

Risk Management in Dairy Contracting: A Study in France, Australia, and the United States^{1, 2}

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ABSTRACT

Dairy products are consumed on a daily basis by people all over the world. The dairy consumption is forecasted to grow to 234 metric tons by the year 2021³. Despite the growth, this industry faces challenges. This paper discusses the risks in dairy contracting found in France, Australia and the United States; what are the risks in contracts within the projects in the dairy industry? What factors trigger those risks? How can we improve the contract clauses so that a fairer agreement to all parties can be achieved? Through cause-and-effect analysis, the root causes of the risks are identified. Then, multi-attribute decision-making model is used to determine the best solution to manage these risks based on Project Management method. Thereafter, Force-Field analysis is used to identify best practices in dairy contracting based on the practices done in the aforementioned three countries. In the end, it can be concluded that the government possesses a vital role in dairy contracting fairness, especially in establishing standards and protecting all stakeholders involved.

Keywords: Contract Management, Challenges, Dispute, Conciliation, Pricing, Contract Fairness, Milk Quota, Risk Transfer

INTRODUCTION

Despite a period of turbulence the global dairy sector is currently facing, “the global demand forecast for dairy is expected to increase by 2.5% annually to 2020”. This expected rise is mainly driven by the rising population and their changing diets towards receiving more of their calories from proteins, especially dairy products⁴. In regards to the growth, it is indisputable that the dairy

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³ Dairy Industry Overview. (2018). Retrieved from <https://www.statista.com/topics/4649/dairy-industry/>

⁴ McMahon, M. (2017). Challenges and Opportunities in the Dairy Sector. Retrieved from https://www2.deloitte.com/content/dam/Deloitte/ie/Documents/ConsumerBusiness/ie_Dairy_Industry_Trends_and_Opportunities.pdf

industry has suffered from numerous scandals in recent times. Modern customer's value when making food choices has also evolved. Customer nowadays weighs in the factor of health, wellness, and social impact while making their buying decision. It is due to these reasons that the dairy sector has been attempting to innovate, and one of the ways to achieve that is through projects. "Milk producers are cooperating with research organizations and universities through several projects to enhance their knowledge about the composition of dairy products so that new options for adding value to milk and its components can be offered to customers"⁵.

With an escalation in the number of projects within the dairy industry, the project management knowledge has been more important than ever. The term *project* itself has been defined in various ways. According to the Global Alliance of Project Performance Standards (GAPPS), a project could be "the preparation of the feasibility study, the creation of a research report for a consumer products company, or the implementation of a new information technology system."⁶ The International Project Management Association (IPMA) describes a project as a "unique, temporary, multi-disciplinary and organised endeavour to realise agreed deliverables within predefined requirements and constraints."⁷ Therefore *project management*, according to the Wideman's Glossary of Project Management Terms can be defined as "the process of directing and coordinating human and material resources throughout the project lifespan to achieve established objectives of scope, quality, time, cost, and stakeholder satisfaction."⁸ This definition includes the management of resources in order to achieve objective. Thus, one of the essential factors that need to be organised in projects is contract management. Managing resources within project requires the project manager to comprehend the globally applied fundamentals of contract and procurement of resources. Especially in the dairy industry where numerous stakeholders are involved ranging from government, companies, farmers, to consumers. A well-established contract management within projects can help the project managers to manage risk, perform strategic alignment, manage complexities, and increase the project success⁹.

