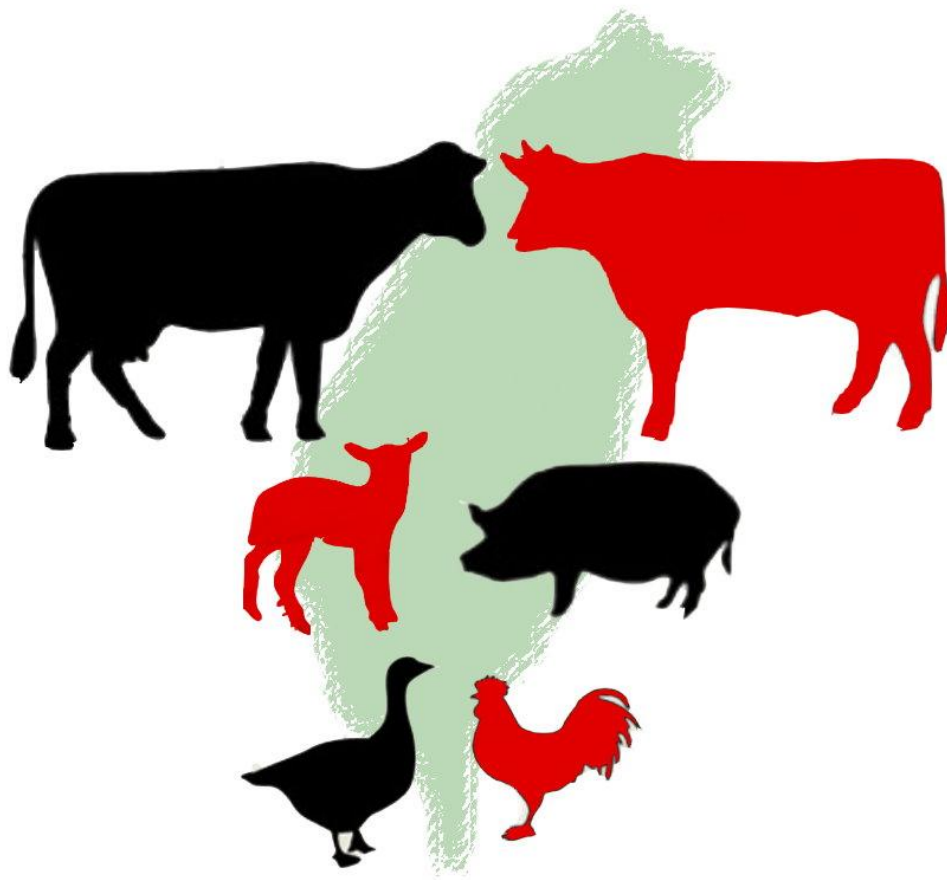


Evaluation of the farm animal welfare market in Taiwan

Analysis based on emerging pattern of animal welfare policy development



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Minor Thesis Report

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Abstract

Evaluation of the farm animal welfare market in Taiwan: Analysis based on emerging pattern of animal welfare policy development

As animal welfare has been noticed and emphasized in Europe for a long term, the scholars in Europe developed a comprehensive policy as an emerging pattern for EU regulation in order to elevate the standards of animal welfare. Livestock industry in Taiwan is incentive system due to limited available space and restricted resources, and the traditional customs and the food culture in Taiwan require in offering a big amount of domestic demands. Thus, the aim of this study is to see whether the development of animal welfare issue in Taiwan could be comparable to the pattern based on the EU. Empirical data was collected through interviews, desk research (news documents and project reports) and practice observation. Expert informants (14 participants) in different spheres (state, market and civil society) were interviewed. The interview results were to recognize the stage of animal welfare issue, the attitude of different stakeholders and their relationships among each other. The results showed that the major livestock market in Taiwan is not feasible in the pattern based on the EU. Animal welfare market in Taiwan is still a niche market. The main differences between the EU and Taiwan are the lack of public attention for animal welfare and the insufficient capability of stakeholders in initiating farm animal welfare due to inadequate knowledge and information.

KEYWORDS: Farm animal welfare- Issue Life Cycle- Societal triangle- emerging pattern- market-Taiwan- the EU

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Executive Summary

Introduction

Farm animal welfare has been noticed and promoted in Europe for a long time. North-western countries in Europe especially have well-developed national legislations of farm animal welfare standards. As to elevate the overall standards among different countries in the EU, Keeling et al (unpublished) developed an emerging pattern of comprehensive policies for farm animal welfare. The 5 policy stages in the pattern are respectively (1) increasing compliance with EU legislation (2) Rising awareness (3) Product development (4) Mainstreaming (5) Integration with other issues. Although the indicators within the model can reveal the developed level of animal welfare in different countries in the EU, the feasibility of this model in other counties outside Europe is still questioned. Taiwan is an island country with mountains covering 50 % (36.000 km²) of its surface. The available land and resources for the husbandry industry in Taiwan are limited. To provide sufficient domestic demands, the livestock product chain is intensive. As a member in different international organizations, WTO and OIE, the government has the pressure to notice farm animal welfare due to the globalization in livestock production. Owing to the globalization in livestock production, the livestock products in Taiwan has been threatened by the imported products with cheap prices and from countries with high animal welfare standards, such as New Zealand, Canada, USA, the Netherlands, Sweden and Norway.

Problem Statement

The aim of this study is to see whether the development of animal welfare issue in Taiwan can fit in the emerging pattern based on the EU, as to develop further strategy or policy to increase farm animal welfare in the husbandry in Taiwan and also to evaluate what is the potentiality of animal welfare market in Taiwan.

Although there are still no official regulations for farm animal welfare standards, OIE has started to manipulate the trade standards in assuring the safety of the products and the animal welfare by giving clear definition and standards for the veterinary examination or other authorities in exporting and importing from 2009. As well, the globalization in livestock production will make the trades in WTO involved with internationally recognized standards for animal welfare as from the requirement of international food corporation and the customers. Therefore, in order to elevate the competitive advantage of livestock products in Taiwan, it is crucial and essential to implement farm animal welfare in husbandry industry. Although the government in Taiwan had made legislation about humane slaughter and transportation, the compliance level is still questioned and supervised by the NGOs in Taiwan. However, the public preference of taste and the culture in Taiwan still is the main manipulator in the market and limit the motivation of implementing farm animal welfare among the market. Before the strategy and policies are made, the level of development of farm animal welfare issue in Taiwan should be recognized. This lead to the main research question:

What is the influence of the development of animal welfare issue on the farm animal welfare market in Taiwan?

To answer the main research question, the following sub questions are developed:

1. Are the different policy stages in emerging pattern based on the EU also applicable in improving animal welfare development in Taiwan?
2. Whether the social concerns regarding animal welfare influence the market in the EU comparable to Taiwan?
3. If not, what are the main different concerns and constraints of animal welfare issue in between the EU and Taiwan?
4. How should the policies of the government and NGOs in Taiwan differ from those in the EU to support farm animal welfare?

The sub-questions will be answered in basis of field research in Taiwan. Before answering the sub-questions, the analysis elements and theories will be explained in order to recognize easily in the empirical research. Societal triangle and issue life cycle will be described first as getting knowledge for the situations in different issue levels. Then different marketing strategy in order to develop animal welfare market will be discussed as well. In the field research, I contain two approaches to collect required information, which are giving interviews to husbandry-related or issue-related people and desk research in reports/ news of animal welfare issues, market survey, and interrelated legislation, codes, and standards in Taiwan. A total 14 participants were recruited in order to accomplish the information collection.

Result and Discussion

The indicators for different policy stages in the emerging pattern of Keeling et al (unpublished) are not recognized in Taiwan. In the first stage, the compliance with legislation of humane slaughter and transportation is incomplete. There is no international pressure to comply with EU legislation in Taiwan. Second, the public awareness of farm animal welfare is absent, whereas the public's focus is more on pet animal welfare. The food habit and traditional custom also are the constraints for the people in Taiwan to notice the importance of farm animal welfare. Third, animal friendly products have been sold and introduced to the public through the niche market in Taiwan; the initiative of assurance scheme product was developed by one of the participants, Dr. Liao, who launched the Humane Certification Mark and taught different voluntary farmers to implement animal welfare standards (EU-oriented reference) in the farms. These animal friendly products are currently sold in certain area (mostly northern Taiwan) or certain shops such as the organic shops, TanHou Food Company. However, the lack of third party validation could not increase the trust from the NGO, EAST, in these certificated animal friendly products. The mainstreaming of animal friendly product in Taiwan has not shown yet. Currently, there are no organizations or institutions as validation system to audit the animal friendly products; the existed validation systems are for sanity safety and food safety not for welfare assessment. At the last stage, the animal welfare issue has not yet been directly addressed among the public in Taiwan; most issues are still surrounded with antibiotic and hormones use, international trade, shark fin prohibition and disease transmission like avian flu. Therefore, the integration of animal welfare with other issue (e.g. sustainability) has not shown either.

Conclusion

The emerging pattern developed for the EU is actually not feasible for the current major market in Taiwan. The main difference between Taiwan and the EU is the power of the initial stakeholders for farm animal welfare issue (e.g. government in Norway and Sweden, NGOs in UK and Netherlands and market in France). From the interview results, it was shown that the main motivation for the integration of farm animal welfare in Taiwanese husbandry is mainly determined through the

perception of the consumers. However, it is founded that most of public awareness for farm animal welfare is influenced significantly by the media in Taiwan. Therefore, the influence of the mass media should be considered as a valuable tool in elevating the social concern for farm animal welfare. The other constraint in developing animal welfare issue in Taiwan is the lack of expertise and knowledge of farm animal welfare among the government and NGOs; whereas it eliminates the power and the authority for them to increase the social attention for farm animal welfare.

Recommendations

- The mass media in Taiwan has great influence on the perception of the public with animal welfare issue, so the NGOs and the government should make good use of the media to promote animal welfare.
- The expertise and knowledge of animal welfare of the government should be improved.
- The NGOs should put more effort in educating the public about animal welfare.
- The NGOs should affiliate with international animal protection group in order to increase their expertise of animal welfare.
- The policy makers in the EU should consider the circumstances in different countries inside EU. The key determinant to decide the policy should depend on the consumer perception for animal welfare.
- The business advantage and the influence of animal welfare market on the husbandry industry should be studied and analysed.
- The quality improvement on livestock products from high welfare standards should be studied.

1. Introduction

1.1 Research Background

Animal Welfare Development in the EU

Farm animal welfare has always been a significantly important issue in the EU and receiving more governmental attention than many other regions of the world (van Horne and Achterbosch, 2008). Animal welfare can be referred to the physical and psychological benefit of animals, yet it is always hard to reach the requirement with both physical and psychological benefit; in addition, there are quite some different views among the animal scientific groups, so it is difficult to comply with every criterion in each dimension (Mason and Mendl, 1993; Fraser, 2003). The EU formally considered farm animal as “sentient beings”, which means animals have the self-interest involved the desire to search for comfort and pleasure and to escape from fear, discomfort and pain (Webster, 2001). The EU has recognized the need to make legislation to protect them from “unnecessary suffering” (Webster, 2001). The awareness of animal welfare in Europe has been developed after World War II. Quantitative of animal protection organization sprang up during that period around Europe. The initiative of animal protection group was launched already in England even in early 1800s (Irwin, 2003). In recent years, the awareness spread rapidly throughout the whole Europe; scientists in different aspects (economic scientist, social scientist, animal scientist, and animal welfare scientist) from several countries in the EU have gathered together to discuss how to develop comprehensive policy framework in order to evaluate the animal welfare standard in entire Europe (Ferrari and de Roest, 2010).

Emerging Pattern of Animal Welfare Development

When the farm animal welfare issue started to be noticed in different countries in Europe, various responses in each country formed different patterns for farm animal welfare issue in practice. For instance, different initial stakeholders appeared to fashion out the issue of farm animal welfare; Swedish and Norwegian governments established a higher standard of farm animal welfare before the EU legislation, while the starts of farm animal welfare in UK and Netherlands were mainly from the NGOs who enforced the execution of legislative standards (Bock and van Leeuwen, 2005). The direction of different policy could be influenced by different culture, political tradition (Bock and van Huik, 2007), different assurance schemes for animal friendly products (Buller and Roe, 2011) and different perception of animal welfare among the public (Kjørstad, 2005).

Therefore, an overview of the whole farm animal welfare improvement in the EU is necessary and valuable. Various disciplinary of scholars (Keeling et al., unpublished) developed an integration of farm animal welfare policy developments in the EU (Figure 2.2) as a general model of animal welfare policy developing process in the EU. Further, this model would like to offer insights of many indicators in which level of animal welfare is in not only European countries but also other countries outside Europe. Therefore, in this study, the targeted country outside Europe is Taiwan. In the following, a brief description of husbandry industry and animal welfare level in Taiwan will be introduced.

Husbandry in Taiwan

Taiwan is a small country with a high population density. The land surface of Taiwan is about 36,000 km², which is four of five times smaller than Netherlands, but over half of the area is mountains and hills. That is, free spaces are not sufficient for agriculture and husbandry use; intensive system thereby

is developed as a more sufficient approach to operate in agriculture. Due to transition economy during “The economic miracle” from 1970 (Xu, 2005; Bellaver and Bellaver, 1999), the demand for animal proteins in human nutrition had been increased in consequence (Fraser, 2008). It is indicated that the total different meat production in Taiwan are pork in 6.2 million kg, beef 0.03 million kg, and avian meats in 74.2 million kg, and the self-sufficient rates for each type of meat are 95%, 6.2%, and 93.1% respectively; the offering of egg products can also meet the requirement of the whole market in Taiwan, which the total production of eggs is 6.5 billion eggs per year (Xu, 2005). Furthermore, the production was sufficient enough to provide as exported production to neighbouring countries, like Vietnam, Malaysia, Singapore, Hong Kong and Japan (COA, 2011).

Husbandry industry played an important role during the period when agriculture was dominant as economic support in Taiwan. However, the fierce outspreads of epidemic, like mouth and foot disease and avian flu, have erupted in recent decades. This in turn prompted to prohibit the exportation of livestock products to other countries, which brought a great impact on the husbandry in Taiwan (Xu, 2005). In addition, Taiwan’s participation in the World Trade Organization (WTO) and the World Organization for Animal health (OIE) brought a further impact and change to the husbandry in Taiwan. The domestic livestock production was challenged by the imported livestock production from the trades within WTO member countries and also by the demanded high standards of livestock product quality in the OIE (Xu, 2005). Therefore, it is important for the livestock production industry in Taiwan to figure out a solution to compete with other competitors.

Globalization in Livestock Production

It has been a worldwide tendency of having livestock productions trades with different countries in the world. Due to globalization in livestock production, the confinement system of animal farming and the increasing international trade among countries induced huge and fast influence on the outspread of animal epidemic (Holtz, 2012). The fear for the outspread of diseases has become a serious issue to be resolved, as regards to the improvement of animal health. Without a healthy condition in animals, it doesn’t reach the standard of animal welfare in accordance to “*the five freedoms*” (Webster, 2001). Measures on animal health are to assure the sanitary safety of livestock products in international trade of all farm animals (including terrestrial and aquatic animals) (Holtz, 2012). It is also believed when concerns of animal health and food safety are integrated into the standards of animal welfare, the public will request for more animal welfare (Fraser, 2003). OIE started to manipulate the trade standards aiming at assuring sanitary safety, food safety and animal welfare by offering accurate definitions and regulations for veterinary examination or other authorities in exporting and importing countries (OIE, 2009). Later in 2005, OIE adopted the first global guidelines for animal welfare in transportation and slaughter of animals (Fraser, 2008). As one participant of OIE, the government in Taiwan also has the pressure to notice that the emphasis of animal welfare has been increased.

Animal Welfare in Taiwan

In order to meet up the criterion of animal welfare in the EU regulations, WTO and OIE, the government in Taiwan had begun to notice the importance of farm animal welfare from 1998. However, the public awareness for animal welfare has been intermittent during this decade. The animal welfare issue would be noticed from the animal epidemic news or food scandals, but it was never discussed directly as an urgent issue to be solved. Furthermore, there are several constraints from the market-based perspectives to integrate animal welfare in the product chain. Cultural factors, traditions and food culture in Taiwan are hard to be changed and improved in a short term of time. For

example, the consumers do not accept the flavour of the pork without castration. This is one of the constraints for the market to implement animal welfare standards in Taiwan. In the livestock market, animal friendly products are considered as additive value products. Though the stipulate of animal welfare has not yet been written down in official paper agreement in WTO, with globalization in livestock production, internationally recognized standards for animal welfare will be involved in the mutual trade agreements and gradually required in future by international food corporation and their customers (Fraser, 2008). Consequently, the government and the husbandry industry in Taiwan should have better notice for animal welfare in order to compete with international livestock production.

1.2 Problem statement

In this study, animal welfare is regarded as a social issue. Due to superior animal welfare development in the EU than other countries, the elevated public awareness for animal welfare issue in European countries has been observed for a long term (Ingenbleek et al., 2011). Nowadays, animal welfare is an essential condition for European consumers. Food quality is not only determined by the safety of the end product, but also by the perception of welfare among animals during producing procedure (Roex and Miele, 2005). As the comprehensive of animal welfare policies developed by Keeling et al. (unpublished), it is questioned whether the patterns of animal welfare development in the EU would be in consensus with other countries out of Europe. It is assumed that different cultural baseline will eventually influence the direction of the developing patterns. The main question will be: *What is the difference of emerging pattern of animal welfare between Europe and countries outside Europe?* The targeted country is Taiwan in this study.

The aim of this study is to demonstrate the pattern of farm animal welfare development in Taiwan, and evaluate what is the potentiality of the animal welfare market. To recognize achievement of different stages in the pattern, the analysis elements include defining the relationship among spheres in the societal triangle (van Tulder and van der Zwart, 2006) and recognizing the stage level in animal welfare issue life cycle (van Tulder and van der Zwart, 2006; Mahon and Waddock, 1992; Femers et al., 2000). Because animal welfare issue is considered more as ethical issue, it is also important to see whether the firms rise the Corporate Social Responsibility (CSR) to meet the interests and demands of different stakeholders (Ferrell et al., 2010; Eesley and Lenox, 2006) and further in use of various marketing strategies in commercializing and promoting animal friendly products (Buller, 2010; Theuvsen et al, 2009; Keller, 2003; Vanhonacker et al., 2007; Presi and Reist, 2011).

Basically, the actors in society can be divided into three spheres: state, market, civil society. To successfully build up or run a business, it is impossible to depend on only one domain sphere, which means it always needs the connection and interaction among different spheres (van Tulder and van der Zwart, 2006). Within the interaction among three spheres, the stage of an issue development in the issue life cycle then can be determined (Mahon and Waddock, 1992; Femers et al., 2000). However, even though the process of interaction among three spheres determines the issue stage, but the assessment of the stage level has always been based on public awareness for the issue (Femers et al., 2000). The public awareness is one of the most influential factor and motivation for each sphere.

As a participant in WTO, Taiwan has multiple livestock trade corporation with developed countries. Plenty of livestock products are imported from USA, Australia and New Zealand, such as beef, lamb, chicken, milk powder and etc. Pork productions are mostly imported from Canada, USA, Netherlands, Denmark and Sweden (COA, 2011). On the other hand, Taiwan has highly developed agriculture technology to serve domestic demand of pork and avian meat. As the importation of livestock products

from different Western countries with higher animal welfare standards, it is considered as a threat for the domestic production. In order to gain competitive advantage, the conception and idea of farm animal welfare has been gradually noticed by the authority in Taiwan. Yet, from the preference of taste and cultural perspective, consumers are still the domain manipulator in the market, and it limited the degree of implementation of animal welfare in producing process in husbandry (e.g. castration). Nevertheless, the conceptual promotion in farm animal welfare has been neglected by the public; in the meanwhile, the public is paying more attention to the welfare of pet animals.

As to general more attention for the issue of farm animal welfare, an ideal resolution was indicated to create an innovative market and implement proper marketing strategies to promote animal friendly product to the public (Binnekamp and Ingenbleek, 2006). However, the level of animal welfare demand in the husbandry in Taiwan has not been studied or recognized, so the main research question is:

What is the influence of the development of animal welfare issue on the farm animal welfare market in Taiwan?

