act has not been enforced yet all over the country except Hetauda municipality (Parajuli, 2007:29); and Pant (2007) who submits that SMIA (1999) is yet to be enforced (Pant, 2007:26). The findings of the present study also opens up that enforcement of SMIA (1999) in KMC is in due process if the official implementation of the Act is kept constant. Both the government and the non-government agencies are seriously working to create environment for its implementation which is rather a slow and largely uncoordinated process. Moreover, various key informants pin point the following causes behind non-implementation of SMIA (1999) in Kathmandu metropolitan city.

- Political transition and political vacuum in local bodies, and the resultant non-priority of government to SMIA (1999) for its implementation.
- Deficiencies in Slaughterhouse and Meat Inspection Act (1999).
- Poor resource base.
- Inability of the government agencies to manage the public-private partnerships for the sustainable development of physical infrastructures.
- Inadequate awareness among meat occupationals and the consumers.
- Socio-cultural factor

6.3. FUTURE RESEARCH DIRECTIONS

The present study has focused on measuring the awareness among meat occupationals and the consumers. As it has constrained with limited time frame, the following areas was not possible to explore under the present study, which can be the issue of further research study in the field of

implementation of Slaughterhouse and Meat Inspection Act (1999) in Nepal in general and in Kathmandu metropolitan city in particular.

- The association of socio-cultural factor and the economic status of the meat occupationals with the process of implementation.
- The political economy behind the implementation of Slaughterhouse and Meat Inspection Act (1999).

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ANNEXURE

1. LIST OF THE KEY INFORMANTS

| S. N. | Name of the Key Informants | Designation / Organization | Remarks |
|-------|----------------------------|--|--|
| 1. | Dr. Shubh Narayan Mahato | Country Director, Heifer International Nepal, Hattiban. | Former Director – General, Dept of Livestock Services, Lalitpur. |
| 2. | Dr. Nar Bahadur Rajwar | Deputy – Director General, Dept of Livestock Services. | |
| 3. | Dr. Bodh Prasad Parajuli | Chief, VPHO, Tripureshwor. | Member – Secretary, SMIAIMC. |
| 4. | Dr. Krishna Prasad Sankhi | Director, HIMALI Project (DLS), Harihar Bhawan. | Acting Programme Director (& Member of SMIAIMC), DLMP, Harihar Bhawan. |
| 5. | Mr. Prabin Man Shakya | Meat Consultant, CLDP (DLS), Harihar Bhawan. | |
| 6. | Dr. Babu Ram Gautam | Director, Dept of Public Health & Social Welfare, KMC. | |
| 7. | Dr. Durga Dutta Joshi | Executive Chairman, NZFHRC, Tahachal, Kathmandu. | |
| 8. | Mr. Dinesh Shahi | Managing Director, Sambhav Saving and Credit Cooperatives Limited, Kalimati-13, Kathmandu. | |
| 9. | Mr. Bal Krishna Khadgi | Owner, Kathmandu Aadhunik Badhashala, Indra Sabha Tole – 19, Kathmandu. | |
| 10. | Mr. Jyoti Baniya | Advocate, Abhiyan Law Firm Pvt. Ltd., Bag Bazar, Kathmandu. | General Secretary, Forum for Protection of Consumers' Right Nepal. |

12. Well, it is quite clear that all the stakeholders need to come under a system of networking and coordination. What could be the model of such a networking system for execution of SMI Act (1999) in Kathmandu?

Date:

Interviewer:

3. FORMAT FOR QUESTIONNAIRE TO KNOW THE PERCEPTION OF MEAT OCCUPATIONALS TOWARDS SLAUGHTERHOUSE & MEAT INSPECTION ACT (1999) IN KATHMANDU METROPOLITAN CITY

General Information

Name:

Permanent Address:

Gender: Age:

Religion:

Ethnic Identity:

Shop Registration:

Affiliation to Occupation related Organization:

Specific Information

1. How long have you been involved in meat business?

I) 1-5 years

II) 5-10 years

III) 10-15 years

IV) Ancestral/Traditional

2. What are the components of your meat business?

I) Slaughtering establishment

II) Meat selling

III) Both

3. Are you satisfied from your business?

I) Yes

II) No

4. Have you got fridge in your meat shop?

I) Yes

II) No

5. What kind of meat generally consumers seek to purchase from your shop?

I) Meat with Skin

II) Meat without Skin

III) Any of the above

6. How frequently do the consumers ask you for frozen meat?

I) Most often

II) Only in face of scarcity

III) Never

7. Do you know about the effects of unhygienic meat/spoiled/meat-borne diseases on human health?

I) Yes

II) No

20. If yes, do these organizations sanction any kind of penalty in your name in case of violation of prevailing Acts and legislations?

I) Yes

II) No

22. Do you know about Slaughterhouse and Meat Inspection Act, 1999?

I) Yes

II) No

23. If yes, do you think SMI Act (1999) could be helpful in the improvement in your business?

I) Yes

II) I don't know

III) No

24. What could be the possible roles of SMI Act (1999) for improvements in your business?

25. What are your suggestions regarding implementation/effective implementation of SMI Act (1999) in Kathmandu metropolitan city?