Project management in dairy sector is involved in a complex environment, in which many stakeholders are involved, there are numerous requirements from the government and trade union, and volatility of price can impact the project at any time. One of these complexities also include

⁵ Research in the area Dairy Science and Technology. (2018). Retrieved from <https://www.wur.nl/en/Research-Results/Projects-and-programmes/Dairy/Research.htm>

⁶ GAPPS. (2007). A Framework for Performance Based Competency Standards for Global Level 1 and 2 Project Managers. Sydney: Global Alliance for Project Performance Standards. Retrieved from https://globalpmstandards.org/wp-content/uploads/2014/12/GAPPS_Project_Manager_v1.1150411_A4.pdf

⁷ Schoper, Y., & Viehbacher, A. (2015). *Individual Competence Baseline for Project Management*. IPMA. Retrieved from <http://products.ipma.world/ipma-product/icb/read-icb/>

⁸ Wideman, M. (2018). Wideman Comparative Glossary of Project Management Terms v5.5. Retrieved from http://www.maxwideman.com/pmglossary/PMG_P16.htm#Project%20Management

⁹ Graham, R. (2018). Contract Management Skills for Project Managers - PMO Perspectives. Retrieved from <https://www.strategyex.co.uk/blog/pmoperspectives/contract-management-skills-for-project-managers/>

the challenges posed by the contracts formulated within the project¹⁰. Figure 1 depicts the four root cause analysis of the elements that possess a big impact on contract management in projects within the dairy sector.

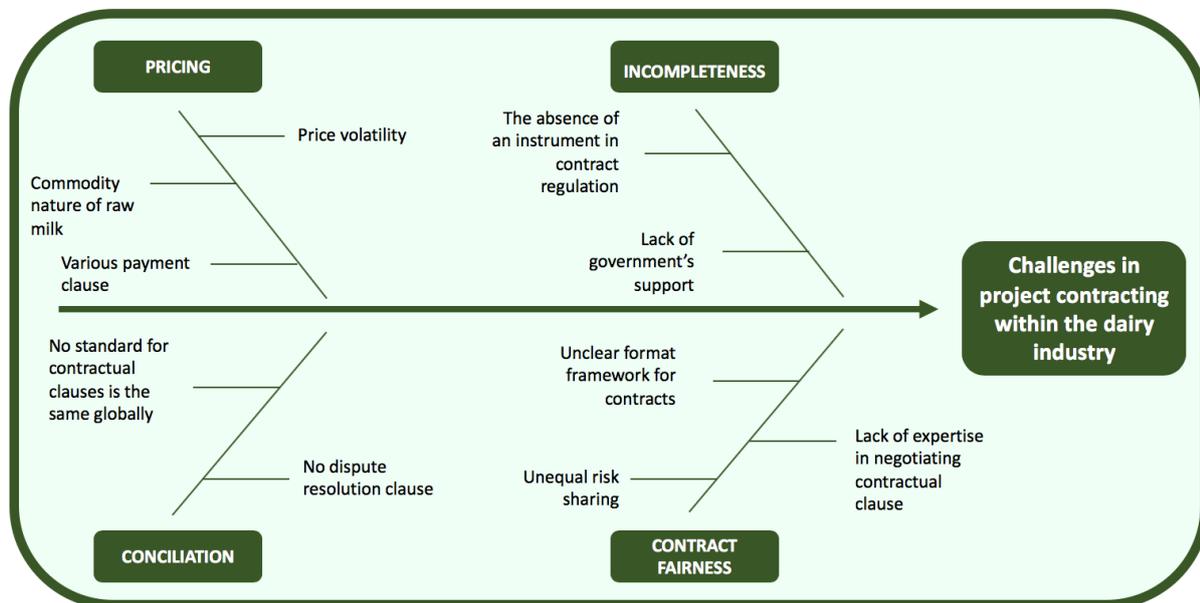


Figure 1: Ishikawa Analysis of the Challenges in Project Contracting Within the Dairy Industry¹¹

This paper evaluates the main causes that trigger and impact the risks in project contracting within the dairy sector, as well as what would be the best global contracting standards that can be used to avoid these risks, and ensure that the stakeholders involved are treated as fair as possible. Different countries will be used as a comparison namely; France, United States of America, and Australia. Not only because these countries have a high milk consumption per annum, but also due to the fact that the dairy projects within those countries have their own unique characteristics which can lead to both positive and negative challenges.