To answer the main research question, the following sub questions are developed:

5. Are the different policy stages in emerging pattern based on the EU also applicable in improving animal welfare development in Taiwan?
6. Whether the social concerns regarding animal welfare influence the market in the EU comparable to Taiwan?
7. If not, what are the main different concerns and constraints of animal welfare issue in between the EU and Taiwan?
8. How should the policies of the government and NGOs in Taiwan differ from those in the EU to support farm animal welfare?

In the following chapter, background of analysis elements and also the emerging pattern of animal welfare development in Europe will be described. The sub-questions will be answered in basis of field research in Taiwan. In the first part of Chapter 2, societal triangle and issue life cycle will be described first. Then different marketing strategy in order to develop animal welfare market will be discussed. In the second part, the pattern of animal welfare policy development in the EU from Keeling et al. (unpublished) will be shown. In Chapter 3 of field research, I contain two approaches to collect required information, which are giving interviews to husbandry-related or issue-related people and desk research in reports/ news of animal welfare issues, market survey, and interrelated legislation, codes, and standards in Taiwan. In Chapter 4, the result from the field research will be shown and to answer whether the situation in Taiwan can be recognized in the pattern based on the EU. In Chapter 5, the emerging patterns of animal welfare policy development based on the EU and Taiwan will be compared and discussed. In the end, conclusion and some recommendations for future research will be made.

2. Farm Animal Welfare Market Development

2.1 Analysis Elements

To determine whether animal welfare has been emphasized and implemented in the industrial procedure, it is important to recognize if animal welfare has been regarded as an emergent issue and

how the stakeholders react on this issue. It is also essential to have enough awareness of animal welfare among the public and the customers, because it is the key motivation for the private sectors and the primary producers to integrate animal welfare in the product line due to an increase market demands.

In the emerging pattern, there are 5 policies stages (Keeling et al., unpublished). To increase the insight of what activities or stakeholders involved in the patterns, it is essential to understand how to define and recognize the phase level in animal welfare issue life cycle and the relationships and the interactions among societal triangle. Further, different types of marketing strategies can assist the firms to introduce animal friendly products into the market, and also for further strategy to increase market share. One of the motivations for the firms recently is that the increasing impact of CSR on their financial and commercial success (Grant Thornton, 2011). Therefore, the formulation of CSR is also a determinant to recognize the willingness of the firms to participate in animal welfare market. Following section, the definition of societal triangle and mechanisms in between each sphere, the phenomena of each stage in issue life cycle, CSR and marketing strategy in promoting animal friendly product will be discussed.

2.1.1 Societal Triangle

In common, the whole society is always consisted of interaction across different spheres, and different attitudes among spheres manipulate the balance and constraint in issues. The actors in society can be divided into three spheres: state (as regulatory and legislatorial actor), market (as corporate indicator), civil society (as the behalf of civilian to create better value and norm). It is important to distinguish the clarification of responsibility of each sphere, which is referred as its own role in the society. Therefore, the role of each sphere will be described first, and then the interaction and relationship among spheres will be described.

State

The government creates the legal framework to construct the society through legislation. Through regulation and codification, the government is basically controlling the pattern of business and the way of citizens' lives in the society. However, it is possible that the interest of the society or the firms is conflict with the state. Whether the state can hear the voice of its civilian and try to implement and formulate? This capability is referring to "state autonomy", which means the ability of the state to act independently to decide the portfolio development of society and economic in the country (Mann, 1984). The capability of state can be distinguished between weak and strong. A strong state would have more autonomous power towards the decision of future development in its society and would be more ability to resist the pressure of certain interest groups. A weak state would contain a less authoritarian government with less policy constraint and basically tempting to leave the economic determined by the operation of the market (van Tulder and van der Zwart, 2006). Generally, the government will apply four basic roles in between business and civil society (van Tulder and van der Zwart, 2006): (1) mandating role, which acts as a regulator and standard builder and have the full autonomy to affect firms and civil society, (2) facilitating role, which the government will provide more enabling instruments or approaches to inspire the firms or the civilian towards to the 'right' direction, (3) partnering role, which the government try to build up a close relationship with stakeholders (firms and civil society) and make a combination of resources, (4) endorsing role, which is the least autonomous of the government and they try to make out an solution in relying on firms and NGOs.

In the mandating role, the initiative of animal welfare will be the state. The state is autonomous to develop and establish the legislation and codes for animal welfare, and in consequence, the farmers and chain will be enforced to upgrade the whole product line with animal welfare standards. But sometimes the inspiration of promoting animal welfare could be affected by international civil society, when the national civil society has less or insufficient knowledge in animal welfare. In second role, the state's role in facilitation is to encourage and support, since the state is willing to enable the whole product chain to work towards animal welfare through the supportive activities such as technique consultant or instrument introduction. Third, the state plays as partnering role in building up strong correlation and cooperation to share the combination of resources. The state would like to promote animal welfare in the coordination between the firms and civil groups. As regarding to public education, the state will cooperate with the civil groups to edit correct animal welfare contents in education ingredients and publish the textbook throughout the elementary and junior high schools. In addition, the state-owned firms could be the initiative in animal welfare market. In the final role, the least autonomy of the state is basically passive in giving solution to the issue of animal welfare. Through the descriptions of different roles of state, the level of state autonomy could be correlated with the level of expertise in animal welfare of state in comparison with other spheres.

Civil Society

Civil society is formed by a group of people shared with same norms and values on behalf of citizens that structures a small society outside government and market (van Tulder and van der Zwart, 2006). Normally the group in civil society is unofficial and without profit purpose, so it often will be referred to non-governmental organization (NGO) or non-profit organization (NPO). The function of civil group is not only to remind the government or the firm if there are unfavourable factors against to the civilian or negative consequence in the progress of their activity or behaviour (van Tulder and van der Zwart, 2006), but also to supervise and assist the implementation of new legislation if it reach the main objective (Vapnek and Chapmen, 2010). The civil groups will try to catch the attention of the public in supervision of the government or the firm by either soft or hard way to express their discontents in the current situation (van Tulder and van der Zwart, 2006). The different approaches are examples as lobby activity to the politicians, letter writing to issue-related powerful people, protest, lawsuit, and boycott as resisting against the state or the firms. During these activities, the media plays an important role to pick up the awareness of the public to notice and emphasis the civil groups' demands, which always refers as a social "issue" (Femers et al., 2000). From an increasing public awareness, the public become more aware of the "issue", and in consequence, the market and the state will be enforced to be more concern about it.

The motivation of civil society to create a new market has always been ethical-driven. For example, the famous animal friendly product label created by Royal Society for the Prevention of Cruelty to Animals (RSPCA) in UK, "Free Range" made the primary producers and chain implement higher animal welfare standards (Bock and van Leeuwen, 2005). In the case of animal welfare, the civil society plays a pushing role for the firms or the government to elevate the standards of animal welfare in the whole production process.

Market

The market primarily creates value and benefit to meet the requirements of the public and in the meanwhile to follow the legislation made by the government in the society through offering products, services, economic growth, employment and income (van Tulder and van der Zwart, 2006). The

market mechanism is based on competition and money (Huang and Han, 2008). Different firms in the same market will compete with each other through initiating innovation or having price competition. For example, the initiatives of animal welfare in USA refers to the food service and retail sectors, like McDonald's and Burger King; they create the standards of animal welfare for their suppliers to improve and meet the requirements (Fraser, 2003). In order to elevate their profit and reward in the company, the manager in the company will implement marketing strategy to meet the demands either from their customers or from their stakeholders (Ferrell et al., 2010). In the case of animal welfare, most of the firms tempt to implement stakeholder orientation as marketing strategy to satisfy different interests of different stakeholders. Furthermore, concerning about animal welfare as a social issue, CSR is another resolution but with bigger impact on the corporate behaviour (Ingenbleek and Immink, 2010). However, it was indicated even if the market is the domain sphere in the entrepreneur, there is still rare chance to have successful business (van Tulder and van der Zwart, 2006). Whether all spheres in either individual or collectively institutions would like to cooperate with each other, the prerequisite is that the certain business has to be economically successful in order to meet the needs and requirements of different stakeholders and in consequence to offer their stakeholders advantage and benefit from the business (Gijssels and Develtere, 2008). Therefore, it is essential and crucial to cooperate with different spheres in the society in order to successfully introduce the new product, animal friendly product, in the market. Different marketing approaches and strategies in new product development will be introduced at the third (2.1.3) section.

2.1.2 Issue Life Cycle

What is an issue?

Issue has been defined as unregulated or unresolved question or topic which induces societal discontents and controversies and involves great expectational gaps (van Tulder and van der Zwart, 2006). Animal welfare has gradually become an international topic around the world, and it has been generated by fierce public debates or huge campaigns/ protests held by animal protection groups. Thus, animal welfare can be defined as an issue. Expectational gaps happen when various stakeholders hold different expectations on what should be the acceptable enterprise behaviour in regard to social issue (van Tulder and van der Zwart, 2006; Wartick and Wood, 1999). Therefore, to resolve the issue should not only find out the resolution for the issue but also consider some specific stakeholders' demands. If the issue continuously brings up the public awareness and becomes influential at internal operation of company, then it will have a big impact and negative effect on the company and its reputation.

Issues, normally, are fashioned out by civil society or certain celebrity in request of certain ethic promotion in the society. For example, a serious and huge event such as the inhumane treatment of battery cage for laying hens mentioned by NGOs can trigger the change of thoughts or bring up the awareness in the society (van Tulder and van der Zwart, 2006). When the issue becomes vital and public aware, civil society will try to make negotiation or controversy to express their ideas and convince the public to accept and believe in their values and ideas in order to enforce the firms or the state to respond. Therefore, the development of an issue life cycle phase will be distinguished via the relationship between societal spheres. Following, the issue life cycle of different stages and also the influence of each stage to the market will be described.

Stakeholder in the issue

Stakeholders were defined and recognized as an individual, a group or an organization in Freeman (1984) as "able to affect or able to be affected by a firm's business" (Mitchell et al., 1997). The

stakeholders in issue life cycles are mainly the three spheres in societal triangle, which are state, market and civil society (van Tulder and van der Zwart, 2006). Beside the actors involved in most issue life cycle, when the media also try to elevate the public awareness of certain issue, the media will be included as stakeholder as well (Femers et al., 2000; Ingenbleek and Immink, 2010). In each phase of issue life cycle, the attitude and behaviour of each stakeholder are basically the variables to influence the public attention in regard to the given issue, and the measurement of issue phase level depends on the intensity of public concern (van Tulder and van der Zwart, 2006; Femers et al., 2000; Mahon and Waddock, 1992).

Issue Life Cycle

The issue life cycle reveals the stage of the dominant problem and also the influence on the public attitude and behaviour (van Tulder and van der Zwart 2006), whereas the cycle was similar with earlier theory, “issue-attention cycle” (Downs, 1972). The issue life cycle consists of four stages: birth, growth, development and maturity (Figure 1), with further different results in post-maturity (van Tulder and van der Zwart 2006); however, there are also other categorisation sets the phases into emergence phase, dissemination phase, establishment phase and erosion phase (Femers et al., 2000).

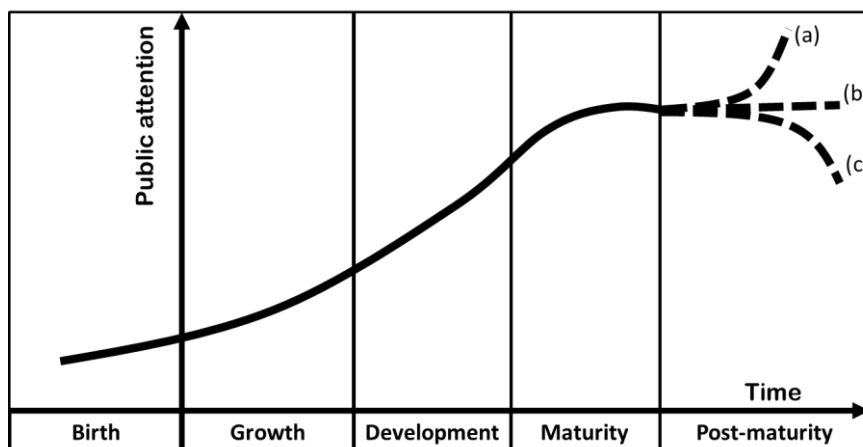


Figure 1. Issue life cycle (van Tulder and van der Zwart, 2006)

Phase Level

(1) Birth

The birth of an issue or societal discontent is under the influence of expectational gap, which is a raise or an awakening moral or ethic in critical event (van Tulder and van der Zwart, 2006). Issue is commonly generated by the societal discontent, in particular from NGOs; sometimes it could be generated by the government which is for the reconstruction of regulation, but the chance is quite rare (van Tulder and van der Zwart, 2006). NGO's attitude in this phase is like watching dog, always keeping eyes on the behaviours of the targeted companies or authorities in relation to the issue. NGOs try to put the problem into agenda as urgent issue to be resolved and persuade the companies and the governments to corporate. However, the non-response and ignorance of the governments and companies reveal their passive attitude in this stage.

In the first beginning of issue formulation, only specialist or insider media will notice the issue and make little discussion via multimedia (like TV, radio, newspaper and internet), so the public attention

of the issue is rather small. At the beginning, few people noticed animal welfare as an issue due to inadequate knowledge and information for animal welfare (Miele, 2011; Binnekamp and Ingenbleek, 2006); therefore, the potential of developing animal welfare market in birth stage is not obvious.

(2) Growth

The discontents are spread out further by a growing media attention in the growth stage, and the issue is well defined with a certain and popular name (Femers et al., 2000; van Tulder and van der Zwart, 2006). With the transition of second stage, the issue has always a trigger event that is able to catch the media's attention, and thus the emergence of public debate is generated by the increasing reports from the media. The trigger event is not necessary to be the most serious incident during issue life cycle (van Tulder and van der Zwart 2006), but perhaps, it can already successfully meet the interest of the media. In this stage, the government and companies have more reactive responses, and the NGOs are still the role of supervision and advocacy of expected resolution. However, the companies are in rather defensive attitude and trying to deny the controversy. The government though reacts on the issue with claim of releasing some baseline regulations and legislative standards, but mostly the main reaction is trying to deny the problem in the issue and only try to pacify the discontents.

The public awareness will gain gradually, because the intensity of the issue reported by the media increases. Due to rough and incomplete legislation of animal welfare standards, some superior companies as initiatives may incorporate above animal welfare standards than legitimacy in their products.

(3) Development

The issue enters into the development stage when important and powerful individual or collective stakeholders oblige the firms or the government to resolve the issue. In this stage, a peak attention from the media often appears due to the outbreak of a scandal in questioning the corporate behaviour of companies and the policies of the government (Femers et al., 2000). Or the civil society will try to carry forward the issue to broader public debate, and they tempt to enforce the government to create proper regulation (van Tulder and van der Zwart 2006). In this stage, the private sectors become active in response due to the fear of scandals or the fierce critics from the public that could possibly harm its reputation and lose their customers. They will try to search alternatives in the assist of scientific support (asking advise from specialist or animal welfare scientist) to provide new labels for the products and turn its brand image into more positive one. Sometimes, a superior company will try to establish self-regulation before the legislation, which can refer to an ethical response in the corporate behaviour as CSR (Maignan and Ferrell, 2004). Further, the government also reacts actively in this stage, but it is still without the establishment of legislation, only with announcement in advocating the recommended regulations and treaties (van Tulder and van der Zwart 2006). The NGOs then start to play a cooperative role in this stage. They may support the companies to have alternative corporate policies, and try to cooperate with the companies in developing the new corporate behaviour, such as setting animal welfare standards in product chain and labelling on the package of products. In the meanwhile, they still play the watching-dog role to ask the government to implement firmly applicable and strict regulations to elevate the compliance level, such as specific amount of living space for animals, stunning approaches during slaughter, and so on.

In this stage, the animal friendly product could be introduced into the market, and the animal welfare market can be referred as an niche market. In this stage, the NGOs have gained plenty of information

and knowledge for animal welfare criterions. Thus, the private sectors not only establish cooperation with animal welfare specialists and academic researchers but also sometimes with NGOs. For example, McDonald's USA announced they had research project in building sustainable and welfare-matching laying hen stables led by Michigan State University and the University of California, Davis. Also, multiple NGOs coalition in research includes the American Humane Association, American Veterinary Medical Association, USDA's Agricultural Research Service, Cargill Incorporated, and the Center for Food Integrity (McDonald's USA, 2009).

(4) Maturity

In the mature stage, the issue has been generalized among the public, and the expectational gaps have been bridged. But the settlement of issue does not mean the implication of legislation (van Tulder and van der Zwart 2006). Companies in this stage are more realistic and trying to address appropriate approach to the issue; they strive to support the change they made to avoid reappearance of the issue. The government also proactively try to implement the proposed solution offered by NGOs or specialists. The relationship among NGO, state and market becomes more cooperative and harmonized in discussing the properly alternatives. However, issue like animal welfare contains large costs for different stakeholders. For example, the prohibition of battery cage in laying hens in the EU cost the farmers a lot of investment in facility restructure and shortage of egg production (Alter, 2012). Therefore, offering consultancy and financial support to the farmers will be more flexible instruments to resolve constraints in animal welfare standards building.

(5) Post-maturity

Three different outcomes from the resolution are in the issue post-maturity phase. First situation, the issue can reappear at an above stage, because the solution fails to resolve the issue or a new expectational gap appears ((a) in Figure 1) (Mahon and Waddock, 1992; van Tulder and van der Zwart 2006). Thus, the cycle will have to go up again if the resolution is not acceptable for the public. Second, a balance can be achieved by confident resolution in achieving the satisfaction of relevant stakeholders and the public. Therefore, the issue can be regard as an end ((b) in Figure 1). In the third outcome ((c) in Figure 1), the issue can fade out or disappear, and the public become indifference for the issue, even if the issue has not yet been resolved (Mahon and Waddock, 1992; Fermers et al., 2000).

2.1.3 Marketing Strategy

Innovation is the process to bring new product or service to market that improves consumers' lives or also emotional perspectives as in the case of animal welfare issue (Hauser et al., 2006). Animal welfare is considered as an innovative feature in the product, so it is crucial to utilize proper marketing strategy to introduce animal friendly products into the market (Buller, 2010). However, more and more scandals or resistances advocated by the civil society are against the husbandry industry. Some of the civil groups have influential power to educate the public that animal welfare is an essential element in the husbandry. Therefore, in the matter of serious consequence, to involve the interests and demands of different stakeholders (stakeholder orientation) is rather better than taking values on only consumers' interests and demands (market orientation).

In practice, there are always conflicts of interests among different stakeholders. In order to meet all the interests and demands, the firm will focus on various stakeholder groups and try to establish different dimensions (normative, managerial and instrumental) of CSR (Maignan and Ferrell, 2004). However, the biggest difference between stakeholder orientation and CSR is the priority of the firm's main concern. Firm implementing stakeholder orientation will respond the request of stakeholder on behalf of maintaining the profit of its sale (Eesley and Lenox, 2006). On the contrary, the firm operating its business with CSR standards is committed to own the social responsibility to increase the morality and normative of its corporate activities, in spite of a possibility to lose short-term profits from its business but to create a long term profit (Donaldson, 2005; Hernández-Murillo and Martinek, 2009).

Nevertheless, to commercialize animal friendly product still requires different marketing strategies. The actual marketing strategies have been indicated to involve creating market, labelling, branding, segmentation, and validation (Buller, 2010). In the following sections, the stakeholders in the market and CSR will be described respectively. Later, different marketing strategies will be described individually.

Stakeholder in the market

Normally the firms will have more concerns for the people who have direct contribute in the business, such as customers, employees, and shareholders, which are called as primary stakeholder (Donaldson and Preston, 1995; Clarkson, 1995). With less direct relation with the firms but still have influence on the business or be influenced by the business will be referred as secondary stakeholder (Clarkson, 1995; Eesley and Lenox, 2006). As in the case of animal welfare issue, the civil society is considered as secondary stakeholders. NGOs and NPOs often express their discontents for the firms through the media; so when the media try to elevate the public awareness of the issue, the media will be included in the secondary stakeholder as well (Ingenbleek and Immink, 2010). In the animal welfare issue in European countries, quite some amount of civil groups played very important roles in initiating the thoughts of animal welfare, such as RSPCA in UK and World Federation for the Protection of Animals (WSPA) in Netherlands (Irwin, 2003).