Date:

Surveyor:

4. FORMAT FOR QUESTIONNAIRE TO KNOW THE PERCEPTION OF CONSUMERS TOWARDS SLAUGHTERHOUSE & MEAT INSPECTION ACT (1999) IN KATHMANDU METROPOLITAN CITY

General Information

Name:

Present Address:

Permanent Address:

Gender:

Age:

Ethnicity/Community:

Educational Status:

Specific Information

1. How often do you take meat?

I) 2 – 4 days/month II) 4 – 8 days/month III) 8 – 12 days/month IV) Uncertain

2. Whether you prefer frozen meat?

I) Yes

II) No

3. Whether you prefer meat without skin?

I) Yes

II) No

4. Whether you purchase meat from improved hygienic meat shops?

I) Yes

II) No

5. Which of the following aspects of meat is the most important for you?

- | I) Quality | II) Cost | III) Availability |
|--|---------------------|-----------------------|
| 6. Have you ever felt that you have been sold with spoiled meat or meat containing male and female animals? | | |
| I) Yes | | II) No |
| 7 (A). If yes, do you complain the meat sellers in case you are sold with unhygienic/spoiled meat? | | |
| I) Yes | | II) No |
| 7 (B). If yes, have you ever filed a complaint to any organization in case you are sold with unhygienic/spoiled meat? | | |
| I) Yes | | II) No |
| 8 (A). Where are the buffaloes slaughtered? | | |
| I) Slaughterhouse | II) Slaughter-place | III) Open places |
| 8 (B). Where are the small animals and poultry slaughtered? | | |
| I) Slaughterhouse | II) Meat shops | III) Open places |
| 9. Is there any practice of examining animals intended for slaughter in Kathmandu metropolitan city? | | |
| I) Yes | II) No | III) Don't Know |
| 10. Is there any practice of due inspection and Stamping of the meat by Veterinary Doctors in Kathmandu Metropolitan City? | | |
| I) Yes | II) No | III) Don't Know |
| 11. Which of the following kind of meat is available in the meat shop where you generally use to purchase meat? | | |
| I) Meat with Skin | | II) Meat without skin |
| 12. Do you know whether the unhygienic/spoiled meat affects human health? | | |
| I) Yes | | II) No |
| 13. What are the improvements needed to be adopted by meat sellers? | | |
| 14. Whether government staffs monitor and inspect meat establishments in Kathmandu metropolitan city? | | |
| I) Yes | II) No | III) Don't Know |
| 15. Whether the meat establishments in KMC are registered? | | |
| I) Yes | II) No | III) Don't Know |

16. Do you know about Slaughterhouse & Meat Inspection Act, 1999?

I) Yes

II) No

17. If yes, do you think the meat occupationals have complied with various provisions asked in the SMI Act, 1999?

I) Majority of them has not followed II) Somebody has followed III) Nobody has followed

18. What could be the causes behind non-implementation of SMI Act (1999) in Kathmandu metropolitan city?

19. What would be the role of the following stakeholders in the implementation of SMI Act, 1999?

| Consumers | Central Government Agencies | Office of the Kathmandu metropolitan city | Non-government organizations | Meat Occupationalals |
|-----------|-----------------------------|---|------------------------------|----------------------|
| | | | | |

Date:

Surveyor:

5. LIST OF THE MEMBERS OF SLAUGHTERHOUSE AND MEAT INSPECTION ACT IMPLEMENTATION AND MONITORING COMMITTEE

| | |
|--|--------------------|
| Director, Department of Public Health and Social Welfare, Office of Kathmandu Metropolitan City: | Chairperson |
| Chief, District Livestock service office: | Member |
| Programme Director, Department of Livestock Market promotion: | Member |
| General Secretary, Consumers' forum: | Member |
| Chairman, Meat Entrepreneurs' Association: | Member |
| Security Officer, Office of Kathmandu Metropolitan City: | Member |
| Media personnel | Member |
| Chief, Veterinary Public Health Office: | Member – Secretary |

6. LIST OF PHOTOGRAPHS OF MEAT ESTABLISHMENTS IN KATHAMNDU METROPOLITAN CITY



Photograph 1: Buffalo Holding Yard at a Privately-owned Slaughter – place in Kathmandu Metropolitan City



Photograph 2: Entrance of a privately – owned Slaughter – shed in Kathmandu Metropolitan City



Photograph 3: Slaughtering of Buffalo in a privately – owned Slaughter – shed in Kathmandu Metropolitan City



Photograph 4: Dressing of Slaughtered Buffalo in a privately-owned Slaughter-shed in Kathmandu Metropolitan City



Photograph 5: Cleaning of Digestive Tract in a privately -owned Slaughter-shed in Kathmandu metropolitan City



Photograph 6: Waste Disposal System in a privately – owned Slaughter – shed in Kathmandu Metropolitan City



Photograph 7: Situation of a privately – owned slaughter – place after Butchering Operation in Kathmandu Metropolitan City



Photograph 8: Butchering Operation on the Bank of Bishnumati River at Hyumat, Kathmandu Metropolitan City



Photograph 9: Transportation of Meat by Rickshaw in Kathmandu Metropolitan City



Photograph 10: A Retail Meat Shop in Kathmandu Metropolitan City