Therefore, the topics that are elaborated in this paper include:

- What are the risks in contracts within the projects in dairy industry?
- What factors trigger the risks?
- How can we improve the contract clauses in the dairy industry project so that a fairer agreement to all parties (mainly farmers and organizations) can be achieved?

¹⁰ Vavra, P. (2009). Role, Usage, and Motivation for Contracting in Agriculture. OECD Food, Agriculture, and Fisheries Working Papers. Retrieved from <https://www.oecd.org/tad/agricultural-trade/43057136.pdf>

¹¹ By author

METHODOLOGY

Step 1:

“All projects involved risk”¹². According to the Wideman’s Glossary of Project Management Terms, the word ‘risk’ itself is interpreted as “the potential of a forced and unplanned change in the future and a measure of its consequences”¹³. The European Association of Agricultural Economists (EAAE) defines risk in the dairy industry as “the uncertainty of decision-makers with regard to future events that are reflected in incomplete information and can result in deviations from a priori fixed target values.”¹⁴ As aforementioned, the aim of this paper is to identify the risks found in contracts within the dairy industry projects. These risks can be both positive and negative. In other words, negative risks could threaten the success of the project, and positive risks might bring new opportunities that could contribute as a benefit to the project.

Projects in dairy industry involve numerous stakeholders. Therefore, it is considered the best practice when the contract clause for projects in this sector does not benefit one party more than the others¹⁵. In order to answer the question of how can we improve the contract clauses so that the so-called fairness can be achieved, we first identify the main topics that cause the risk which are:

1. Pricing

Due to the volatility nature of milk as a commodity and different government regulation in treating it, once there is a hike in the milk price it either benefits the farmer and becomes a hindrance for the purchaser. On the other hand, once the price goes down it burdens the farmers and brings advantage for the purchaser. It is very vital that *the pricing element is included in the contract*, to ensure that both parties are protected when there is an increase or decrease in the milk price¹⁶.

¹² Chapman, C. (2014). *Project Risk Management*. Wiley-Blackwell. Retrieved from https://books.google.fr/books/about/Project_Risk_Management.html?id=ES7PugEACAAJ&source=kp_book_description&redir_esc=y

¹³ Wideman, M. (2018). Wideman Comparative Glossary of Project Management Terms v5.5. Retrieved from http://www.maxwideman.com/pmglossary/PMG_R05.htm#Risk

¹⁴ Schaper, C., Lassen, B., & Theuvsen, L. (2009). Risk Management in Milk Production: A Study in Five European Countries. *EAAE*. Retrieved from https://www.researchgate.net/publication/46473132_Risk_Management_in_Milk_Production_A_Study_in_Five_European_Countries

¹⁵ Dairy Industry, Code of Best Practice on Contractual Relationships. (2018). Retrieved from <https://www.nfuonline.com/code-of-practice-booklet/>

¹⁶ Trouvé, A., Dervillé, M., Pouch, T., Kroll, J., Briot, X., & Lambaré, P. et al. (2016). Study of Measures Against Market Imbalance: What Perspectives After Milk Quotas in the European Dairy Sector? Retrieved from http://agriculture.gouv.fr/sites/minagri/files/study_of_measures_against_market_imbalance_-_summary.pdf

2. Contract Incompleteness

The lack of *support from the government*, or in the EU countries' case; the support from the European Commission, leads to the absence of an instrument (standard) that can be used as a benchmark in contract formulation. At times, this lack of standard causes an incompleteness of a contract¹⁷.

3. Contract Fairness

Some contracts put farmers in an unfortunate side of the deal. Supported by their lack of knowledge in the contracting area, the risks are transferred to the farmers. Therefore, the *risk taken by each stakeholder should an uncertain event arises needs to be balanced and stated clearly in the contract*¹⁸.

4. Conciliation Procedure

In some countries, the conciliation procedure is clearly stated in the contract. Regrettably, it is not the case for the other countries. The main cause of this issue is there is no *standard for the same contractual clause globally*¹⁹.