Corporate Social Responsibility

In order to develop a sustaining business with satisfaction from various stakeholders, CSR could be one of the solutions for firms in the issue, such as animal welfare to establish new normative standards in their product chain (Maignan and Ferrell, 2004). CSR is referred as "social obligation", "stakeholder obligation", "ethic driven" and "managerial processes" (Maignan and Ferrell, 2004). CSR standards are derived from social pressure and social discontents to reconstruct or improve the criterion of companies' activities and behaviours (Ingenbleek and Immink, 2010). CSR standards could be the precursor of legitimacy in animal welfare standards. However, the process of formulating comprehensive CSR standards is rather complicated and difficult due to the involution of various stakeholders whose interest may conflict with one and another. It was indicated that formulating CSR is better to put firm's objective as suboptimal goal but to satisfy each stakeholder's interest in part of extent, rather than maximizing the interest of a single stakeholder (e.g. customer) (Ingenbleek, Binnekamp and Goddijn, 2007).

The firm with CSR has a positive image of brand or product as an advertisement (EUCAM, 2009). Because the firm has social responsibilities for their customer, they will reveal their norms through their product packages or labels and persuade them to agree with the norms. That is, when the CSR of

the firm is perceived increasingly by consumers, the firms will also win the positive words from consumers' mouth as rewards (Handelman et al., 1999). The CSR formulation can be referred as a marketing tool that the firms are marked in brand names; it shows to the public they have social responsibility and they care about their customers, in order to bring up the awareness and recognition of their brand (EUCAM, 2009). It is also indicated to integrate social responsibility in corporate activities may increase private profit, in terms of the ability to attract customers by differentiating its products with premium value (Hernández-Murillo and Martinek, 2009). However, it is also questioned how the firm can successfully create a new segment for animal friendly product. Subsequently, the different marketing strategies in introducing animal friendly products into the market are going to be discussed.

Labelling

It is studied that labelling scheme is the most feasible option to inform the consumers about special products (Theuvsen et al, 2009). Labelling is the most visible and obvious element to differentiate animal friendly products with others, and also it has the function of certification to guarantee the food safety and quality to the consumers (Theuvsen et al, 2009; Buller, 2010). In addition, levels of operational criteria are distinguished through three main dimensions: schemes that only focus on only animal welfare, schemes that focus on different aspects but definitely including animal welfare and schemes that focus on aspects other than animal welfare but having positive effect on animal welfare (Theuvsen et al, 2009).

Market Creation

In animal welfare market, retailers, wholesalers, and food and beverage industries have the most potential to 'create' the demands of consumers or adjust consumers' requirement and choice (Buller, 2010). To recognize the potential consumers' demands is more for the commercial-driven reason than ethical-driven reason. Barriers such as the willingness of distribution channel, recognition and perception from consumers, and price competition with normal livestock product will influence the capability to build up an animal welfare market (Binnekamp and Ingenbleek, 2006). Therefore, to create animal welfare market is crucial to let the food chain actors, especially retailers and food and beverage industries, realize the potentiality of animal friendly product (Buller, 2010).

Segmentation

Animal welfare is in fact the factor to segment a different level between normal livestock products (Buller, 2010). The consumer's perception of animal welfare product is actually the base of segmentation (Vanhonacker et al., 2007). But due to the different interpretation of animal welfare concepts, there are different interests and knowledge from various stakeholders. Therefore, the food chain actors try to differentiate the level of various animal friendly products with assurance scheme and segment the welfare standard ranges within the products.

Branding

When there are plenty of labelling products in the market, the function of differentiation of the product will be eliminated. As well, if the upgraded animal welfare legislations are established, all livestock products in the market are required to meet the minimum legislative standards; then the explicit

differentiation of animal friendly product will diminish. Therefore, it is necessary to transfer the emphasis from individual consumer choice to brand equity (Buller, 2010). Brand equity refers to the direct and indirect value accumulatively perceived by the consumers (Keller, 2003). The food chain actors increasingly incorporate higher animal welfare standards in the product chain, which is the key factor to evaluate the brand image and corporate reputation.

Validation

A solid, effective and trustable animal-base welfare indicator is important, especially when the industry is without the comprehensive legislation in contribution to confine welfare-level standards in manipulation and instrumental requirement and also the quality of products. Validation is mainly executed through audit and traceability procedures (Buller, 2010). The approaches and tools in validation of animal welfare are still in developing; in the meanwhile, there are quite some applicable methodologies studied could be used in most animal species (Presi and Reist, 2011).

2.2 Emerging Pattern of Farm Animal Welfare Development in the EU

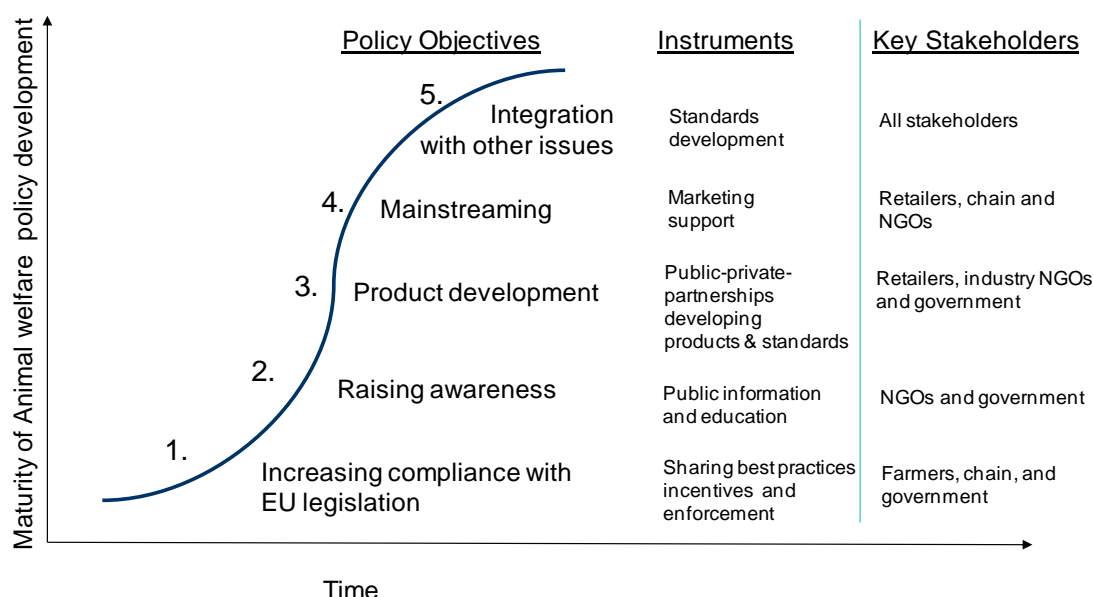


Figure 2.2 Emerging pattern of animal welfare policy development in the EU (Keeling et al., unpublished)

The different instrumental policies in the developing pattern of farm animal welfare in the EU represent the empirical confrontation for the theories described in the previous chapter. In this instrumental policy development, it consists of different experiences from various countries in Europe, mostly from the well-developed animal welfare northern west European countries. The pattern could be a step-by-step procedure in measuring the maturity of animal welfare development in different countries.

In the first step, a minimum of legislative standards for farm animal welfare has to be established. Thus, the governments in the EU countries have to apply the minimum welfare standards as national legislation. The level of legislative compliance among farmers and the food chain actors is the indicator of policy effectiveness. Yet, farmers and chain actors with less awareness for farm animal

welfare will probably have less willingness or limited financial and instrumental resources as capability to comply with the welfare regulation. Therefore, the government should provide education programmes for farmers and food chain actors to realize the benefits of including animal welfare as essential feature in the product chain. Also, the government attracts the farmers and chain sectors with incentives such as offering rewards for initiatives who achieved the minimal legislation, financial supply or technical consultancy in reaching the minimum standards. In contrast, the government can execute some legal enforcement to set a deadline or business constraint for increasing minimum standards compliance. For example, Brazilian poultry sectors try to meet the minimum of EU legislation in maintain the market share of chicken meat market in European countries (van Horne and Achterbosch, 2000). This policy instrument can refer to the phase between ‘growth’ and ‘development’ in issue life cycle (section 2.1.2). The key turning point from growth to development stage is whether the market starts to obey the baseline of regulation or standards.

The next stage is indicated by whether the public increases awareness for animal welfare. In this policy, the government has the obligation to rise up public awareness of animal welfare. Through school education, correct animal welfare knowledge can be edited in the text books. Affiliation with NGO may be also effective, because NGO has better ability to communicate with the public. Activities held by NGOs have better influence in educating people outside school. Further, once the consumer’s awareness of farm animal welfare is sufficient, the sectors will have more opportunity to promote the animal friendly products successfully.

The next step is to provide animal friendly products in the market. When more requirements for animal welfare appear in the market, the retailers will consider offering more animal friendly products in their shelves. Different standard levels will be implemented by farmers or food chain sectors to differentiate their products as competitive advantage. Hence, labels on the welfare product packages should have clear explanation in order to let the consumers recognize, and different prices based on various welfare standard levels should be set as well. In order to protect the benefit of consumers, it is considerably essential and crucial to involve the third party certification with national/ international authorities’ or NGOs’ approval in the validation system to guarantee the claim of the label. As voluntary welfare scheme either from self-construction or suggested by NGOs, the credibility will be insufficiently effective to have the label on the package without a third party certification. Therefore, the validation system should be developed in this stage. In this policy stage, a better situation for animal welfare development is to maintain ‘maturity’ phase in issue life cycle, which means the public attention is still maintaining. Continuous public awareness in animal welfare will support the growing of animal welfare market.

When the innovative welfare products become common in the market, to increase the market share will be the main objectives for the retailers and food chain actors. What is preferable for the sectors is maintaining or even increasing consumers’ concerns for animal welfare. It will increase the demands of retailers to involve in animal welfare market as well as providing animal friendly products in its store brand. The sectors will also elevate the private standards of animal welfare from time to time in order to compete with other competitors. The higher standards are possible to transform the scheme from gaining additive value of animal friendly product to a threshold for entry of the animal welfare market (Buller and Roe, 2011).

As the time goes by, the consumer awareness of animal welfare may decrease. The stakeholders should prevent the possibility of animal welfare fading away. Rearranging animal welfare with novel

thinking such as climate change (CIWF, 2008) or sustainability of agriculture (Eurogroup for animal, 2010) as other issues can remind and reformulate the importance of animal welfare among consumers.

However, this pattern has not been tested if it is suitable or applicable for every society or country to implement, but it brings clearer indicators for overall animal welfare market development. Yet, the accuracy of this pattern is still questioned. Whether it is true that in each stage, the stakeholders listed in the pattern should be necessarily involved as an indicator? Is it possible that the maturity of animal welfare development can be achieved through different order of these policies? In order to investigate if the farm animal welfare development in practice is followed every step in the emerging pattern, several questions come out of the table:

1. Could the compliance with minimum regulation of farm animal welfare from farmers and chain be enforced only through the state?
2. Is the public awareness of animal welfare only increased by the education and information providing from NGOs and government?
3. Should other stakeholder be involved in product development rather than just retailers, industry and NGOs?
4. What kind of marketing support is for the animal friendly product to become mainstreaming?
5. What kind of standards development can animal welfare integrate with other issues?

2.2.1 Compliance of Legislation in Farm Animal Welfare

Regulation and legislation are always established by the state. Government with strong animal ethic is superior to create high standards of farm animal welfare as the mandating role (section 2.1.1), such as Swedish and Norwegian governments that possessed the dominant power to decide the legislative details (Bock and van Huik, 2007). As well, with pressures from international organization, like the EU, the government will also enforce the farmers and the chain to implement welfare standards. For example, Italy was basically dominant by the government in pushing animal welfare development due to the pressure of EU legislation (Bock and van Huik, 2007). However, the government is not always the initiative trying to build up legislative standards of animal welfare. Civil society often proactively advocates the issue of animal welfare and tends to attract the attention from the public. During the issue life cycle (section 2.1.2), it was indicated that civil society held all different kinds of activities, such as boycott and protest, to enforce the government to establish proper regulation for farm animal welfare. For example, The Netherlands and UK promoted animal welfare via strong civil society but running upward the development through participation of sectors; the Swedish and Norwegian decisions for welfare legislation details were through the interaction and negotiation with civil society (Bock and van Huik, 2007). However, the market could also see the incentive of animal welfare and be the role to enforce the minimum legislative welfare standards; France had less powerful civil society to promote animal welfare but progressed through the enforcement of private sectors (Bock and van Huik, 2007).

To achieve the first policy stage is to show the incentive and enforcement of compliance with the minimum legislative standards. Not only the state can share the best practice of implementation of animal welfare, but also the civil society and the market can show the incentive and perform the enforcement across different food chain actors and farmers. The state and the market are mainly the obligatory stakeholders in this stage, but civil society is not essential also quite influential.

As far as the minimum regulation is concerned, different culture, market supply, sector size, and public preference influence the various emphasized aspects in animal welfare standards (Bock and van

Leeuwen, 2005; Bock and van Huik, 2007). In Sweden and Norway, the dominant pig farms are rather small scale, compared with ones in UK and the Netherlands. The minimum surface requirement for pigs in Sweden and Norway are higher than in UK and the Netherlands (Bock and van Leeuwen, 2005). In Sweden, Norway, UK and the Netherlands, the regulations and legislations concern more about animal welfare than food quality and safety, which food safety is already compulsory feature within animal welfare. In France and Italy, the legislations are more linked with food quality (taste) in order to produce better quality products within animal welfare, and wherefore the legislations of animal welfare in France and Italy will only comply with the minimal requirement in the EU legislation and seldom be the superior in higher animal welfare standards.

2.2.2 Public Awareness for Farm Animal Welfare

Information and education of animal welfare for the general public are usually shown at the conference, in-service training, and activities held by the government or NGOs. Education channels are derived into two categories which may complement to each other: formal education during schooling and higher education; informal education from families, the media and other approaches such books, television programmes, internet, and the visit of zoos, farms and museums (FAWC, 2011). However, animal welfare is considered as a complex of multi-faceted social issue which consists of scientific, ethical, economic, and socio-political dimensions (Wilkins et al., 2005). In formal education, little knowledge for the animal use, why the animals are reared in current system and animal welfare concepts are given in the school. However, there are still some constraints in promoting animal welfare successfully in formal education. For example, though quite some good quality of educated materials produced for UK teachers by the NGOs or institutions, it is difficult for the teachers to access good quality and objective material of farm animal welfare. Because only small amount of teachers have been training in science to get well understanding of animal welfare (FAWC, 2011).

As far as informal education is concerned, the media also has a big impact on the issue of animal welfare. Food scandal and food scare reported by the media often will mislead the perception of the public that always only focus on negative issues, such as epidemic outspread (e.g. Salmonella and foot and mouth disease) and environmental pollution (e.g. dioxin) (Miele, 2011). For example, due to the food scare in outspread of Bovine Spongiform Encephalopathy (BSE) in Italy, consumers in Italy started to grow the intolerance of low level welfare rearing conditions (Kjørstad, 2005). Also in other European countries, like UK, the Netherlands, and Hungary, the media always seemed to have significant influence on consumer knowledge about animal husbandry through the news of food scandal (Miele, 2011).

It also had been studied that the public has inadequate knowledge in contemporary farm system practices (especially confined farms) and also a lack of knowledge for the welfare problems of animals caused by intensive systems of production (Miele, 2011). French and Dutch consumers have little knowledge on animal welfare, and the knowledge they have about farm animal welfare and practical situations are rather fragmented, vague, and negative impression (Miele, 2011; Kjørstad, 2005). In Norway and Sweden, the public also lacks of knowledge about practical situations in animal farms (Miele, 2011). However, the majority of Swedish consumers stressed out that they would like to choose the highest welfare products among of all; whereas, the Norwegian consumers care less about the authenticity of different welfare levels among livestock production chain, and in general, these consumers thought the responsibility to establish higher animal welfare standards should be set with the experts (Kjørstad, 2005).

The penetration of animal welfare knowledge among the public in European countries is actually not complete. However, to increase the public awareness doesn't necessarily require well-grounded understanding of animal welfare. The increasing public awareness for farm animal welfare is through the NGOs' advocacy, the government's promotion and the wide reports of the media.

2.2.3 Animal Friendly Product Development

The most common strategy to introduce animal friendly product into the market through is through labels. In general, the product information is through labels with animal friendly claim. But the labels sometimes can be too general that the consumers couldn't properly distinguish the difference between animal friendly product and common product. For example, the so-called 'animal friendly product' in Italy only provide 30% of information about animal rearing condition, but most consumers still couldn't recognize a better welfare quality in these products.

Different animal welfare schemes are defined as a better approach for market segmentation (section 2.1.3). Different schemes imply with various level of animal welfare and different range of the product price. In principle, three classifications of animal welfare schemes were distinguished: *quality assurance schemes* (focus more on food safety, quality and traceability than animal welfare), *specific animal welfare schemes* (claim to guarantee significant welfare improvement) and *organic schemes* (focus on all food safety and quality, animal welfare and environmental health) (Bock and van Leeuwen, 2005). These schemes would be established by various stakeholders, like industry, NGOs, private sectors in the chain, farmers, and the government. The following illustrations given are originally from a review report of animal welfare schemes in the EU edited by Bock and van Leeuwen(2005). In Norway, the majority of livestock productions are certified by Quality System for Agriculture (KSL), which is established by the agricultural industry in cooperation with agricultural authorities. The industry-led schemes also include the British Farm Standard (BFS) in UK and the Integral Chain Management (IKB) and 'Dumeco' in the Netherlands. The schemes in the product chain are the Environmental Inspection (MHS) created by multi-sector self-regulation programme and 'Swedegam+' initiated by private slaughterhouses in Sweden respectively. 'Freedom Food' is the most famous specific welfare scheme example created by British NGO, the Royal Society for the Prevention of Cruelty to Animals (RSPCA) in UK, in which quite large amount of pig farmers participates in UK. Also, farmers could be the initiative of a scheme: the 'Scharrel' in the Netherlands was created by 35 farmers, and the 'Grøstadgris' in Norway was initiated by one farm. Within the development of different schemes, higher animal welfare standards are established as well.

The factors driven in different schemes are different motivations within stakeholders. Three classifications are distinguished: ethical, commercial and legislative reason (Roe and Marsden, 2007). Specific welfare schemes led by NGOs and organic schemes always implement the standards far beyond national legislation, which are considered as ethically-driven (Roe and Marsden, 2007). Mostly the quality assurance scheme are either commercial or legislative reason, like the KSL in Norway and MHS in Sweden (Roe and Marsden, 2007; Bock and van Leeuwen, 2005).

Consequently, the developing of product will include quite some different stakeholders, not only the industry, NGOs and the government, but also farmers and chain actors as well. Retailers are basically the main stakeholder that all other stakeholders would like to convince, because retailers control and shelve space in the store as a distribution channel for animal friendly product. Thus, retailers will consider selling animal friendly product in their store when they notice the increasing public

awareness for animal welfare issue, which refers to a marketing strategy as market creation (section 2.1.3).

2.2.4 Mainstreaming of Animal Friendly Product

As the animal friendly product is introduced in the market, it is a big challenge to compete the market share with common and rather cheap imported or conventionally-produced livestock products. Though it was indicated that a high level of transparency in animal friendly product has explicit product differentiation (Ingenbleek et al., 2011), the differentiated products can increase the competitive advantage. However, when animal friendly products are gradually generalized in the market, it becomes less visibly differentiated as a default (Miele, 2011). In an attempt to make animal friendly product as mainstream livestock production, strong brand within animal welfare should be created and perceived by consumers as a premium brand choice. Therefore, branding should be the marketing support in this policy stage. Animal welfare claim within a brand can be carried by mainly three different stakeholders' brands: retailer, manufacturer (chain sector) and producer (farmer) (Roe and Marsden, 2007). 'Product-tiering', which has become a shelving strategy for retailers, indicates that different level of welfare products positioned as high-quality, standard and price-oriented should be offered to consumers (Roe and Marsden, 2007). It has been studied that a competitive pressure for producer and manufacturer are induced by the increasing products with claim of animal welfare sold as retailer brand. Manufacturer brands carrying welfare-claim are dominant in Italy, France, and the Netherlands, but the retailer brands in these countries are rapidly expanding. Producer brands dominate the animal welfare market in Sweden (Roe and Marsden, 2007).

Further, as numerous levels of claims in different animal friendly products, validation (section 2.1.3) of these claims consequently becomes essential and crucial in terms of credibility of these products. Through a certification in welfare products, the consumers can better trust and easily recognize the welfare products with a warranty. For instance, due to the effective certification of Soil Association organic standards (always higher animal welfare standards) with the approval of UK legislation (Roe and Marsden, 2007), the retailer brand products in UK have decreased the additional logos and labels for 'quality' information attribution.

Two mechanisms included in certification system perform as two different functions in protecting the animals (Peeling, 2007). The first is through the minimum legislation to protect the overall animals in husbandry, yet it only prevents the animals from the worst abuse in the whole production system. Voluntary feature is the second mechanism within certification. It is ideal to certify different level of welfare standards. Because if the constraint of certification limits the differentiation of welfare products, the farmers will have no incentive to upgrade into higher welfare standards and the consumers will just buy the cheaper one since there are no distinction between two levels of welfare standard. In addition, voluntary standards are not compulsory for every producer, whereas it is obligatory for every producer to follow legal standards. Legal standards will sometimes bring negative impact on the farmers due to the increase of production cost, while voluntary standards approve with the higher welfare standards the farmers implemented as additive value on their products in the market. For example, the 'Freedom Food' scheme in UK refers to voluntary standards that it had been implemented in 8 sectors, and the high animal welfare actually delivered not only welfare to animals but also economic benefits to the business (Peeling, 2007). Comparably, the 'Scharrel' in the Netherlands also mainly focuses on farm animal welfare with standards beyond the national legislation, but in pig sectors, only 35 farmers participate in this scheme (Bock and van Leeuwen, 2005).

Traceability and audit of welfare products are offered as a marketing strategy to communicate with consumers after the purchasing behaviour, such as Duchy Original (UK) and Sodiaal with their Candia 'Route du Lait' milk (France) (Roe and Marsden, 2007). However, the traceability and audit from the sector itself has little credibility. Certification includes also on traceability and audit, and also other rigor procedures: standard establishment, transparency, labelling, and sanction (Peeling, 2007). Nevertheless, the credibility of certification should rely on an independent institution/ NGO with professional and effective assessing approaches in animal welfare.

Overall, to increase the market share of animal friendly product is better to develop a strong brand with different level of standard in terms of segmentation. In order to elevate a higher welfare standard among producers, voluntary standards has more incentive and effectiveness than legal standards. Validation and certification are essential and crucial in assuring the quality and credibility of each welfare schemes.

2.2.5 Integration of Animal Welfare and Other Issues

In order to maintain the public awareness of farm animal welfare, rearranging animal welfare with other issue as radical thinking is one of the marketing strategy implemented by the firms acting as an overall CSR behaviour (section 2.1.3). Different issue topics could be involved in animal welfare: global warming, sustainability of agriculture, substitute of energy resource, environmental pollution and waste disposal from animal emission as examples. Such as 'Rondeel' sustainable poultry housing system in the Netherlands, it not only consists of poultry welfare but also emphasize the sustainability of husbandry in eliminating the emission of animals to prevent environmental pollution (Rondeel, 2012). As referring to implementation of 'Rondeel' farm, it is considered as corporate responsibility in response of social issues.

As far as sustainability is concerned, the perspectives of other issues, such as global warming, substitute of energy resource, and environmental pollution and waste disposal from animal emission, have been contained. In order to develop sustainable husbandry industry, further standards will be elaborated to overcome all the issues contained, such as the limit amount and component of emission, the amount of gas emission from animals and the implement of new technology in manure elimination or energy conversion.

Overall, the actual animal welfare policy development contains more elements than the original pattern, due to more possible involvement of different stakeholders and policy instruments. In the first stage, it is achieved by the compliance with minimum legislation. But the establishment of legislative standards is enforced by the state, civil society, and also private sectors. The content of legislative standards will be influence by different culture and market demand in different countries. Still, the compliance should be executed by the farmers and chain actors. Second, the public awareness is not raised only by the government and NGOs, but also a majority of awareness is raised by the mass media. Third, the animal friendly products are introduced through different claims of label schemes into the market. The founders for different schemes include industry, NGO, the government, farmers and chain actors. Fourth, after the animal friendly product become generalized in the market, other marketing supports, such as branding and validation, are mainly to increase the market share and segment with other livestock products. In the last stage, animal welfare issue should comply with other issues in order to maintain the public awareness. In order to recognize a development stage of farm animal welfare in Taiwan, these indicators are valuable references. Thus, the questionnaires in research method and qualitative analysis will base on the elements mentioned above.

3. Methodology

To figure the pattern of animal welfare development in Taiwan, the required elements for qualitative analysis should be recognized first. In this study, qualitative and desk research are required. The study will focus on researching the policy stage achievement in accordance to the emerging pattern of animal welfare development in the EU (chapter 3). It is through the recognition of attitudes and activities from each sphere and the balance and constraint mechanisms among spheres in societal triangle, the animal welfare issue phase level, and current marketing policy of animal friendly products in livestock production market. Further when all the policy stages are recognized, the maturity of animal welfare policy development can be defined and the emerging pattern of animal welfare improvement can be drawn.

3.1 Qualitative Research

The qualitative research is based on interviews, and interviews for state, market and civil society were executed in terms of open questions. In order to explicitly express the open question related to analysis elements, the open questionnaires are designed to answer whether the animal welfare policy in Taiwan is also based on the emerging patterns of farm animal welfare improvement in the EU (Chapter 3). The order of policy stages are compliance with minimum animal welfare standards, raising awareness of animal welfare, animal friendly product development, mainstreaming of animal friendly products, and animal welfare integrated with other issues. In each policy stage, there are different topics of questionnaires designed to distinguish and figure out the answers. The indicators for each policy stage are listed in Table 3.1. Basically, the questionnaires are designed for the three spheres from societal triangle: state, market and civil society. The questionnaires for each sphere are in Appendix 1-3. For example, in order to know the situation of compliance with minimum welfare standards in husbandry, questions for each sphere will be different. The questionnaire addressed to the state will ask what regulation has been established and the compliance situation; the one addressed to the market will be whether they follow the minimum animal welfare standards or not, as to compare and insure the correctness of answers from the state.

However, in order to indicate the level of each policy stage, the involvement of different stakeholders is also a crucial indicator. The list of stakeholders in each policy stage is shown in Table 3.1. Therefore, stakeholders in each sphere have to be recognized. The authority and academic scholars is included in the state. The market consists of primary producers, food chain actors, industry, and retailers. NGO represents as civil society. Media is also considered as a stakeholder in 'raising awareness' stage (section 3.2), but it is not part of either one sphere in societal triangle.

Basically, the relevant information/ answer got from the questionnaire is firstly to indicate the phase of animal welfare issue in the life cycle, the activities executed in each sphere and/ or interaction between spheres within societal triangle, and the marketing strategy in current livestock production market. As a result, the emerging pattern of animal welfare improvement in Taiwan then can be defined and shaped out.

Table 3.1 Related questionnaire topics and relevant information expected from interviewed stakeholders to indicate the policy development of animal welfare in Taiwan.

Policy stage	Questionnaire Topic	Information Indicator	Stakeholder involved
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Compliance with minimum welfare standards	Level of (legislative) standards	<ul style="list-style-type: none"> What the current (legislative) standard is in addressed to animal welfare? In which aspect does the animal welfare standard emphasize? (e.g. slaughter, transportation, rearing environment or rearing management) 	Government, farmers, chain, NGOs (industry)
	Compliance level among chain and farmers	<ul style="list-style-type: none"> Which level do chain and farmer achieve in compliance with (legislative) animal welfare standards? If the level of compliance with standards is low, what are the constraint and difficulty for farmers and chain? 	
Rising awareness	Individual/group perception for farm animal welfare	<ul style="list-style-type: none"> What is your or your group's perception and acknowledge for farm animal welfare? What is your or your group's motivation in promoting farm animal welfare? 	Government, NGOs, media
	Activity for farm animal welfare promotion	<ul style="list-style-type: none"> What kind of activity do you hold in addressed to farm animal welfare? Which target group do you focus on and try to provide the information to? 	
	Affiliation with other stakeholders group for farm animal welfare promotion	<ul style="list-style-type: none"> Do you have affiliation with other organization/ institution in promoting farm animal welfare? Which activity? Would you be willing to cooperate with other organization/ institution in promoting farm animal welfare? 	
Product development	Assurance scheme in livestock products	<ul style="list-style-type: none"> What condition/ standard do you use to select your supplier? What segmentation do you have based on your products? What type of label scheme do you use in your products? Where do you sell your products? How do the consumers perceive with the labelled products? Do your customers request for farm animal welfare feature in your product? 	Industry, NGOs, government, farmer, chain, retailers
Mainstreaming	Marketing support	<ul style="list-style-type: none"> Is there any accessible and creditable certification institution for validating the assurance scheme label? Will you or you group elevate farm animal welfare standards in your product? 	Retailers, chain, NGOs
Integration with other issues	Farm animal welfare standards development	<ul style="list-style-type: none"> Has other issue raised up the public awareness along with farm animal welfare? What is the next aspect to focus on in addressing to a higher farm animal welfare standards? 	All stakeholders

In order to carry out this qualitative research, I recruited 14 participants in different spheres. However, the listed stakeholders in Table (3.1) for each stage were not completely recruited during the field research. The first and main criteria to select participant is the interviewer owns the motivation in promoting animal welfare (especially farm animals), which I got the connection from the other known interviewers or searched through the internet. The second criterion is that the participant works at husbandry-related institution. As to recognize the stakeholders in my interview list, authority and

academic scholar primarily represent the state. In the market, I recruited primary producers (farmers or employees at farm) and food chain actors (wholesaler and food sector). The NGOs I contacted with are respectively Social-driven and Research-driven.

The classification of participants in each sphere was based on societal triangle (van Tulder and van der Zwart, 2006). The detailed information of participants is listed in Table (3.2). The state is the role of legislation builder. Therefore, the authority of husbandry industry in Taiwan is Council of Agriculture (COA). The technical specialist in the division animal protection of Husbandry department in COA recruited several academic scholars in order to develop further policy in establishing animal welfare regulations and standards. Hence, the academic scholars are also classified as state in this study. For market sphere, the whole chain is included to have better insight of animal welfare perception in different part of product line. However, due to the limit of connection and time, only few producers, wholesaler and food sectors could be contacted. There was no direct contact with retailers, but only one indirect connection with retailer's supplier. Other information about the products in retail shops were all found during the rough fieldwork. During the contact searching of NGO, it was known that NGOs for animal protection in Taiwan rarely address issues to farm animals. The primary NGO, Environmental Animal Society of Taiwan (EAST), working with farm animal welfare issue in Taiwan was connected. It founded in 1997 by only few members originated from another animal protection group, Life Conservation Association. Now the Due to the fame and some training activities held in Taiwan by RSPCA in Taiwan (Littlefair, 2004), it was especially interesting to interview Taiwan SPCA; because it was suspected that Taiwan SPCA is the subsidiary of RSPCA in UK.

To briefly describe the procedure for interviewing contacts, the connection of animal science education network is used in my bachelor study. It is truly important to have connection with different spheres in doing qualitative research in Taiwan, because mostly the commercial firms, authority or even academic scholar will not voluntarily accept interviews from random individual or group. The first contact I had was the professor that gave animal welfare lectures in my bachelor year, and he told me that he has been involved with an authority-organized researching project group of animal welfare for 6 years. Later, he made a list of all the members included in this researching group to me in able to connect with more interviewers. Therefore, the connection of the authority, professors within this researching project and the associate researcher who created the initial animal welfare assurance scheme in Animal Technology Institute Taiwan (ATIT) were all made through the list. The organic food sector, TanHou Food Company, was introduced by the associate researcher in ATIT. Further, the professor in my previous study (Participant 3) has been a consultant for many firms. McDonald's supplier, K&K Food Ltd., is one of his clients. McDonald's is considered as international business, which they will have annually meeting in gathering all the McDonald's divisions around the world. As well, McDonald's company in USA was also some level of initiative among the national market as a famous brand (McDonald's USA, 2009). Other participants such as farmers and wholesaler were connected through the connection of acquaintances. The NGOs were found through the internet searching and connected via e-mail communication.

Table 3.2 The list of interviewers and position

Sphere	Classification	No	Institution	Participants' Position	Location	Remarks
State	Authority	1	COA	Technical specialist in Division of animal protection	Taipei	Coordinator in the academic research group of animal welfare
Academic Scholar		2	National Chung Hsing University	Professor in Animal Science department	Taichung	Head professor in the academic group of animal protection
		3	National Chung Hsing University	Professor in Animal Science department	Taichung	Consultant for K&K Food Ltd.
		4	National Taiwan University	Professor in Animal Science department	Taipei	Member professor in the academic research group of animal welfare
		5	Chinese Culture University	Professor in Animal Science department	Taipei	Member professor in the academic group of animal welfare
		6	Private pig farm	500 pigs Farm Owner	Kaohsiung	Phone interview*
Market	Producer (Farmer)	7	Kuang Chuan milk industry (光泉鮮乳)	Instructor of company's dairy farmers	Taoyuan	Phone interview*
Wholesaler		8	Taiwan Sugar Corporation pork (台糖肉品公司)	Employed to work in pig breeding farm	Tainan	Phone interview*
		9	Private sector	Sell pork in traditional market	Kaohsiung	Phone interview*
Food Sector		10	K&K Food Ltd. (基富食品股份有限公司)	Director/ Chief Technical Officer and Quality assurance (QA) manager	Taoyuan	The main meat production supplier of McDonald's, Burger King and Costco in Taiwan
NGOs	Industrial-driven	11	TanHou Food (天和生物股份有限公司)	Deputy General Manager	Taipei	Selling welfare assurance scheme products
		12	ATT (財團法人台灣動物科技研究所)	Associate researcher in Industrial management and validation laboratory	Hsinchu	welfare assurance scheme initiative: Human Certification Mark (經濟動物人道監控認證標章)
	Social-driven	13	EAST (社團法人台灣動物社會研究所)	Executive Director	Taipei	Address to all animals, but the primary NGO which addresses to farm animals
		14	SPCA Taipei (社團法人台灣防止動物虐待協會)	Executive Director	Taipei	Mainly address to pet animals

*Note: Locations are hard to access in making face-to-face interviews.

ATT= Animal Technology Institute Taiwan, East= Environmental and Animal Society of Taiwan, Taiwan SPCA= Taiwan Society for the Prevention of Cruelty to Animals

3.2 Desk Research

In order to find the evidence to prove the outcomes from the interviews, desk research is also required. Through internet searching, the news from media (VANA, 2009; Yang, 2012; Chiu, 2010), boycotts and petition reports from NGOs (EAST, 2011a; 2011b), and current legislation of animal protection

and husbandry (COA, 2011b) were reached. Further, information about evaluation of animal welfare level in the husbandry industry was accessed through the hard-copy reports from academic scholars in authority-organized project team. Empirical field researches were accomplished only via a rough visiting supermarket and traditional market to see whether there were animal friendly products accessible and how the labels were presented in different assurance schemes.

4. Farm Animal Welfare Development in Taiwan

This chapter will recognize the pattern of the farm animal welfare development in Taiwan. The results of the field research will be presented in this chapter. Firstly, the level achievement of the five policy stages will be discussed in details. Later, whether the emerging pattern developed by Keeling et al. (unpublished) is applicable in Taiwan will be analysed.

4.1 Compliance of Legislation in Farm Animal Welfare

The Taiwanese government use positive approaches to elevate the level of compliance with the minimum legislation, such as encouragement and rewards. The technical specialist in COA (Participant 1) said in the interview: *“To elevate the compliance with the minimum standards, we invite the employees in the slaughter houses and truck drivers for animal transportation to training activities or lectures in gaining more expertise about animal welfare; we also provide different channels for them to consult about humane slaughter and transportation.”* On the other hand, auction is the special pricing system for pigs in Taiwan; through the “catwalk” of pigs, the price of each pig is decided by price competition based on the body condition of pigs. That is, to enforce the pigs to move is a necessity in this auction process. It is legally allowed to enforce animals moving by using electrical shock less than 50W (Humane Slaughter Criterion, 2008). The associate researcher in ATIT (Participant 12) cooperated with the authority in providing consultancy to the farmers and chain actors about animal welfare. *“Years ago, I was invited to judge different auctions of various slaughter houses in Taiwan whether the administration during auction is in accordance with animal welfare. We chose the best candidate which had the most welfare level to reward with award money,”* told by the associate researcher.

In the meanwhile, the soft policies induced the leeway of the compliance with humane slaughter. The announcement 097150233 published by COA was planned to execute on April 1 in 2008, and it was included *“The freshly slaughter of chicken in the traditional markets is forbidden.”* However, the executive director of EAST (Participant 13) indicated that *“The government postponed the implementation date of this announcement; instead, the government rewrote the announcement to allow the freshly slaughter of chickens (inhumane slaughter way) in traditional markets in March in 2010.”* He also said *“The freshly slaughter of chickens can still be seen in the traditional markets nowadays, which we concern a lot. We worry about the risk of outbreak of avian flu, which will probably influence the impression of Taiwan in international organization, OIE. But the most important thing is that we worry about the welfare and health of those chickens, which will indirectly influence the food safety and the health of consumers.”* From the news report of Lin and Liu (2010), it indicated that the main reason of this revocation of the announcement was that the demand of freshly slaughter of chickens was still a majority in the traditional markets.

The professor in CCU (Participant 5) indicated that the large scale of pig farm offered about 20% of the total pig production in Taiwan, which constitutes a great proportion of supply amount. Therefore, the management of large scale is mainly the reference for the policy maker in establishing animal

welfare standards in pig farm. Therefore, there is no specific detail for any animal welfare standards for animal rearing process; only the surrounding condition of rearing environment are described in general, such as “Adequate food, water and sufficient room for the animal to move around”, “A safe, shaded, ventilated, illuminated, warm and clean living environment”, and “Protection against vicious or unjustified disturbance, maltreatment or harm” (Animal Protection Act, 2011). There are not explicitly quantitative descriptions of minimum moving space allowance. Further, the prohibition of some animal treatments, like castration, tail-docking, and farrowing crate in pigs are not listed in the legislation yet. In chickens, battery cage and de-beaking (make beak blunt) are still allowed in the practice. Since the prohibition of these processes will increase the burden of management and the risk of injury in both animals and humans, it is still unacceptable for farmers.

There are different constraints and limitations to implement animal welfare standards in animal rearing environment and management. Mostly the constraints and limitations are driven by the culture, traditional customs, eating preference among the public, the large amount of supply, and the limited space. The professor in NCHU (Participant 3) and farmers in pig farm (Participant 6 and 8) indicated that the prohibition of castration among pigs and chickens is hard to implement. In pigs, the smell caused from non-castrated factor will decrease customers’ willingness to purchase the meat. In chickens, castrated chicken is an old tradition custom from the specific region population, Hakka people. On the other hand, due to supplying domestic livestock demands and limited space, the confinement system is still required in husbandry industry in Taiwan. Also, the other constraint of accepting and implementing farm animal welfare in primary producers is caused from the little knowledge and awareness for animal welfare. Furthermore, to implement farm animal welfare standards requires substantial amounts of capital. If less requirement in the market, there will be no flows of profit from the animal friendly products to support the financial cost in executing higher animal welfare standards.

4.2 Public awareness for Farm Animal Welfare

For most participants, the public awareness of farm animal welfare is not sufficient enough. Different activities for raising public attention or education from various stakeholders are listed in Table (4.1).