Step 2:

After identifying the issues that cause risk in dairy sector contracting, this section elaborates the feasible alternative solutions. These solutions are developed based on risk treatment practice within the project management field; transfer, share, avoid, mitigate, and accept²⁰. The possible solutions are described as follows, according to the category of risk treatment it falls into.

1. TRANSFER

One of the ways to transfer risk is to take an example of the system done in the USA, which is called the Margin Protection Programme (MPP-Dairy). In this case, a margin is set, and it acts as an insurance for the producer. Which means that in case of price volatility, the producers (normally farmers) are protected and the risk is transferred to the purchaser. This margin is calculated based on the average milk price in the United States. Another way of doing this is through government

¹⁷ Schaper, C., Lassen, B., & Theuvsen, L. (2009). Risk Management in Milk Production: A Study in Five European Countries. *EAAE*. Retrieved from https://www.researchgate.net/publication/46473132_Risk_Management_in_Milk_Production_A_Study_in_Five_European_Countries

¹⁸ Schaper, C., Lassen, B., & Theuvsen, L. (2009). Risk Management in Milk Production: A Study in Five European Countries. *EAAE*. Retrieved from https://www.researchgate.net/publication/46473132_Risk_Management_in_Milk_Production_A_Study_in_Five_European_Countries

¹⁹ Bachev, H. (2016). Risks and Risk Management in Agri-food Chains. *Journal Of Economics Bibliography*, 3(2). Retrieved from <http://www.kspjournals.org/index.php/JEB/article/view/742>

²⁰ Berg, H. (2018). Risk management: procedures, methods and experiences. Retrieved from <https://cyberleninka.ru/article/v/risk-management-procedures-methods-and-experiences>

control upon the milk price, and should the price increase, the consequence is then transferred to the government. This would also keep the price within a reasonable range²¹.

2. SHARE

Risk sharing means dividing the consequences of the risks between the parties involved. This could be done through a detailed inclusion of contract clauses including dispute resolution, price fluctuation risk sharing, arbitration clause, and conciliation procedure that does not benefit only one party of the contract, but shared. This would be useful for ensuring fairness and to reinforce transparency. In case of a risk event, this strategy will help to share the risk equally, as fair as possible²².

3. AVOID

Risk avoidance can be achieved through the usage of soft law and guidelines which includes the code of conduct, best practices, and guidelines. These practices can help eliminate the probability of risk happening since it provides anticipation of risk occurrence and the best way of managing it should it happens. In other words, it helps to protect the stakeholders involved and the project from the risk impact²³.

4. MITIGATE

One of the ways to mitigate the consequences of risks is through government involvement to assist farmers in contracting issues²⁴. One of the options to do this is by establishing an organization to facilitate counselling for the farmers. This organization is also given the authorization to establish a benchmark to ensure standardization of contract clauses. This will reduce the chance of differences in the clauses which will reduce the likeliness of a risky event to occur in the future²⁵.

²¹ Trouvé, A., Dervillé, M., Pouch, T., Kroll, J., Briot, X., & Lambaré, P. et al. (2016). Study of Measures Against Market Imbalance: What Perspectives After Milk Quotas in the European Dairy Sector?. Retrieved from http://agriculture.gouv.fr/sites/minagri/files/study_of_measures_against_market_imbalance_-_summary.pdf

²² Vavra, P. (2009). Role, Usage, and Motivation for Contracting in Agriculture. OECD Food, Agriculture, and Fisheries Working Papers. Retrieved from <https://www.oecd.org/tad/agricultural-trade/43057136.pdf>

²³ Pultrone, C. (2018). Uniform Law Review Revue de Droit Uniforme. Retrieved from http://www.fao.org/fileadmin/user_upload/contract_farming/Uniform%20Law%20review_Pultrone.pdf