Table 4.1 The list of activities for raising awareness of farm animal welfare

Stakeholder	Feature	Topic addressed	Target group	Note
Authority	Workshops and Conferences	Validation of humane slaughter and transportation	Inspectors in slaughter house	—
		Licensing lessons of humane slaughter and transportation	Personnel in slaughter house and animal truck drivers	Slaughter: From 2008, over 1300 people attended Transportation: Over 2500 people got licenses
		Promoting the conception of animal welfare	Chain, sectors, producers, scholars and students	—
Academic Scholar	Lectures and Conferences	Professional knowledge about farm animal welfare	All students in the school, but especially animal science or veterinary science students. Encourage students to do related research.	Animal welfare lectures accessible in 6 universities

		Promoting knowledge about farm animal welfare	Employees in food sectors	Participant 3 in K&K Food Ltd.
Food sector	Monthly journal (TanHou Food)	Advocating animal friendly product	Consumers	–
NGOs	Boycott and Petition (EAST)	Forcing the establishment and compliance of farm animal welfare legislative standards	Authority, food chain actors, primary producers and public	From 1985 till 2012, 44 reports for boycott and petition
	Text books editing (EAST)	Put correct animal welfare knowledge and negative impact of husbandry in the text book	Students among obligatory education years	–
	Workshops (ATIT)	Providing channel for lectures about farm animal welfare and standards and the introduction of certification system	Primary producers	6 products applied with humane certification mark

Although EAST, years ago, firstly tried to fashion the issue of farm animal welfare to the public in affiliation with other environmental friendly groups and consumer protection groups, the most emphasized perspectives were primarily for the aspects of consumer and environment, not for farm animal welfare. Therefore, it is also a difficulty for EAST to be the only NGO who takes the responsibility of educational activities for farm animal welfare to the general public. Recent years, there are more and more animal protection group launched in Taiwan, but mostly addressing the issues at pet animals. The executive director of Taiwan SPCA (Participant 14) said *“We definitely have the willingness to address all different types of animals, not solely pet animals. Yet, the organization has launched for only two years, and it actually has no connection and subsidiary relation with RSPCA in UK. In each year, we will have a main topic to advocate. In 2012, to forbidden shark fin in the market is our main goal of the year.”*

An academic research project of farm animal welfare has been recruited by the technical specialist in COA (Participant 1). Conferences for animal welfare have been held in order to promote animal welfare and encourage students to do more researches on the proper animal welfare facility in Taiwan. Battery cages for laying hens have been increasingly debated and opposed, due to the rising awareness of laying welfare in the system and the announcement from the EU legislation of prohibition of battery cage in 2012. There were several studies addressed to this problem. Simple cage enrichment in breeding native chickens (Fang, 2010) was focusing on finding substitute housing system for better laying welfare quality. Nevertheless, the limited land is the main constraint in prohibiting battery cage. The approaches to rear broiler chickens and other avian are mainly floor feeding and free-range (Liao and Huang, 2006), which relatively correspond to the free accessibility of movement in terms of animal welfare. However, researches related to farm animal welfare are still limited. The professor in NCHU (Participant 2) mentioned *“The incentive of doing farm animal welfare research is small, due to a low research impact factor and Science Citation Index. In addition, little consensus is between domestically academic animal scientists due to the view of extremes in different groups. One is especially emphasizing the practical aspect, and the other mainly focuses on animal welfare.”*

The mass media in Taiwan has massively influenced the image of husbandry in practice and the knowledge of farm animal welfare among the public. For instance, the controversial issue happened

recently in Taiwan: there is a worry from the public that the imported beef from USA possibly contains the residue of lean meat powder (Ractopamine) (Han, 2012). However, the government in Taiwan already prohibited the use of lean meat powder in 2006, due to the side-effects having negative impact on the animals' welfare and the doubt of the effect on human health (Han, 2012). As to maintain the cooperative trade with USA government, the government in Taiwan has a difficult dilemma to decide whether the beef should be imported or not. That is, if the government in Taiwan allow American beef to be imported, it means a leeway of animal welfare in Taiwan as well. The other example is the issue to ban the production of shark fin and to reduce the requirement of shark fin in the market. The traditional way of hunting sharks was too cruel and inhumane. Therefore, as in terms of animal welfare aspect, the EAST and Humane Society International (HSI) announced together in 2011 the Joint Declaration that required the authority to request the fishers to catch the whole shark on board rather than to take the fin only on board (EAST, 2011a). Animal welfare were mentioned from different issues before, such as food scandal (e.g. hormone use), animal disease outbreak (e.g. mouth and foot disease and avian flu), or global warming (VANA, 2009). However, the underlying function of mass media in Taiwan did not reveal on the level of the public awareness for farm animal welfare.


Another issue that had also been reported in the newspaper in Austria (Der Standard) was the traditional costume, god pig competition in the temple (Hu, 2012). It was also one of the topics the EAST animal protection group and Life Conservationist Association addressed to (EAST, 2011b; Shi, 2003). Due to the advocacy of the NGOs in Taiwan and international pressure, the awareness of animal welfare was increased. However, according to the news (Hu, 2012), the executer of god pig competition claimed that this event should not just be criticized with negative impacts but also given some compliments with the preservation of traditional costume and culture and the economic benefit it brought.





On the other hand, the professor in NTU (Participant 4) indicated that it is compulsory to involve the mass media to promote the farm animal welfare. As a resolution for the distortion truth, the correct knowledge of farm animal welfare should be promoted through the celebrities on TV programmes. Therefore, educating the celebrities could be one of the policies in educating the public.

4.3 Animal Friendly Product Development

From the field research in the traditional market and supermarket, there are several label assurance schemes of animal friendly products. In normal supermarket, the quality assurance schemes are the most common on the shelves, which the main feature of the products focuses on food quality and safety with animal welfare feature. Superior quality assurance schemes have traceability function. As to guarantee the food safety and quality, certification from CAS (premium agriculture product label in Taiwan), HACCP or ISO22000 are often shown on the packages of labelled products (Wang and Chen, 2009; Chiu, 2009). These assessments are mostly executed by local government, private sectors and certificate institutions, which are shown in Table (4.2).

Table 4.2 Certification assessments among quality assurance schemes.

Certification	Standards	Pattern
Food safety and quality CAS	High hygiene production surroundings without any contamination, proper temperatures for products, and take samples to check medicinal residues and toxins.	

HACCP	According to the international regulations of HACCP for livestock products, the safety and quality of food are examined.	
ISO22000	According to the international regulations of ISO22000 or livestock products, the safety and quality of food are examined.	
Animal welfare Humane Certification Mark	Higher level of animal welfare standards in the whole product chain.	
Traceability	The transparent production process is accessible and accurate.	

The initial specific welfare assurance is the product with Human Certification Mark (Table 4.2). Although this is called as certification, the founder promotes this mark as an assurance scheme and educates primary producers to implement high animal welfare standards. The founder developed higher animal welfare standards than legislative standards in different animals, mainly pigs and laying hens. Farrowing crate for sow is improved through group housing system and individual pen system (Liao, 2008). Environmental enrichment by offering fresh food and toys is recommended to use in growing and fattening pig farms. Tail-docking is suggested not to implement, but if it is necessarily required, only once in the laying's lifetime. Further, the battery cage in laying hens is forbidden in this certification system; floor feeding, free range or simple cage enrichment is required. Nail cutting and forcedly moulting are completely prohibited. The humane slaughter and transportation are strictly required. Only few farmers comply with the certification standards in Taiwan. However, it was indicated by the manager in TanHou Food Company (Participant 11) that the certification duration of most products had been expired in 2011. The credibility of Human Certification Mark was doubted by animal protection group, EAST. The executive director in EAST (Participant 13) said *"The certification is lack of validation system to audit the products. We can't do this task, because we don't have the expertise and assessment in auditing. There is no institution or organization fulfilling this ability. In this case, the consumers have difficulties to trust the credibility of these animal friendly products. The most important thing is that we question what he has done. We don't trust the initiative of this certification and we think he didn't think thoroughly."* The certification is challenged by the NGOs, but worst of all, the cost and changes of implementation is constraining the primary producers to comply.

The distribution channels of the animal friendly products in Taiwan are basically supermarkets (e.g. Jason), discount stores (e.g. Carrefour), and internet store. Specific animal welfare schemes are also sold via the distribution channels mentioned above, only with more regional limits (e.g. certain area in Taipei and production location) and mostly sold in organic shops (e.g. TanHou Food) and shops of

NGO (The Homemaker's Union and Foundation). According to the manager in TanHou Food Company, the meat production of certificated animal friendly products sold via their store is 50 pigs, 2000 chickens every 3 months. TanHou has only one shop in Taiwan, but they also sell the certificated animal friendly products to different organic shops. They have cooperative relationships with 140 organic shops in various part Taiwan, but the certain amount of distributed animal friendly products in each organic is not known. Different certificated egg products are more easily accessible in organic shops and more common in supermarkets all over Taiwan.

Due to high food quality requirement in the food preference of the public in Taiwan, assurance scheme in food quality with animal welfare feature will be more attractive for consumers than the one in animal welfare with food quality feature. Therefore, the motivation to establish a label scheme among most quality assurance schemes is mostly commercial reason; the motivation in specific welfare assurance schemes is commercial and ethical reason. From a willing-to-pay report made by Lee (2007), it was indicated that consumers concerned the food quality more than the production process, in both pork and eggs.

The validation system in Taiwan for animal welfare has not been established. To create validation system or certification is limited and constrained due to a short of professional experts in animal welfare assessment and the training of auditors. Therefore, most of certification systems are dominantly addressing to only food safety and quality, but not animal welfare.

Organic schemes in livestock product have just been developed. In the market, only two organic livestock production could be seen, which are Ju Nong eggs and poultry and organic beef in Taitung breeding farm (Cheng, 2010). However, there are some private "organic animal products" can be accessed from the connection of acquaintance in certain region, and the credibility and safety of product is not tested and audited. The manager in TanHou Food (Participant 11) indicated that *"I know some private 'organic products' are produced by small scale of farmers without any certification and spread through word of mouth."* The associated researcher in ATIT (Participant 12) cooperated with other people and recruited an institution, Taiwan Society of Agricultural Standards (TSAS). He mentioned *"TSAS provides also the consultancy of animal welfare standards. The motivation to found an institution is to establish the quality standards for segmented animal friendly products and to create the assessments of animal welfare in different parts of product chain. The audit for Humane Certification Mark includes only sanity control, not yet animal welfare assessment. In the meanwhile, we are planning to establish a higher animal welfare standard for organic scheme of livestock production."*

4.4 Mainstreaming of Animal Friendly Product

The animal friendly product has not been generalized in the major market in Taiwan, but it has been gradually generalized in the niche market. Since the animal welfare assurance schemes are only sold in certain region of supermarkets and traditional market, mostly in organic shops, stores of NGO in big cities (northern more than southern), or internet virtual stores (TanHou, 2010; Wang and Chen, 2009; Chiu, 2009). Welfare assurance schemes of egg products are the most common and accessible animal friendly products in the market. The acceptance of higher price in egg products with welfare feature is the highest, due to a relatively lower price increase (Lee, 2007).

Branding is the main marketing strategy after the generalization of animal friendly products, according to the emerging pattern in the EU (Section 2.2.4). The motivation of establishment of Humane

Certification Mark was to assist the primary producers to have their own brands and attract more distribution channels to sell the products. As the matter of fact, this strategy has been effectively influenced the fame of some brands created by primary producers (Chiu, 2009).

However, the larger private sector, such as K&K Food Ltd., the supplier of McDonald's in Taiwan (Participant 10), stated *"Our primary costumer, McDonald's, operates with Corporate Social Responsibility. Therefore, they would like to be superior in animal friendly product as the whole market to increase the positive image. In consequence, the competitors will be impeded in the animal welfare market."* There are also constraints and limitation to increase the mainstreaming and market share of animal friendly products. It was also mentioned by the supplier (Participant 10) *"To make the animal welfare feature into transparency within the brand is a burden and pressure. Since the minimum legislative animal welfare standards in Taiwan have not yet been established and the animal friendly products are without the guarantee from a validation system. They are afraid of the intense supervision and criticism from the NGOs or the mass media to influence its reputation."* Therefore, animal friendly products are still mainly distributed in the niche market.

4.5 Integration of Animal Welfare and Other Issue

In the niche market, animal welfare issue has been discussed for a long term. But in the majority of market, this issue has just been noticed. Mostly, the public concerns about different other issues than animal welfare issue, such as outbreak of animal disease (e.g. avian flu) (Lian, 2004) and residue of pharmaceutical additive (e.g. antibiotic and hormone) (Liao, 2000). In the case of animal disease transmission, the awareness of animal welfare was raised, because it is also part of the consequence of confinement system. While the high animal population density is so high that it can easily induce the disease transmission.

The abuse of using antibiotics and hormone in the previous decade has been the most concerned issue in the husbandry industry in Taiwan. The government has made regulations to prevent the farmers to overuse these pharmaceutical additives, which they have gradually forbidden different types of antibiotics and eliminate the meat production with antibiotic and hormone residues. However, there are still some misunderstanding and misleading information of husbandry which are harmful for the husbandry industry. The professor in NCHU (Participant 2) said *"The mass media or some powerful and famous celebrities will use overwhelming words and information to cover the reality of husbandry industry. It distorted the perception of husbandry among the public and induced the misunderstanding and had a huge negative impact on the farmers."*

5. Discussion

5.1 Comparison between Taiwan and the EU

After the results revealed, it is clear that the order of policy development in the emerging pattern in the EU is not able to fit in the overall livestock market of Taiwan. The pattern could barely illustrate the circumstances in the niche market in Taiwan. The public awareness of farm animal welfare in Taiwan has not been raised, which means the citizens in Taiwan generally don't consider farm animal welfare as an urgent issue and know little about the necessity for farm animal welfare. But what is the main factor to influence the different development of animal welfare issue in Taiwan, as comparing to the EU? Is the social concerning of animal welfare assisting the progress of animal welfare market in the

EU also happening in Taiwan? What was the main driven factor of the growth of animal welfare market in Taiwan?

Taiwan vs. the EU

In the emerging pattern based on the EU, the countries in the EU with lower welfare standards have the pressure and urgency to apply the minimum standards of the EU regulation as national legislative standards. In Taiwan, there is no such stress or anxiety. Despite the fact that the livestock productions in Taiwan has been forbidden to export to other countries by the reason of disease transmission, the husbandry industry still has little competitive advantage in the exportation market due to the limited space and natural resources. Taiwan only focuses on domestic livestock market and without the pressure for upgrading animal welfare from the coalition with near countries; whereas the EU is towards to the goal in developing comprehensive welfare standards within different countries in the Europe. Although the public awareness of animal welfare in Taiwan is not as strong as in the EU currently, it has been gradually influencing the authority and the private sectors in Taiwan to focus on the issue of animal welfare. From the interviews of different academic scholars, they also think that the social concerning of animal welfare will be the main stimuli for the growth of animal welfare market, same with the situation in the EU. Presently, the main drivers for the growth of animal welfare market in Taiwan are certain groups of people in the niche market, such as people in the animal protection groups (NGO), the owners and the customers of organic shops.

It is interesting to discuss the main factors of different stakeholders which influence the developing status of the animal welfare issue in Taiwan and in consequence also stimulus the growth of animal welfare market. Some questions appeared after the analysis of the results in Taiwan. Whether the distorted news and information reported via the mass media have massive impact on the public's perception of the husbandry industry? Whether the inadequate of expertise and knowledge of animal welfare affect the power of the NGOs among the public? Whether the autonomy of the government in Taiwan influences the role of the authority in improving animal welfare?

Power of Mass Media

The mass media in the EU directly underlines the issue of animal welfare in husbandry, whereas the mass media in Taiwan mainly emphasizes other issues but partly including animal welfare concerns. In fact, the public awareness of farm animal welfare is easily influenced by the media in Taiwan. For most people, the knowledge and information about animal welfare are mainly from the media and internet. Even when the NGOs in Taiwan tried badly to advocate the importance of farm animal welfare, if the topic was not interesting for the media, the public will have little chance to notice the seriousness of the animal welfare issue. However, arising issues in the husbandry industry in Taiwan concerned more about the use of antibiotics and hormone and the animal disease transmission (e.g. avian flu and mouth and food disease). Basically, the awareness of these issues was through the emphasis of the mass media or powerful celebrities.

As long as the public realize that the animal welfare is essential element in the husbandry industry in Taiwan, the demands for animal welfare can possibly increase. In consequence, the animal friendly products will increase. As multiple products in the market, it is recommended that the private sectors should make the whole production procedure transparent and clear, and they should request the media to interview them and report it to promote. In this way, the public will realize that there are animal

friendly products in the market accessible, and the procedures in the whole product chain are within high animal welfare standards.

Power of NGO

The well-developed animal welfare knowledge also induces a more powerful and convinced NGOs in Europe to influence the public attention for animal welfare. However, only very few NGOs in Taiwan advocate the importance of farm animal welfare, mostly for pet animals. The NGOs in Taiwan do not have sufficient power and effectiveness like the NGOs in Europe, such as RSPCA in UK and WSPA in the Netherlands, to persuade the public. The NGOs in Taiwan mostly take the examples of regulation implemented in the EU to give pressure to the government to improve on animal welfare, but without constructive suggestion or advice for approaches that fit in the husbandry in Taiwan; whereas it is one of the reasons that the government and the NGO keep opponent attitude against each other. The government indicated that the NGOs in Taiwan just provide the animal welfare information and devices in Europe but not considered the difference between Taiwan and Europe.

Currently, the power of NGO has not yet revealed among the public attention for animal welfare. As to increase the public awareness for animal welfare, NGOs in Taiwan should gain more insight for the situation of husbandry practice in Taiwan, and indicate more precisely how the farm animals suffers in a real farm. However, due to less power and influence, the NGOs in Taiwan will require the assist of the mass media to spread out their advocacy to increase the awareness of animal welfare. When the activities or concerns of NGOs are transferred by the mass media, it is more efficient to transmit to the public. According one of the academic scholar participants (Participant 4), it will be interesting that the NGOs cooperate with the media to recruit a TV show with famous chefs or gourmets or series for revealing the practice of livestock industry and introducing animal welfare knowledge to the public, but without distorted truth or scandals. Beforehand, the NGOs should collect adequate information and data and visit some practical farms.

Government's Autonomy and Role

The exploration of animal welfare in Europe has been developed for more than a century. The physiological and psychological well-beings of animals have been studied for a long period. There are quite many studies and researches in Europe regarding to animal welfare assessment, welfare housing system development, and approaches in increasing animal welfare. Therefore, the expertise for animal welfare, including various animals, is far easier to access and learn in Europe. In contrary, inadequate knowledge and information are accessible in Taiwan. Researches and studies are less addressed to animal welfare issue, especially farm animals. Also, there are still conflicts among different animal scientists in Taiwan in whether animal welfare is a necessity in husbandry industry.

It was discussed that the level of expertise of animal welfare among the government will influence the autonomy of the government. Therefore, the government in Taiwan has less autonomy to establish proper legislative animal welfare standards for the husbandry industry in Taiwan due to the lack of expertise in animal welfare, compared to the governments in northern-west European countries. Even though the authority visited different western countries, like USA, UK, and New Zealand, in learning more knowledge and information about animal welfare standards, assessment tools and related facilities and equipment, what they really need to learn is to build up its own animal welfare standards as to adapt different environmental and cultural conditions in Taiwan.

Moreover, the approaches used as to elevate the compliance with the minimum legislation are the most different between the EU and Taiwan. In the EU, the government mostly uses enforcement to push the farmers and chain to comply, whereas the government in Taiwan mostly uses positive approaches to encourage the farmers and chain. Due to the positive approaches used in Taiwan, the compliance with animal welfare standards seems that it is gradually improved but not urgently changed. The training courses for humane slaughter and transportation are still promoted annually by the authority in Taiwan. Currently, the policy is only educating the farmers and chain actors of correct knowledge and skills and giving warning and notification, but without enforcement in giving fines and punishment when lack of compliance. In contrary, the civil society and the market in the EU have superior awareness for the implementation of farm animal welfare in the livestock production chain.

Therefore, in the animal welfare issue in Taiwan, the government plays a partnering role but not mandating role, so the legislative regulation for animal welfare could not be well established. The authority in Taiwan has quite some pressure to improve animal welfare issue from the animal protection group, EAST. However, the power of this NGO is not strong enough to have radical attention to urgently change the current status of the husbandry in Taiwan.

Initiative in the Market

Animal friendly product is the most obvious animal welfare achievement in the market. Although the whole welfare standards in the product chain has not yet been established and improved, the initiative of animal friendly product increased the animal welfare awareness among some private sectors. Though in the previous section, it is revealed that the NGOs in Taiwan (animal protection groups) have little power on the issue of farm animal welfare. However, the initiative of the animal friendly products was developed by the industrial-driven NGO, ATIT, which successfully caught the attention of some primary producers, private sectors and some consumers about farm animal welfare. As a result, to increase the public awareness of farm animal welfare issue in Taiwan, it is better to execute through the market than through the legislation.

The segmentation for different assurance schemes for animal friendly products is developed quite completely in the EU. Different features within the schemes are recognized and classified. On the other hand, the schemes used in Taiwan have similar classification, which are also quality assurance, specific welfare assurance and organic assurance. Nonetheless, the animal welfare standards within each scheme, especially in specific welfare and organic assurance are not in the same line as the ones in the EU. For quality assurance, the most common type of assurances in Taiwan is the emphasis of using specific feed ingredients such as healthy additives (prebiotic and probiotic). For specific animal welfare assurance, the products mostly highlight the involvement of humane slaughter and transportation in the production proves. In the Taiwanese market, only one or two livestock products are classified as organic assurance product. While different private sectors or industrial organizations initially created higher animal welfare standards as specific welfare assurance in the northern west European countries, the affiliation among different private sectors or different chain actors in Taiwan to build up one scheme with higher standards has not been seen.

Animal friendly product is mainstreaming in UK and the Netherlands, and it has mainstreamed in Sweden and Norway. There is no tendency revealing that animal friendly product becomes mainstreaming in the major market in Taiwan, but it has become common products in the niche market. The private sectors in the EU have not only the competitors of other manufactures, but also the store brands of famous retailers, such as Albert Heijn in the Netherlands and Marks & Spencers in

UK (Roe and Marsden, 2005). In the meanwhile, the brands of animal friendly products are all created by predominantly primary producers and very few by private sectors and manufactures. Furthermore, the animal friendly products are also easily accessible in the EU countries, while it is only accessible in certain regions or specific stores (e.g. organic shop) in Taiwan. It is more well-known that there is animal friendly products in the market of the EU, whereas the noun of ‘animal friendly products’ is rusty among the public in Taiwan.

Overall, the mechanisms of the society in Taiwan differ from the ones in the EU which determines the different patterns of animal welfare issues. In different counties in Europe, various sphere pressed the triggers to develop animal welfare issue. For example, NGOs are the main actors in the UK and the Netherlands. The governments in Sweden and Norway are the main actors. In France, the initiative was from the private sectors. However, there is no such powerful sphere in Taiwan that is able to enforce the animal welfare issue to develop further. Although some NGOs started to emphasize the importance of animal welfare, they are not influential enough and enable to reach the turning point in increasing the social attention for animal welfare issue. As concerning for the power of each sphere in Taiwan, the most possible reason is the lack of expertise and research of the devices for farm animal welfare; whereas most well-known theory and researches for animal welfare have been developed in Europe for such a long term.

5.2 Pattern of animal welfare development in Taiwan

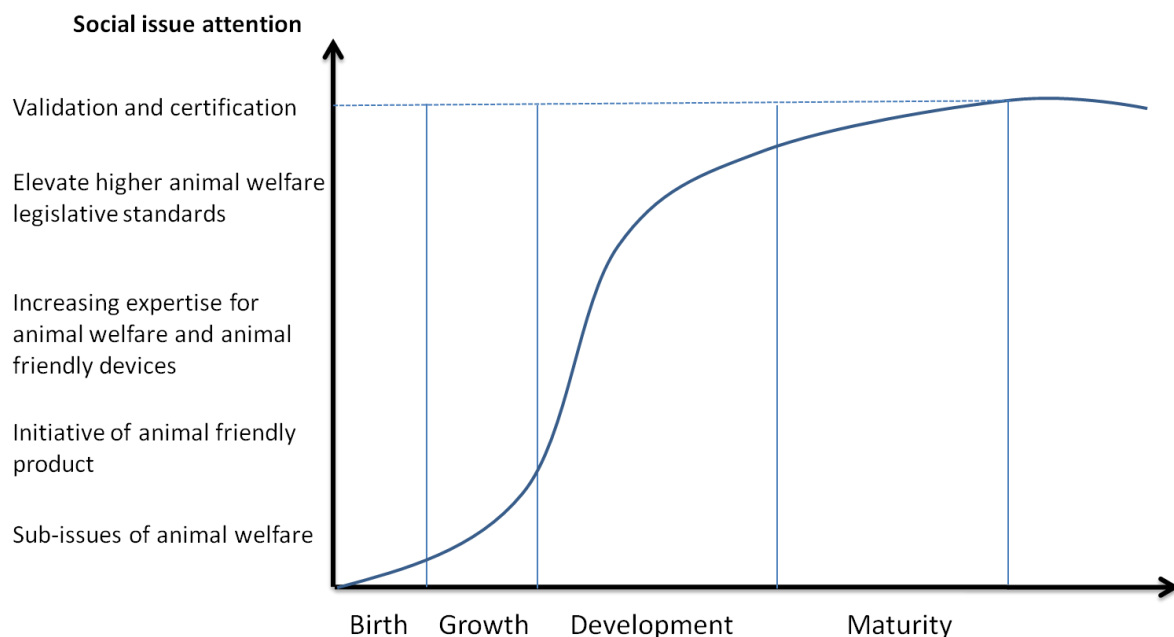


Figure 5.1 the pattern of animal welfare issue development in different status achievements in Taiwan

From the results and discussion of comparison between Taiwan and the EU, the pattern of animal welfare issue development in Taiwan has been drawn and shown in Figure (5.1), which is referred to the mechanics of the issue life cycle developed by (van Tulder, unpublished). Similar with the pattern developed by Keeling et al (unpublished), there are different statements indicates the level of the development of the issue. Currently, the different spheres have different perception of animal welfare issue level in Taiwan. In NGOs, animal welfare issue is considered as urgent and serious issue to be

solved, and the awareness of animal welfare among the public is in the growth stage. In the state, animal welfare issue is not an urgent issue to be solved, and the awareness of animal welfare is in the development stage due to the establishment of animal protection law. The market considers the animal welfare issue as a trend but not an urgent issue. Before the resolution for animal welfare issue, the three main actors should share the consensus for animal welfare to figure out the better resolutions.

As the sub-issues of animal welfare issue started to be notice by the public, it is considered as a birth stage of animal welfare issue in Taiwan. The sub-issues are for examples, the outspread of avian flu, the incomplete compliance with humane slaughter and transportation regulation, the dispute for the international trade (American beef with lean meat powder), the regulation for capturing shark fin and the use of antibiotics and hormone. However, how can these sub-issues push the issue of animal welfare into a higher stage as growth stage? The media plays an important role as an instrument. Within this pattern, the main actors in this pattern are still the three spheres mentioned in the societal triangle: state, market and civil society. As to increase the social attention for these sub-issues, the main actors should increase the cooperation or catch the attention of the media to emphasize the importance of these sub-issues, and in consequence, when these sub-issues are reported enormously, the awareness of animal welfare will increase gradually.

It is indicated in van Tulder's study (unpublished) that to move forward the issue into another stage depends on the movement and decision made by the most involved actors. The number of the involved actors is determined by the nature of issue (responsibilities): stretch issue (only one responsible actor), interface issue (two most involved actors), and growth regime issue (all three actors required). As to discuss the key stakeholders in each stage in the pattern, the main actors should be recognized. Within each issue, the key stakeholders will frame the issue as different types which will influence the factor of the development of the outcome. The different types are puzzle (search for optimum option), dilemma (favour or against), trade-off (win-win) and paradox (out-of-the-box thinks: third dimension) (van Tulder, unpublished).

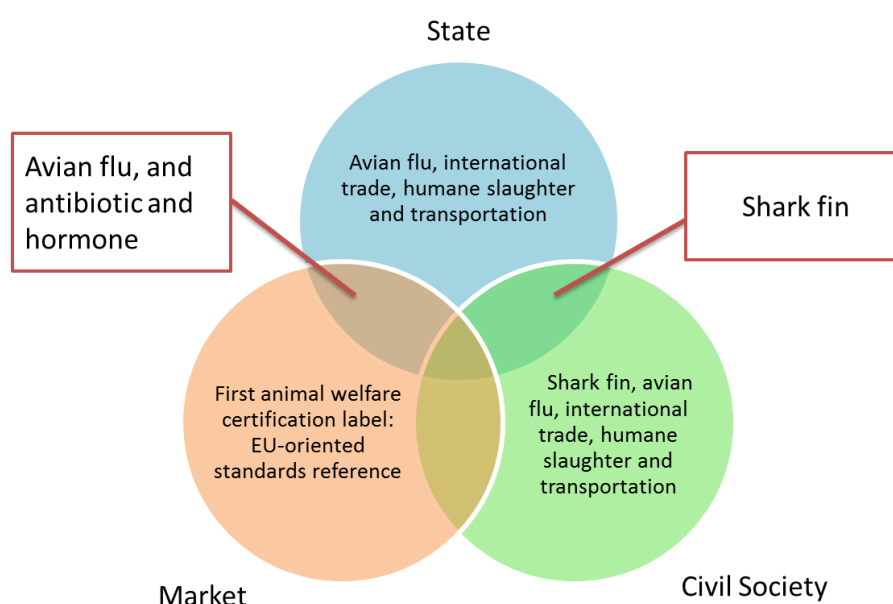


Figure 5.2 the framing of the issues determined by the natures of the sub-issue for animal welfare

In figure 5.2, the mentioned sub-issues in the results are shown and classified by whom the main actor is emphasizing the certain sub-issue. For example, the state puts a lot of attention in controlling of the outspread of avian flu, because they have the obligatory to execute firmly the prevention of the avian flu from the pressure of the international organization, OIE. In the meantime, the primary producers in the market have to cooperate with the state to reach the goal, and the government should supervise continuously for the circumstances of each chicken farms or avian farms and establish certain regulation as preventions or supporting actions. This issue is considered as a trade-off, and the issue can be solved by the regulation establishment of the government and the compliance and execution of the primary producers. The other sub-issues for animal welfare are framed in the table (5.1). In this pattern, these sub-issues only play the role to increase social attention for animal welfare, so the indicators of the stage of “sub-issue of animal welfare” are the discussion and dispute of these issues through the mass media and among the public. When these sub-issues are resolved by the implementation of certain policies, such as establishment of legislation or the launch of the validation system, the development of animal welfare issue actually reach the maturity stage.

Table 5.1. The information of the framed sub-issues and issues for animal welfare in Taiwan

Issues	Key question	Responsible stakeholders	Resolution	Framing type
Avian flu	Prevention of the avian flu among the avian farms as an obligatory in OIE	The government and primary producers (market)	Vaccine implementation and isolation strategy	Trade-off
Compliance of humane slaughter and transportation	The compliance level of the legislation of humane slaughter and transportation among the market is questioned	The government	To increase the compliance with enforcement or encouragement	Dilemma
Use of antibiotic and hormone	The worries for using antibiotics and hormone among animals	The government and the market	Limit or prohibit the use	Dilemma
International trade (American beef)	The debate for the importation of American beef with lean meat powder	The government	Label the residue of detected amount of lean meat powder on the products	Paradox
Shark fin	The dramatic decrease of the shark population in the ocean due to the market for shark fin	The government and the NGO	Establish regulation for “whole body on the board” strategy or prohibition of selling shark fin	Dilemma
Animal welfare certification label	The trustworthiness of the certificated products is questioned by the NGO	The product producers (market)	Increase the transparency of the production process and implied standards	Puzzle

Nevertheless, each of the stage in the pattern can be recognized as an issue in the animal welfare, and the key stakeholders are who involved the most to push the animal welfare issue development into next stage. In the initiative of animal friendly products, the key stakeholders could be the actors in the market such as primary producers, retailers, industry, chain actors and NGO. In Taiwan, the initiative was the researcher (Participant 12) in the industrial-driven NGO, ATIT, where he developed the first animal friendly product certification and established the first welfare standards that used the EU-

oriented standards as references. His initiative of animal friendly product has opened the gate of animal welfare market for different farmers who voluntarily complied with higher welfare standards in their farm management. Also, it found more contribution channels where these animal friendly products could be sold.

In the third stage, the key stakeholders can be the NGOs, academic scholars, the government or the private sectors. Currently in Taiwan, the government and academic scholars started to give a lot of efforts in increasing the expertise of animal welfare through overseas visit and interflow with scholars and experts of animal welfare from different countries. The government and academic scholars holds conferences regarding animal welfare, and they especially encourage the students or researchers to participate thesis competition, and further they try to show the incentives and advantages of implying animal welfare in the husbandry product chain to the companies, primary producers and chain actors. Therefore, the attention for animal welfare among the public has been slowly progressed. From the learning experience of UK and the Netherlands, it is also possible that the NGO has better expertise for animal welfare, and they can increase the social attention for animal welfare more efficiently. The main animal protection group in Taiwan, EAST, also attended to different conferences domestically and internationally to learn more information and knowledge for animal welfare. In this stage, it is possible for the NGOs or sectors to affiliate with international organization, such as animal protection groups (RSPCA) and international enterprise (McDonald's) in order to increase the expertise and knowledge for different welfare devices and standards that fit in the husbandry in Taiwan.

To elevate the higher animal welfare legislative standards, the government and the policymaker are the key stakeholders to implement. But the NGO, the public and the private sectors can be the driver to give the pressure to the government as involved stakeholders. The intervention of international organizations such as WTO or OIE can force the government in Taiwan to put the welfare standards from WTO's or OIE's regulations into national legislative regulations. In this stage, the expertise and awareness of animal welfare of the government will be obviously increased and more complete. As it is indicated by the authority that the next animal welfare legislative standards will be established when they notice there are sufficient social awareness for animal welfare. Therefore, when the social attention for animal welfare is adequate to influence the demand for animal friendly product in the market, it indicates the trend of the generalization of animal friendly products.

The fifth stage is to establish a complete validation and traceability system among the animal friendly products, since the animal friendly product will become generalized and largely demanded from the previous stage. In this stage, the animal welfare issue is developed into a maturity level, and the social attention for animal welfare will be the highest. All three spheres: state, market and the civil society are potential key stakeholders. As reaching this stage, all the stakeholders will have consensus in elevating animal welfare in the husbandry and sit on the same table. As the legislative standards for animal welfare will be established in the previous stage, all the stakeholders will start to discuss about approaches to guarantee the quality of animal friendly product and how to develop a complete validation and traceability system.

6. Conclusion

The emerging pattern developed for the EU is actually not feasible for the current major market in Taiwan. Animal welfare has been gradually developed through the niche market, and the main constraint of animal welfare issue development in Taiwan is the lack of social attention. Also, the

main difference between Taiwan and the EU is the power of the main actor who opens up the issue for farm animal welfare (e.g. government in Norway and Sweden, NGOs in UK and Netherlands and market in France). It was studied that animal welfare has been noticed by the public better through the market than the legislation in the EU and in Taiwan, so animal welfare market in Taiwan is valuable and crucial as a step stone to promote farm animal welfare awareness to the public. From the interview results, it was shown that the main motivation for the integration of farm animal welfare in Taiwanese husbandry is mainly determined through the perception of the consumers. For the government and the market, the premise of animal friendly product is that the consumers are willing to pay for it, and in consequence the increased cost for higher animal welfare standards in the product chain will be more possibly covered. However, it is founded that most of public awareness for farm animal welfare is influenced significantly by the media in Taiwan, through the reports of different food scandals or animal abuse events from the boycott and petition from the NGOs. Therefore, the influence of the mass media should be considered as a valuable tool in elevating the social concern for farm animal welfare. The other constraint in developing animal welfare issue in Taiwan is the lack of expertise and knowledge of farm animal welfare among the government and NGOs; whereas it eliminates the power and the authority for them to increase the social attention for farm animal welfare.

7. Future Recommendation

7.1 Recommendation for Taiwan

As to improve the animal welfare issue in Taiwan, it still requires a long term strategy and some short term policies to achieve. As to increase the awareness of animal welfare among the public at first and consequently the market, the mass media plays an important role. Information through television can be considered the most efficient approach to transfer information to the public. But the content of the show or report should be studied and designed to make the most effort to catch the attention of the public. The government and the NGOs should make a good use of the mass media, and the influence of the mass media should be considered as a valuable tool in elevating the social concern for farm animal welfare. The expertise and knowledge of farm animal welfare should be improved as well. It is recommended that stakeholders in Taiwan should affiliate with or ask for more consultancies from the international animal protection groups in how to address the issue of farm animal welfare in Taiwan.

7.1.1 Government

The regulation of farm animal welfare standards should still be studied in how to formulate in Taiwan. As concerning the next policy for the government in Taiwan, they should cultivate more researchers in animal welfare expertise and develop the devices and standards proper for the husbandry industry in Taiwan.

7.1.2 NGOs

Although the watching-dog role as the NGOs play against to the government is quite important to develop animal welfare, it is recommended that the NGOs put more effort in giving rise of public awareness of farm animal welfare, such as education of animal welfare. It is recommended that the NGOs should affiliate with different international animal protection groups. They should not focus only on the government who has the power to manipulate the legislations, but also on the market that has the power to motivate the industry to integrate with animal welfare.

7.1.3 Market

There are several examples from the EU that the initiative of farm animal welfare is from the market. It is recommended for the global business companies in Taiwan such as McDonald's, Burger King, or KFC could be the initiatives in farm animal welfare market in order to elevate the attention in the husbandry industry.

7.2 Recommendation for the EU

Animal welfare has been more emphasized in the north-western countries in Europe; whereas the southern and eastern European countries mostly neglect the issue of animal welfare in the husbandry industry. Despite the fact that the members of the EU have the pressure to implement the welfare regulations from the EU standards, the enforcement of animal welfare regulation may negative influence on the livestock markets in these countries due to different perception of animal welfare. From the research study of Taiwanese husbandry, it is indicated that the increase of awareness for animal welfare from the consumers will balance the increased cost for implementing animal welfare standards. This could be a reference for the policy makers in the EU where they try to create comprehensive regulation for animal welfare among all European countries: the key determinant should be the consumer perception for animal welfare for overall situation.

7.3 Future Research Recommendation

As to increase the farm animal welfare in the husbandry globally, it is recommended to study the business experience of the European and Western countries how the animal welfare market influences on the normal husbandry industry. In this study, there is a constraint to accurately recognize the pattern of animal welfare development in Taiwan. Different stakeholders in Taiwan consider the animal welfare issue at different developed stage. Therefore, the future research can also focus on the experiences learned from the European countries in what is the determinant to make different stakeholders have the consensus in farm animal welfare. As concerning the advantage of animal friendly product, it is recommended to study how the higher animal welfare can improve and elevate the quality of livestock products and what business profit it can bring.