²⁴ Australian Dairy Industry: Rebuilding Trust and a Fair Market for Farmers. (2018). Retrieved from <http://apo.org.au/system/files/102881/apo-nid102881-416026.pdf>

²⁵ Vavra, P. (2009). Role, Usage, and Motivation for Contracting in Agriculture. OECD Food, Agriculture, and Fisheries Working Papers. Retrieved from <https://www.oecd.org/tad/agricultural-trade/43057136.pdf>

5. ACCEPT

Establish a long-term contract (5 to 7 years, instead of 6 to 12 months), in which formulated through a standardized framework. This framework includes a price calculation, what to do in case a risk event occurs, and the clauses pertaining to the treatment of price per volume. In this case, producers are required to implement the contract in order to operate and develop. This is one of the cases implemented in France. This method anticipates the risk of price fluctuation from the beginning and forces all parties involved in the contract to accept the risk²⁶.

In order to analyse which alternative is the most feasible, some attributes are chosen to assess the solutions²⁷:

- Cost to Implement: How expensive it is to implement the solution.
- Fairness: Since one of the root causes of the risks found within dairy contracting is unequal risk sharing; it is important to ensure the fairness of the solution.
- Completeness: Is used to assess whether the solution covers all the necessary elements that create the risk.
- Degree of formality: This aspect evaluates the degree to which the solution is legally binding.
- Transparency: This element concerns the transparency of the solution to all parties involved in the contract.

Step 3:

In order to assess the aforementioned attributes, the first step is to perform the “demonstrating lexicography” method to identify the rank of the attributes from the most important to the less important. This is done by performing a pair-wise comparison and awarding a score of 1 for a more essential attribute within the pair, and 0 for the less essential one.

²⁶ Trouvé, A., Dervillé, M., Pouch, T., Kroll, J., Briot, X., & Lambaré, P. et al. (2016). Study of Measures Against Market Imbalance: What Perspectives After Milk Quotas in the European Dairy Sector?. Retrieved from http://agriculture.gouv.fr/sites/minagri/files/study_of_measures_against_market_imbalance_-_summary.pdf

²⁷ Dairy Industry, Code of Best Practice on Contractual Relationships. (2018). Retrieved from <https://www.nfuonline.com/code-of-practice-booklet/>

Demonstrating Lexicography						
	Cost to Implement	Fairness	Completeness	Degree of Formality	Transparency	Ordinal Ranking
Cost to implement	x	0	0	0	0	0
Fairness	1	x	0	0	1	2
Completeness	1	1	x	0	1	3
Degree of Formality	1	1	1	x	1	4
Transparency	1	0	0	0	x	1

Figure 2: Demonstrating Lexicography Table²⁸

From this analysis, it is concluded that the most important attribute is the degree of formality, followed by completeness, fairness, transparency, and lastly the cost to implement.

Step 4:

After prioritizing the attributes, the next step is to compare the attributes against the possible solutions. The method used for this step is the “Multi-Attribute Decision-Making Model”, which is depicted in Figure 3.

Best Choice	Neutral Choice	Worst Choice			
Attribute	Transfer	Share	Avoid	Mitigate	Accept
Cost to implement					
Fairness					
Completeness					
Degree of Formality					
Transparency					

Figure 3: Multi-Attribute Decision Making Model²⁹

In order to narrow the choices down, the next step is the “Demonstrating Dominance” model in which the solutions are being paired up and assessed against each other, which is shown in Figure 4.