8. Reference

- Alter B. (2012). £400 Million later and all UK eggs are free-range or from “enriched” cage. January 4, 2012. <http://www.treehugger.com/green-food/all-uk-eggs-free-range-or-from-enriched-cages.html>
- Animal Protection Act (2011). Issued on June 29, 2011. <http://law.moj.gov.tw/Eng/LawClass/LawAll.aspx?PCode=M0060027>
- Bellaver, C. and Bellaver, I. H. (1999). Livestock production and quality of societies’ life in transition economics. *Livestock Production of Science*, Vol. 59, pp. 125-135.
- Binnekamp, M. H. A. and Ingenbleek, P. T. M. (2006). Market barriers for welfare product innovations. *Netherlands Journal of Agriculture Science*, Vol. 54, No. 2, pp. 169-178.
- Bock, B. B. and van Huik, M. M. (2007). Animal welfare: the attitudes and behaviour of European pig farmers. *British Food Journal*, Vol. 109, No. 11, pp. 931-944.
- Bock, B. B. and van Leeuwen, F. (2005). Review of socio-political and market developments of animal welfare schemes. *Welfare Quality® Reports No. 1*, Cardiff School of City and Regional Planning
- Buller, H. (2010). The marketing and communication of animal welfare: a review of existing tools, strategies and practice. *European Animal Welfare Platform, Progressing animal welfare through the food chain*.
- Buller, H., Lever, J. and Roe, E. Regulation and Governance. 01.22.2012 <http://www.animalfarmlife.eu/regulation.html>
- Buller, H. and Roe, E. (2011). Certifying Quality: Negotiating and integrating animal welfare into food assurance. *Welfare Quality® Reports No. 15*, Cardiff School of City and Regional Planning.
- Cha, M. S. and Wu, T. M. (2002). Colonial transition to modern economic growth in Korea and Taiwan. Mimeo, Yeungnam University and National Taiwan University.
- Cheng, Y. Q. (2010). The promotion of the management and certification system for organic livestock product. *Agriculture Biotechnology Industry Quarterly*, No. 23, pp. 12-15.
- Chiu, L. L. (2010). Taipei Veterans General Hospital examined the residue of lean meat powder from the samples of food poisoning in chicken meat at 2 years ago. November 11, 2010. http://news.rti.org.tw/index_newsContent.aspx?nid=267166&id=6&id2=1
- Chiu, M. Z. (2009). The high standards in husbandry: Certification. *Cheng Shi Liang Pin*. February 3, 2009: pp. 16-17.
- CIWF (2008). Global warming: climate change & farm animal welfare. *Compassion in World Farming (CIWF) summary report*. Surrey, UK.
- Clarkson, M. B. E. (1995). A stakeholder framework for analyzing and evaluating corporate social performance. *Academy of Management Review*, Vol. 20, p. 92-117.
- Council of Agriculture (COA) Statistic of agricultural production searching system. Taiwan. December 15, 2011 <http://agrapp.coa.gov.tw/TS2/TS2Jsp/Index.jsp>
- Donaldson, T. (2005) “Defining the value of doing good business.” *Financial Times*. June 2005. 28 October 2011. <http://www.ft.com/cms/s/2/748f21be-d377-11d9-ad4b-00000e2511c8.html#axzz1c4GcyBUv>
- Donaldson, T. and Preston, L. E. (1995). The stakeholder theory of the corporation: Concepts, evidence and implications. *Academy of Management Review*, Vol. 20, p. 65-91.
- Downs, A. (1972). Up and down with ecology- the “Issue-Attention Cycle”. *The Public Interest*, Vol. 28, p. 38-50.
- EAST (2010). The leeway of traditional market and other live chicken retailer: Animal protection group and environmental friendly group protest in front of the Executive Yuan. March 17, 2010. http://www.east.org.tw/that_content.php?s_id=6&m_id=27&id=298
- EAST (2011) a. Confirmation of the policy of “the whole fish on board” implemented by the Fisheries Agency and the prohibition of “Cut fin and dump body”. July 12, 2011. http://www.east.org.tw/that_content.php?s_id=16&m_id=0&id=362

- EAST (2011) b. Hundreds of Hakka people and the NGO arise the petition of “Against inhumane approach of rearing god pigs”. August 10, 2011
- Eesley, C. and Lenox, M. J. (2006). Firm responses to secondary stakeholder action. *Strategic Management Journal*, Vol. 27, pp. 765-781.
- EUCAM . “Corporate Social Responsibility: the new marketing tool. Trends in Alcohol Marketing.” *EUCAM Report*. 2009. October 31 2011.
http://www.eucam.info/content/bestanden/trendrapport_csr.pdf
- Eurogroup for animal (2010). Analysis of animal welfare issue in the European Union. Areas of concern 2010. Brussels, Belgium.
- Fang, J. R. (2010). The effect of simple cage enrichment on the daytime behaviour of native chickens. Master Thesis. National Chung Hsing University, Taiwan.
- FAO (2002) World livestock trade. 11.01.2012. <http://www.fao.org/ag/magazine/0204sp1.htm>.
- FAWC (2011). Education, communication and knowledge application in relation to farm animal welfare. Farm Animal Welfare Committee (FAWC) Report. London, UK.
- Femers, S., Klewes, J. and Lintemeier, K. (2000). The ‘life of an issue’ and approaches to its control. *Journal of Communication Management*, Vol. 4, No.3, pp. 253-265.
- Ferrari, P. and de Roest, K. (2010). Strengths and weaknesses for the animal of upgraded welfare standards. *EconWelfare Report*. Lelystad, the Netherlands.
- Ferrell, O. C., Gonzalez-Padron, T. L., Hult, T. M. and Maignan, I. (2010). From market orientation to stakeholder orientation. *Journal of Public Policy & Marketing*, Vol. 29, No .1, pp. 93-96.
- Fraser, D. (2003). Emerging animal welfare standards and their implications for animal hygiene. *International Society for Animal Hygiene report*, Mexico.
- Fraser, D. (2008). Toward a global perspective on farm animal welfare. *Applied Animal Behaviour Science*, Vol. 113, p. 330-339.
- Gijssels, C. and Develtere, P. (2008). The Co-operative Trilemma. Co-operatives between market, state and civil society. *Working Papers on Social and Co-operative Entrepreneurship*.
- Grant Thornton (2011). Corporate social responsibility: the power of perception. Grant Thornton International Business Report.
- Han, J. (2012). Lean meat powder become focus again. January 22, 2012.
<http://www.epochtimes.com/b5/12/1/22/n3493363.htm%E5%B9%B4%E9%97%9C%E8%87%B3-%E7%98%A6%E8%82%89%E7%B2%BE%E5%86%8D%E6%88%90%E5%90%84%E6%96%B9%E9%97%9C%E6%B3%A8%E7%84%A6%E9%BB%9E>
- Handelman, J. M. and Arnold, S. J. (1999). The role of marketing actions with a social dimension: Appeals to the institutional environment. *Journal of Marketing*, Vol. 63, pp. 33-48.
- Hauser, J., Tellis, G., and Griffin, A. (2006). Research on innovation: A review and agenda for marketing science. *Marketing Science*, Vol. 25, No. 6, pp. 687-717.
- Hernández-Murillo, R. and Martinek, C. J. “Corporate Social Responsibility can be profitable.” *The Regional Economist*. April 2009. 28 October 2011.
<http://research.stlouisfed.org/publications/regional/09/04/socialresponsibility.pdf>
- Holtz, R. (2012). Animal health and animal welfare standards. January 29, 2012.
<http://tradestandards.org/en/StandardTopic.1.aspx>
- Hu, H. N. (2012). Austrian famous news paper criticised cruelty for the competition of god pig. January 29, 2012. <http://www.libertytimes.com.tw/2012/new/jan/30/today-life16.htm>
- Huang, F. L. and Han, Y. (2008). Price discovery, completion and market mechanism design. *Asian Social Science*, Vol. 4, No. 6, pp. 122-128.
- Humane Slaughter Criterion (2008). Animal Protection Act. September 25, 2008.
<http://law.moj.gov.tw/LawClass/LawAll.aspx?PCode=M0060075>
- Ingenbleek, P. T. M. and Immink, V. M. (2010). Managing conflicting stakeholder interests: an exploratory case analysis of the formulation of corporate social responsibility standards in

- the Netherlands. *Journal of Public Policy & Marketing*, Vol. 29, No. 1, pp. 52-65.
- Ingenbleek, P. T. M., Immink, V. M., Spoolder, H. A. M., Bokma, M. H. and Keeling, L. J. (2011). EU farm animal welfare policy: Developing a comprehensive policy framework.
 - Ingenbleek, P., Binnekamp, M. and Godijn, S. (2007). Setting standards for CSR: A comparative case study on criteria-formulating organizations. *Journal of Business Research*, Vol. 60, pp. 539-548.
 - Irwin, P. G. (2003). A strategic review of international animal protection. Pages 1-8 in D.J. Salem and A.N. Rowan (editors), *State of the Animals II*, Humane Society Press, Washington, DC.
 - Keeling, L. J., Immink, V., Hubbard, C., Garrod, G., Edwards, S. and Ingenbleek, P. (unpublished). Designing animal welfare policies and monitor progress.
 - Keller, K. L. (2003). *Strategic brand management: Building, measuring, and managing brand equity*, 2d Ed. Upper Saddle River, NJ: Prentice Hall.
 - Kjørstad, I. (2005). Consumer concern for Food Animal Welfare. Part I-A Literature Reviews. In J. Roex and M. Miele eds. *Farm Animal Welfare Concerns. Consumers, Retailers and Producers. Welfare Quality® Reports Series No. 1*, Cardiff: Cardiff University.
 - Lee, Z. R (2007). The project of structure improvement in the husbandry for the trend of globalization of humane animal management: The investigation of the consumer perception of the price of animal friendly product. 2007 Agricultural Management Plan in COA.
 - Lian, Y. Y. (2004). Culling farm animals as epidemic prevention vs. animal welfare. *The Collection of Public Forum for Animal Protection*, pp. 229-234.
 - Liao, Z. Y. (2000). The effect of the use of medication in animals on the animal welfare. *The Voice of Animals*, No. 21.
 - Liao, Z. Y. (2008). The introduction of Humane Certification Mark.
<http://www.atit.org.tw/ATIT/units.php?id=3&sid=104>
 - Liao, Z. Y. and Huang, N. Z. (2006). The current humane status of avian in Taiwan. Animal Technology Institute Taiwan (ATIT).
 - Lin, J. M. and Liu, H. L. (2010). The pause of the prohibition policy of slaughter chicken lively in traditional market. March 17, 2010.
<http://www.youtube.com/watch?v=JlswUyoJBVk>
 - Littlefair, P. (2004). Professionalising the role of the animal protection inspector in Taiwan. RSPCA Animal Protection Forum. Chiayi, Taiwan.
 - Mahon, J. F. and Waddock, S. A. (1992). Strategic issues management: an integration of issue life cycle perspectives. *Business and Society*, Vol. 31, pp. 19-32.
 - Maignan, I. and Ferrell, O. C. (2004). Corporate Social Responsibility and Marketing: an integrative framework. *Journal of Academy of Marketing Science*, Vol. 32, No.1, pp. 3-19.
 - Mann, M. (1984). The autonomous power of the state: Its origins, mechanisms and results. *European Journal of Sociology*, Vol. 25, pp. 185-213.
 - Mason, G. and Mendl, M. (1993). Why is there no simple way of measuring animal welfare? *Animal Welfare*, Vol. 2, No.4, pp. 301-319.
 - McDonald's USA (2009). McDonald's USA to join new coalition to study U.S. hen housing sustainability, including cage-free. 26.01.2012
<http://news.prnewswire.com/DisplayReleaseContent.aspx?ACCT=104&STORY=/www/story/05-21-2009/0005030994&EDATE=>
 - Miele, M. (2011). Report concerning consumer perceptions and attitudes towards farm animal welfare. Official Experts Report EAWP (task 1.3), Uppsala: Uppsala University.
 - Mitchell, R. K., Agle, B. R. and Wood, D. J. (1997). Toward a theory of stakeholder identification and salience: defining the principle of who and what really counts. *The Academy of Management Review*, Vol. 22, No. 4, pp. 853-886.
 - Peeling D. (2007). Animal welfare and certification schemes: the view of animal protectors. *Assuring animal welfare: from societal concerns to implementation*. Second Welfare Quality®

stakeholder conference, Berlin, Germany.

- Presi, P. and Reist, M. (2011). Review of methodologies applicable to the validation of animal base indicators of welfare. Scientific report submitted EFSA. Bienne, Switzerland.
- Rondeel <http://www.rondeeleieren.nl/> February 5, 2012.
- Roe, E. and Marsden, T. (2007). Analysis of the retail survey of products that carry welfare-claims and of non-retailer led assurance schemes whose logos accompany welfare-claim. Part II. In U. Kjærnes, M. Miele and J. Roex eds. *Attitudes of consumers, retailers and producers to farm animal welfare. Welfare Quality® Reports* No. 2 Cardiff School of City and Regional Planning, Cardiff: Cardiff University.
- Roex, J. and Miele, M. (2005). Farm animal welfare concerns: consumers, retailers and producers. Cardiff University, Cardiff, UK.
- RSPCA (2012) RSPCA in Action- About Us. 26.01.2012. <http://www.rspca.org.uk/in-action/aboutus/heritage>
- Schmeer, K. (1999). Stakeholder Analysis Guidelines. In *Policy Toolkit for Strengthening Health Sector Reform*. Bethesda, MD, USA: Abt Associates, Inc.
- Shi, Z. H. (2003). "Domestic culture" vs. "Respect for multiple cultures". August 26, 2003. <http://www.lca.org.tw/column/node/626>
- TanHou (2010). TanHou Healthy Blog. July-August. No.23
- Theuvsen, L., Alleweldt, F., Kara, S. von Gall, P., Doré, M. P., Beteille, R., Schubert, K. Caspari, C., Christodoulous, M. and Bradley, D. (2009) Feasibility study on animal welfare labelling and establishing a Community Reference Centre for Animal Protection and Welfare. *Part 1: Animal welfare labelling*. European Commission Directorate General for Health and Consumer Protection, Final Report.
- van Tulder, R. (unpublished). The mechanics of the Issue Life Cycle. Upgrade and addition to chapter 9 of *International business-society management*.
- van Tulder, R. and van der Zwart, A. (2006). *International business-society management*. NY: Routledge.
- van Horne, P. L. M. and Achterbosch, T. J. (2008). Animal welfare in poultry production systems: impact of EU standards on world trade. *World's Poultry Science Journal*, Vol. 64, p. 40-52.
- VANA (2009). Taipei 350: Fighting against global warming & the 51 % greenhouse gas production from the livestock industry. November 15, 2009. <http://www.lca.org.tw/column/node/59>
- Vanhonacker, F., Verbeke, W., van Poucke, E. and Tuytens, F. A. M. (2007). Segmentation based on consumers' perceived importance and attitude toward farm animal welfare. *International Journal of Sociology of Food and Agriculture*, Vol. 15, Issue: 3, pp. 84-100.
- Vapnek, J. and Chapmen, M. (2010). Legislative and regulatory options for animal welfare. Rome, Food and Agriculture Organization of the United Nation.
- Wang, X. W. and Chen, Y. J. (2009). High quality product illustration. *Cheng Shi Liang Pin*. February 3. 2009: pp. 76-110.
- Wartick, S. L. and Wood, D. J. (1998). *International business and society*. Oxford: Balckwell Publishers.
- Webster, A. J. F. (2001). Farm animal welfare: the five freedoms and the free market. *The veterinary journal*, Vol. 161, pp. 229-237.
- Wilkins, D. B., Houseman, C., Allan, R., Appleby, M. C., Peeling, D. and Stevenson, P. (2005). Animal welfare: the role of non-governmental organisations. *Rev. sci. tech. Off. Int. Epiz.*, Vol, 24, Issue:2, pp. 625-638.
- Xu, Z. Z. (2005). The nowadays situation of husbandry industry and development in Taiwan. National Chung Hsing University.
- Yang, S. M. (2012). The American beef meeting: the NGOs in Taiwan are free to recommend experts to participate. February 22, 2012.

<http://www.epochtimes.com/b5/12/2/22/n3519998.htm%E7%BE%8E%E7%89%9B%E6%9C%83%E8%AD%B0--%E5%8F%B0%E6%B0%91%E9%96%93%E5%8F%AF%E6%8E%A8%E8%96%A6%E5%B0%88%E5%AE%B6>

- Ye, Z. G. (2012). The big impact of American beef on the domestic livestock products, and the husbandry resist lean meat powder. February 22, 2012.

<http://tw.epochtimes.com/b5/12/2/22/n3519992.htm%E7%BE%8E%E7%89%9B%E8%A1%9D%E6%93%8A%E6%9C%AC%E5%9C%9F--%E7%95%9C%E7%89%A7%E6%A5%AD%E6%8B%92%E7%98%A6%E8%82%89%E7%B2%BE>

Annex 1 Questionnaires for the state
(Authority and academic scholar)

General Information

Personal position

What is your position in the husbandry industry?

What is your function in the organization? What will be influence by your role?

Compliance with minimum welfare standards

Current Policy

What the current legislative standards is in addressed to animal welfare?

What is your current policy towards to farm animal welfare?

Activity

What success have you reached?

How does the compliance level achieve among the primary producers and chain actors?

What barrier/ difficulty have you met?

Rising awareness

Animal welfare perception

How do you perceive animal welfare on your own?

As talking in animal welfare, in which perspective is the most important factor that should be addressed? (E.g. animals, farmers, companies, consumers, and etc.)

What is your ideal situation of animal welfare?

Do you consider the situation now in Taiwan that animal welfare is a big issue?

Motivation

What event or reason did/ will make you start to consider animal welfare in your policy?

To solve animal welfare is involved with too many perspectives and complex system in the operative process. What are the easiest approach/ perspective to start in solving this issue?

Position in the issue

Regarding to animal welfare, how do you think you can do to solve the issue?

Which group/ organization or who you think should be involved in this issue?

How should they solve this issue?

During the first dispute of animal mistreatment reported via media or the first discontent from the NGO, how did you respond with the issue?

Affiliation

Which group/ organization or who you think that you can cooperative with to solve this issue together?
And how can you solve the problem?

Future development for farm animal welfare

Standards

According to different reference in animal welfare, like WTO, OIE and EU legitimacy, what perspective of animal welfare should be addressed in priority? (e.g. living space, light, transportation, slaughter)

Future Policy

While some of the firms have their own claims and labels for animal production guarantee in quality and welfare, what do you think you can do or you should do?

Establish a higher standard legitimacy, money support or practical support?

If supplier / farmers (small scale) voluntarily want to establish the high standard of animal welfare system, what role you think you should be? Do you offer practically supports (like fund, infrastructure, and practice consultant)?

Do you think the public have enough experience and knowledge for animal welfare in husbandry?
What is your strategy for the animal welfare education?

Future constraint and limitation

If higher the standard of animal welfare, what are the possible constraint and limit to establish the future policy?

What kind of difficulty or problem do you think your company will come through after the implementation of high standard animal welfare?

Annex 2 Questionnaires for the market

General Information

Personal position

What is your work position in the organization?

What is your function? What will be influence by you?

Rising awareness

Animal welfare perception

How do you perceive animal welfare on your own?

As talking in animal welfare, in which perspective is the most important factor that should be addressed? (e.g. animals, farmers, companies, consumers, and etc.)

What is your ideal situation of animal welfare?

Do you consider the situation now in Taiwan that animal welfare is a big issue?

Affiliation

Which group/ organization or who you think that you can cooperative with to solve animal welfare as an issue together? And how can you solve the problem?

If NGO concerns very much about your product chain and would like to cooperate with you to improve the standards of animal welfare, would you like to be involved?

Motivation

Do you think the animal disease and the food scandal change the food/ husbandry industrial business environment in general?

What event or reason did/ will make you start to consider animal welfare in your policy?

Responsibility declaration

What do you think you should do in animal welfare issue?

Position in the issue

Regarding to animal welfare, how do you think you can do to solve the issue?

Which group/ organization or who you think should be involved in this issue?

How should they solve this issue?

Product development

Current Policy

What is the current policy in your company?

If your firm have own label to claim with high standard of animal welfare and quality guarantee, could you explain the process of your high standard product line in detail? If not, why not?

Activity

What policy have you changed in addressing to animal welfare issue?

Marketing strategy

What type of market segmentation do you have based on your product?

Who are your target groups of customers? Where they are mainly situated?

What are the factors they usually concern?

Do they concern about animal welfare?

What success have you reached?

What problem in animal welfare have you solved in your policy change?

What barrier/ difficulty have you met?

What are the barriers/ difficulties have you met during implementing the new policy?

Input and output

Who are your suppliers? How do you select them? Does your supplier implement animal welfare?
What aspect of animal welfare your supplier addresses to?

Which channels are your products distributed?

Is there any accessible and creditable certification institution for validating the assurance scheme label?

Future development for farm animal welfare

Standards

According to different reference in animal welfare, like WTO, OIE and EU legitimacy, what perspective of animal welfare should be the next one to be addressed in priority? (e.g. living space, light, transportation, slaughter)

Will you or your group elevate farm animal welfare standards in your product?

Future Product development

Do you think it is a potential market to create a new product, as animal friendly product? Do you consider it's a potential market?

Would you like to sell animal friendly product?

How would you promote the animal friendly product? What is your marketing strategy? What price will you sell?

Constraint and limit

What constraint and limit you think you will confront to create animal friendly product?

What kind of difficulty or problem do you think you will come through after the implementation of high standard animal welfare?

Annex 3 Questionnaires for the NGO

General Information

Personal position

What is your position in the organization?

What is your function? What will be influenced or decided by you?

Rising awareness

Animal welfare perception

How do you perceive animal welfare on your own?

As talking in animal welfare, in which perspective is the most important factor that should be addressed? (e.g. animals, farmers, companies, consumers, and etc.)

What is your ideal situation of animal welfare?

Do you consider the situation now in Taiwan that animal welfare is a big issue?

Current Policy

What is your current policy in addressing to animal welfare?

Activity

What kind of protest or event is created/ participated by your organization to address animal welfare?

Which target group do you focus on and try to provide the information to?

What success have you reached?

What problems in animal welfare have been solved in your policy change?

How the attitudes of your target groups have been changed through your activities?