Attribute	Transfer vs Share	Transfer vs Avoid	Transfer vs Mitigate	Transfer vs Accept	Share vs Avoid	Share vs Mitigate	Share vs Accept	Avoid vs Mitigate	Avoid vs Accept	Mitigate vs Accept
Cost to implement	WORSE	WORSE	MAYBE	WORSE	BETTER	WORSE	BETTER	BETTER	BETTER	EQUAL
Fairness	WORSE	WORSE	WORSE	WORSE	EQUAL	EQUAL	BETTER	EQUAL	BETTER	BETTER
Completeness	EQUAL	WORSE	WORSE	EQUAL	EQUAL	WORSE	BETTER	BETTER	BETTER	BETTER
Degree of Formality	EQUAL	BETTER	BETTER	EQUAL	BETTER	WORSE	EQUAL	WORSE	WORSE	EQUAL
Transparency	BETTER	BETTER	MAYBE	MAYBE	EQUAL	EQUAL	BETTER	EQUAL	BETTER	EQUAL
DOMINANCE	NO	NO	NO	NO	MAYBE	NO	YES	MAYBE	MAYBE	MAYBE

Figure 4: Demonstrating Dominance Model³⁰

²⁸ By author
²⁹ By author
³⁰ By author

The next step is to quantify each solution against the attribute. The “best”, “neutral”, “maybe”, and “worse” are given scores of 1, 0.5, 0.3, and 0 respectively. Through quantification, the possible solutions can be narrowed down. **The total score that results less than 3 will be eliminated** since it does not demonstrate dominance. This quantitative approach is depicted in figure 5.

Attribute	Transfer	Share	Avoid	Mitigate	Accept
Cost to implement	0.3	1	1	0.3	0
Fairness	0	1	1	0.5	0.5
Completeness	0	1	0.3	1	1
Degree of Formality	1	1	0	0.3	1
Transparency	0.3	1	1	1	0
TOTAL	1.6	5	3.3	3.1	2.5

Figure 5: Quantitative Method of Multi-Attribute Decision Making Model³¹

As a result, the three possible solutions that will be analysed further in this paper are “share”, “avoid”, and “mitigate”.

FINDINGS

The three possible solutions are now evaluated based on their practices in the selected countries (France, USA, and Australia).

I. FRANCE

Share: in order to ensure fair risk sharing amongst farmers and processors, the inclusion of dispute resolution, price fluctuation treatment, and other possible risk event occurrence must be included in dairy contracting according to the standard established by the Customer Protection Act and the Future of Agriculture, Food and Forestry (LAAAF)³².

Avoid: the *French Centre National Interprofessionnel de l'Économie Laitière* (CNIEL) has published a set of code of conduct comprises of recommended practices and explanations in order to share knowledge to farmers and help them understand better the dairy contracting³³.

³¹ By author

³² Perrot, C. (2017). The Dairy Sector in France. Retrieved from https://www.moag.gov.il/yhidotmisrad/research_economy_strategy/publication/2018/Documents/4%20Christophe%202017%2012%2019%20ENPARD%20idele_final.pdf

³³ Guide des Bonnes Pratiques Contractuelles de l'Interprofession Laitière. (2018). Retrieved from http://www.fnab.org/images/files/actions/filieres/Guide_bonnes_pratiques_contractuelles_CNIEL_Mars_2011.pdf

Mitigate: “in France, farm structure and the spatial distribution of production are heavily influenced by the implementation of quotas”³⁴. This leads to a risk of producers bearing the disadvantage of loss and are more subjected to price risks. Nevertheless, since 2014, France’s LAAAF have been working to establish a standard of contract frameworks, which in particular trying to ensure fairness in price so that farmers are not heavily burdened by the volatility nature of the commodity. They have also been reinforcing the mediation of formalisation through contract in the dairy sector³⁵.

II. USA

Share: there are several instruments to ensure equal risk sharing and protect farmers in the States. One of them is the Margin Protection Programme for Dairy Producers (MPP-Dairy), that basically works as an insurance cover that has a reasonable price for the farmers. It guarantees a margin of \$4,00/cwt (centrum weight; 100 pounds of milk) and an administrative fee of \$100 per annum³⁶.

Avoid: there have not been many practices in which the United States Department of Agriculture (USDA), or any related government body for this matter, provides soft law and guidelines or code of conduct to educate farmers, and eliminate a risk occurrence probability³⁷.