What barrier/ difficulty have you met?

What are the barriers/ difficulties have you met during implementing the new policy?

What is the constraint for you to promote animal welfare in the society? (e.g. Lack of knowledge? Profit orientation?)

When the disputes and discontents were aroused by your activities at the first beginning, how did the firm or the government respond?

Motivation

What event or reason made you start to consider animal welfare in your organizational object?

To solve animal welfare is involved with too many perspectives and complex system in the operative process, what are the easiest approach/ perspective to start in solving this issue?

Responsibility declaration

What do you think you should do in animal welfare issue?

Position in the issue

Regarding to animal welfare, how do you think you can do to solve the issue?

Which group/ organization or who you think should be involved in this issue?

How should they solve this issue?

Affiliation

Which group/ organization or who you think that you can cooperative with to solve this issue together?
And how can you solve the problem?

Have you involved in certain network in object to animal welfare? What is your role or function in the network?

There are several different NGOs addressing animal welfare in their object, what do you think you differentiate from the others?

Future development for farm animal welfare

Standards

According to different reference in animal welfare, like WTO, OIE and EU legitimacy, what perspective of animal welfare should be addressed in priority? (e.g. living space, light, transportation, slaughter)

What is the next aspect to focus on in addressing to a higher farm animal welfare standards?

Future development

Do you think the small scale of farms which establish animal welfare claim and label capable to be the driver to promote animal welfare and establish a higher standard of animal welfare in product line?

What would you do to try to let the firms affiliated with you and implement animal welfare in the supply chain?

How would you do to try to let the government to formulate regulation for animal welfare in husbandry industry?

Future constraint and limit

What possible constraint and limit do you think you will confront during executing your new policy or activities?

What kind of difficulty or problem do you think the husbandry industry will come through after the implementation of high standard animal welfare?

Annex 4 Interview of Participant 1

Name: Wen-Ling, Zhuo (周文玲)

The specialist in the department of animal protection in the COA

Date: 11.18.2011

- (1) The current legislative welfare standards focus on humane slaughter and transportation. The policy we have now is to firmly promote the principles of these welfare standards. We held speeches and lectures for the examiners and primary producers around cities and counties. We invite some instructors to talk about the expertise about humane slaughter and transportation, and also offer the opportunities to let the participants to ask questions. To elevate the compliance with the minimum standards, we invite the employees in the slaughter houses and truck drivers for animal transportation to training activities or lectures in gaining more expertise about animal welfare; we also provide different channels for them to consult about humane slaughter and transportation. There are 110 legal slaughter houses in Taiwan that have been licensed. Upon the implementation of the legislative welfare standards, the improvement of humane slaughter and transportation has been progressed. The main constraint to promote animal welfare among the public is that the welfare of farm animal has always been neglected, and the common consumers haven't had the willing-to-pay conception for animal friendly products.
- (2) My personal perception for animal welfare is based on the five freedoms as a central conception, but the details will be different from different culture and habits. The government actually considers animal welfare issue as not an urgent issue, but only a development of conception. Animal welfare has been promoted from 13 years ago, but only pet animal welfare has been addressed and emphasized. Although the farm animal welfare conception will be considered gradually due to the emphasis of the European and Western countries and international organizations, there is a big gap of farm animal welfare conception between western and Taiwanese, due to the different culture and industrial conditions. The level of animal welfare integration in the whole product chain in European and Western countries has been step by step developed. However, the public in Taiwan doesn't understand the circumstances of husbandry practice and the difference between Taiwan and Western countries. That is, the government considers that it is not about the time to establish legislative standards to resolve animal welfare as an urgent issue. Despite the fact that certain disputing procedures (e.g. castration, de-beaking and tail cutting), I consider the primary producers and chain actors have midterm level of animal welfare conception. The government can be as the role of supporter in academic, and encourage the academic researches into more animal welfare direction. Different organization affiliation has always been considered. Environmental friendly groups or humane society can cooperate with celebrities, and promote correct animal welfare knowledge as education promotion.
- (3) As the animal friendly certificated product developed by civil society and sold by the private sectors, the government won't proceed any further certification or validation due to a lack of resource and capability. As for those voluntary primary producers to elevate animal welfare standards, the government will offer the assist in building up the infrastructure but without financial supply.
- (4) The main constraint and barrier for integrating animal welfare standards among husbandry industry are from the industry and primary producers. When the potential profit cannot balance the

necessary cost for elevating animal welfare in the product chain, the industry will be willing to implement animal welfare; without the request from the industry, the primary producers won't have pressure to obligatorily execute animal welfare standards during animal rearing. However, the determinant point for the industry to implement animal welfare is the awareness of animal welfare among the consumers. So the future policy will try to promote animal welfare to the industry that positive feedback and response will be induced when they treat the animals nicely and with high animal welfare standards.

Annex 5 Interview of Participant 2

Name: Yen-Pai, Lee (李淵百)

Professor in Animal Science department in NCHU

Date: 11.15.2011

- (1) We advocate to promote animal welfare in Taiwan should analyze the problems in husbandry industry and the practical situations and list down the parts that can be improved. Further, training more people to have animal welfare expertise with techniques and tools in assessing the welfare level of animals. Therefore, collecting the information and learning experience from Western countries is essential. In addition, it is important to let the researchers and the primary producers to realize that offering animal with good quality of lives and high welfare treatments will induce positive feedbacks, and therefore, the consumers can have high quality of livestock products. For further development, the establishment of legislation for welfare standards and controls of product quality is important and necessary.
There are some constraints in promoting animal welfare among the academia. The incentive of doing farm animal welfare research is small, due to a low research impact factor and Science Citation Index. In addition, little consensus is between domestically academic animal scientists due to the view of extremes in different groups. One is especially emphasizing the practical aspect, and the other mainly focuses on animal welfare. In this case, a better incentive is to increase the cooperation with international academia.
On the other hand, a higher animal welfare requires large amount of capital to upgrade the facilities and equipment, so it is one of the reasons that animal welfare has not been addressed to.
- (2) The ideal farm animal welfare is to let the animals have freedom to eat and drink, but the welfare is accomplished through learning to learn how to adapt to the artificial surroundings.
However, there is no consensus for farm animal welfare in the academia; scholars who emphasize more about the practical aspects (e.g. costs, resources, and practicability) consider animal welfare not as much important as scholars who put a lot of attention in animal protection.
We hold conferences to exchange information and knowledge with scholars from New Zealand, UK and OIE every year, and we offer the opportunities for the students and personnel in husbandry industry to participate.
To promote the correct knowledge about animal welfare to the public is difficult, because the mass media or some powerful and famous celebrities will use the overwhelming words and information to cover the reality of husbandry industry. It distorted the perception of husbandry among the public and induced the misunderstanding and had a huge negative impact on the farmers.
- (3) The animal friendly products haven't been classified and segmented. Although the animal friendly products in the market are accepted by the consumer and the price is set in 20-60 % more than common livestock products, the qualities of different products vary a lot. Most of the certification of animal friendly products is created by its own manufacturers and without the audit and certification by the third institution, so the credibility of these products is questioned. The most constraint, after all, comes from the consumer, because normal consumers will prefer a lower price for livestock products. Therefore, if the animal friendly products are sold in a lower price, the quality cannot be assured.
- (4) The future policy development for farm animal welfare is to establish a complete legislation which the primary producers can easily accessed and reached, and the standards should be elevated after a higher level of compliance. The policy for animal welfare improvement should be progressive. The correct knowledge for farm animal welfare should be realized and understood by the mainstream of the society, and in consequence, the correct knowledge then will be gradually passed in the public.

Annex 6 Interview of Participant 10

Name: K & K Food Ltd. (基富食品有限公司)

Date: 12.06.2011

- (1) The meaning for animal welfare is to keep animals away from thirst, hunger, and stress during their growths and not to suffer during slaughter. We consider the animal welfare is an urgent issue to be resolved in the husbandry industry. Because animals provide the source of protein as human's necessity, animals should be treated well and offered with good environment. The first motivation for animal welfare is our biggest customer, McDonald'. Their international corporate meeting advocated implementing animal welfare in their product chain. The first plan was to elevate higher standards in animal welfare among the midstream suppliers in 2006. Nowadays, except for humane slaughter and transportation, the rearing management has been gradually emphasized as well.
- (2) Our main products are chicken meat, pork, beef and fish meat which are produced with animal welfare conception. The local products are pork and chicken meat, and beef and fish are imported. We request our suppliers to meet the minimum welfare standards in the chicken farms (healthy, high hygiene and without any abuse), and we will routinely process selective examination. The pig farms are chosen and fixed through high standards selection due to the large stress obtained by the pigs during the price audition. The examination proceeds once in three months. The examiners should attend to training lectures abroad and to the license training in OSI in Beijing. When the suppliers have been examined with one fail spot, they will be requested to improve within one week and we will cut off the order from them; the order will recover after they pass the second-chance check. Because we have built up the cooperation with them for a long term and the order amount is substantial and profitable, they always firmly meet our requirements.
- (3) Our primary costumer, McDonald's, operates with Corporate Social Responsibility. Therefore, they would like to be superior in animal friendly product as the whole market to increase the positive image. In consequence, the competitors will be impeded in the animal welfare market. To make the animal welfare feature into transparency within the brand is a burden and pressure. Since the minimum legislative animal welfare standards in Taiwan have not yet been established and the animal friendly products are without the guarantee from a validation system. They are afraid of the intense supervision and criticism from the NGOs or the mass media to influence its reputation. The animal welfare market does not count as an innovative market but only as a small niche market, because it has been supported by certain group of people. We think animal welfare market can grow bigger as long as we elevate the perception of animal welfare among the consumers, and the other sectors will follow to implement animal welfare in their product chain as well. From McDonald's point of view, they think animal welfare should be transparent. The consumers should know how their foods come from, since a lot of parents concern the health for their children.
- (4) To integrate animal welfare with the whole product is quite difficult and with some barrier to break through. The policy should be progressive to improve the whole product chain. McDonald's requests their suppliers to follow the requirements to improve the aspect of animal welfare. Since the suppliers have long term of cooperation on business, they relatively have more capital to do some micro changing. But if a higher animal welfare standard is required, it is determined by the consumers. It concerns about the cost, so if the consumers don't have willingness to pay more for animal friendly products, the private sectors won't have the willingness and financial support to change.

Annex 7 Interview of Participant 11

Name: Li-Juan, Huang (黃麗娟)

Deputy General Manager in Tan Hou Food

Date: 12.07.2011

(1) I noticed the ideal animal welfare from the humane certificated farm. I never notice that animals can have their own space and freedom to walk around. So I think animal welfare is considered as an urgent issue to be resolved. The promotion of farm animal welfare should be determined by the government. The government should establish the certification system or institution, and provide the private sectors or manufacturers with certification label of animal friendly products, and promote to the consumers.

(2) We are the first organic shop where sells the livestock products with Humane Certification Mark developed by Dr. Liao in ATIT. We have another restaurant named “Hai Dao Shih Tang” which the food materials, especially livestock products, are with certification. We also offer monthly journals with examination reports for our products in order to show our customers that we have safe and high quality products. In addition, we also asked some journalists to have interviews with us and introduce animal friendly product to the public.

After we had the connection with Dr. Liao, he directed some farmers in person how to implement animal welfare in their farms and how they can improve on their facilities. All the amounts of livestock productions are not a lot: the pork is produced by 50 pigs a time (3 months) and chicken meat is produced by 2000 chickens. Further, we developed another product named “natural beef”. These cows are all near our supplier’s farm but without commercial purpose. They can naturally graze and move outdoor. The amount of cow each time is only 2 or 3.

However, in the first beginning when we were searching for cooperation partners, we confronted a lot of refusing from different farms around Taiwan, because they couldn’t accept the requirements we said. Also, we are still considering now whether we should re-certificate our products with Humane Certification Mark due to a lack of money. The most constraint is that it is hard to search the new farm with high hygiene and safe environment that is willing to integrate animal welfare in his/ her farm.

We have our customers most situated in Taipei and northern cities. Our customers normally won’t request for animal welfare, because our customers were introduced to the animal friendly products and the Humane Certification Mark at the first time when they came to our shop.

(3) We also offer our animal friendly products to other organic shops, and we will have routinely checking on their sales and whether they correctly store our products safe to sell to the customers. We wouldn’t want to affiliate with other animal protection groups. The only cooperation is with Dr. Liao in ATIT. We want to consolidate the animal welfare market through our products, because we believe in the existence and the future growth of this market. We suggest the government should support the existed shops that sell animal friendly products and also promote animal welfare conception in the meantime, and let more private sectors realize the importance of animal welfare.

Annex 8 Interview of Participant 12

Name: Zhen-Yuan, Liao (廖震元)

Associate research in Animal Technology Institute Taiwan

Date: 11.17.2011

- (1) The ideal animal welfare should be integrated with eating and using livestock products. The standard for animal welfare is the five freedoms.

My motivation for promoting animal welfare is that the lack of capability of the authority to supervise the quality of livestock products in Taiwan. Although they establish the legislation for humane slaughter and transportation, when the farmers have higher welfare standards in rearing management, the authority can't offer them official certification. The Humane Certification Mark developed through private institution, and it is aim to assist the voluntary farmers with higher welfare standards to have their own brands. The other aim of this certification is the segmentation for livestock products in Taiwan. Common consumers couldn't distinguish the difference between labelled and un-labelled products. I want the consumers to know that the products with the certification label are produced through high quality standards and welfare standards. Also, the products with certification can be more acceptable for the stores to sell. The certification has auditing system in hygiene and quality but lack of a third institution to audit and assess the welfare level of the animals.

- (2) I guided some farmers to create better welfare environment for the farm animals, including pigs, laying hens and broilers. In the market, you can access the humane certificated eggs the most easily, and meat should be accessible in certain organic shops or production location. The standards of humane certification in Taiwan are different from other countries, which were established through the conditions of husbandry in Taiwan. For example, to enrich the environment in chicken farms is through increasing the perches in the cages or space, and free range is classified as having free movement and without the constraint of space. Commonly, most farmers or companies will only implement higher welfare standards in special production line but not the whole product line. The little demand for animal welfare in the market can't afford the money to have a significant change.

- (3) The main constraint to use the welfare standards of Europe or America is the limitation of available space. We have to consider our own resource and circumstance to create our own animal welfare standards. As comparing to other countries, the governments in New Zealand and Australia support their research institutions to study what kind of standards and devices are feasible in their countries. But in Taiwan, the authority mostly supports the farmer rather than institution in animal welfare aspect, so the farmers can't implement animal welfare in the correct way due to a lack of knowledge.

Further, I think the third party to audit the humane certificated product should be folk organization, but currently there is no such institution or organization. We only have ISO certification for validating the sanity and safety of the products.

On the other hand, the animal welfare conception among the consumers is still adequate. There is no sufficient channel for the public to get animal welfare information and knowledge. Also, the animal protection group will use minority issue in husbandry to notice the public about animal welfare and distort the truth, such as boycotting the fresh slaughter of chicken in the traditional market. Lectures of animal welfare or humanity held by the school or civil society always have distorted information intercepted from the internet, which some quantity of them are defamation of husbandry industry.

- (4) In the future, I'd like to recruit another institution, Taiwan Society of Agricultural Standards

(TSAS), which contains a lot of different standards for organic agriculture. TSAS provides also the consultancy of animal welfare standards. The motivation to found an institution is to establish the quality standards for segmented animal friendly products and to create the assessments of animal welfare in different parts of product chain. The audit for Humane Certification Mark includes only sanity control, not yet animal assessment. In the meanwhile, we are planning to establish a higher animal welfare standard for organic scheme of livestock production.

- (5) If there are more farmers willing to implement animal welfare, I will try to assist them in evaluation of infrastructure and practice guiding. But if they need more financial support, the authority should be the one in charge. I'm also willing to cooperate with private sectors, but only with those who are willing to change and complete infrastructure and sale channels.

In education, I'd like to offer the consumers the correct knowledge and information of animal welfare, and in the meanwhile, I'm also educating the personnel in husbandry industry that the job they involved is a noble career. As well, educate the industry that with a better animal welfare, the quality of livestock product will be higher as well as a positive feedback.

- (6) There are several difficulties and constraints when the animal welfare is elevating. The production sufficient will decrease, and the cost will increase even when the price of the product increase. The most unknown thing is whether the demand from the market can reach to our expectation. When the animal welfare is upgrading, there might be some inconvenience in disease controlling and prevention. Also, whether the livestock products could be exported could be a problem. All the problems mentioned above could be barriers in increasing the animal welfare in husbandry.

Annex 9 Interview of Participant 13

Name: Zeng-Hong, Zhu (朱增宏)

Executive Director in Environmental and Animal Society of Taiwan

Date: 11.14.2011

- (1) EAST is the animal protection group concerning different kinds of animals, and farm animals are always quite crucial. The first boycott activity was addressed to the issue of livestock slaughter. The normal slaughter house and pig audit didn't use humane approaches to treat the animals, and also the fresh slaughter of chickens in the traditional market was also a problem due to the high potential of disease transition from dirty environment. We often participated with different international or national conferences, which international organizations, such as WTO, OIE, RSPCA or animal protection group from New Zealand, participated. In Asia-Pacific region, animal welfare conception is developed and promoted by New Zealand. I think the five freedoms are not so ideal anymore; the scholar in New Zealand advocated "animal wants" in life quality should be the key point to improve the welfare of animals. In order to integrating animal welfare in husbandry industry, all different aspects (animals, primary producers, industry, chain actors, the government, and the consumers) should be emphasized.

We especially focus on requesting the government to establish legislation for animal welfare and supervise whether the government completely execute the regulation and punish and penalize the ones who didn't follow the rules.

- (2) I think animal welfare issue is at the beginning stage in Taiwan. The public has started to notice it, but without adequate knowledge and experience to understand the meaning and necessity of animal welfare. The mass media gradually considered our reports and problem analysis in husbandry valuable and trustworthy. Animal welfare is an urgent issue. Although humane slaughter has been established in the regulation, it hasn't been complied completely yet.
- (3) The first response of the government for our boycotting activity was passive; they only established the legislative standards, but they didn't completely execute these regulations. For examples, the freshly slaughter of chicken in the traditional markets was supposed to be forbidden. But the government postponed the implementation date of this announcement; instead, the government rewrote the announcement to allow the freshly slaughter of chickens (inhumane slaughter way) in traditional markets in March in 2010. The freshly slaughter of chickens can still be seen in the traditional markets nowadays, which we concern a lot. We worry about the risk of outbreak of avian flu, which will probably influence the impression of Taiwan in international organization, OIE. But the most important thing is that we worry about the welfare and health of those chickens, which will indirectly influence the food safety and the health of consumers.

It is much easier to make the mass media to understand what we are concerning, and the second easier is the government. We think the government has positive progress in concerning for animal welfare issue in recent years. They promote animal welfare through holding conferences and inviting different scholars from different countries and some international animal protection groups, what we used to do. The academia is also concerning more about animal welfare lately.

- (4) I personally had been involved in the Human Animal Study, but just as a role of learning. We did have some affiliation with other environmental friendly group or consumer-oriented groups, but it didn't work out. Different organizations had different demands, so we couldn't have consensus to solve the animal welfare issue together. Now we are affiliating with the authority of education. We would like to edit the text books among the schools and put in the correct knowledge about animal welfare and fashion what kind of problems we have in husbandry in Taiwan. We don't have much connection with other animal protection groups in Taiwan, because other NGOs focus more on pet animal welfare.
- (5) We don't think the research of Dr. Liao is good enough. The certification is lack of validation system to audit the products. We can't do this task, because we don't have the expertise and

assessment in auditing. There is no institution or organization fulfilling this ability. In this case, the consumers have difficulties to trust the credibility of these animal friendly products. The most important thing is that we question what he has done. We don't trust him and we think he didn't think thoroughly.

- (6) In the future, I still think the EAST should be the watching dog in promoting animal welfare. We need to check whether the legislation has been complied completely and whether the regulation has met the requirement for animal welfare, which we are currently studying about the regulation and standards of Europe and US. I still think the awareness of animal welfare in Taiwan differs a lot from the theories of England and New Zealand. So I hope in the future we can establish a commitment where we can discuss different sub-issue for animal welfare to improve and resolve; further, we should gather different aspects of stakeholders and discuss different objective policies and instruments for improving animal welfare.