Mitigate: the core of risk mitigation in dairy contracting as mentioned in previous sections is government involvement. In the United States, the government implements the Dairy Product Donation Programme (DPDP) in case of risk event in which the milk price drops below the determined price margin. Should such event occurs the USDA has to intervene by purchasing the milk at market price. Afterward, since it is not feasible to store the purchase, the USDA then will distribute the milk through food programmes for low-income families³⁸.

³⁴ Trouvé, A., Dervillé, M., Pouch, T., Kroll, J., Briot, X., & Lambaré, P. et al. (2016). Study of Measures Against Market Imbalance: What Perspectives After Milk Quotas in the European Dairy Sector? Retrieved from http://agriculture.gouv.fr/sites/minagri/files/study_of_measures_against_market_imbalance_-_summary.pdf

³⁵ Trouvé, A., Dervillé, M., Pouch, T., Kroll, J., Briot, X., & Lambaré, P. et al. (2016). Study of Measures Against Market Imbalance: What Perspectives After Milk Quotas in the European Dairy Sector? Retrieved from http://agriculture.gouv.fr/sites/minagri/files/study_of_measures_against_market_imbalance_-_summary.pdf

³⁶ Trouvé, A., Dervillé, M., Pouch, T., Kroll, J., Briot, X., & Lambaré, P. et al. (2016). Study of Measures Against Market Imbalance: What Perspectives After Milk Quotas in the European Dairy Sector? Retrieved from http://agriculture.gouv.fr/sites/minagri/files/study_of_measures_against_market_imbalance_-_summary.pdf

³⁷ Schaper, C., Lassen, B., & Theuvsen, L. (2009). Risk Management in Milk Production: A Study in Five European Countries. *EAAE*. Retrieved from https://www.researchgate.net/publication/46473132_Risk_Management_in_Milk_Production_A_Study_in_Five_European_Countries

³⁸ Trouvé, A., Dervillé, M., Pouch, T., Kroll, J., Briot, X., & Lambaré, P. et al. (2016). Study of Measures Against Market Imbalance: What Perspectives After Milk Quotas in the European Dairy Sector? Retrieved from http://agriculture.gouv.fr/sites/minagri/files/study_of_measures_against_market_imbalance_-_summary.pdf

III. AUSTRALIA

Share: the keyword from risk sharing strategy is fairness. According to the Australian Farmer Power organization, “the agreement within the dairy sector in Australia can be classified as deregulated. This is due to the nature of the clauses that results to the risks being borne by the farmers, lack of transparency and accountability in pricing, and a range of restrictive practices that prevent dairy farmers from effective negotiation with processors”³⁹. There’s also no clear procedures for conciliation, in which burdens the farmers even more in case of dispute.

Avoid: currently, there is no soft laws or best practices published by any government body to help farmers gain equal knowledge and avoid unfair dairy contracting clauses that can dis-benefit them⁴⁰.

Mitigate: one of the known practices to mitigate risk in Australia is the *milk levy*. Farmer Power, an organization for farmers, “advocated for the introduction of a levy on milk sales to ‘stem the exodus of farmers from the industry’. According to them, the amount of money collected from the milk levy could be effectively used as an insurance for protecting the farmers”⁴¹. However, there are two opponents to this view; the Department of Agriculture and Water Resources takes an opposing side and stated that “the milk levy could put Australia in a difficult position to advocate against domestic dairy support measures in other countries when negotiating trade agreements”⁴². In addition, Dairy Connect also supports this argument by saying that “previous milk levies had not worked for farmers.” That is why they are reluctant to support any further milk levies incentive⁴³.

Based on these findings, one element that has proven to be vital and effective in all countries is the government’s role in facilitating fair contractual agreements between all parties and ensuring fair risk sharing. Even in Australia’s case, where the government has not been advocating concrete regulations to protect the farmers, it only supports the view that within dairy contracting, an environment in which many stakeholders are involved and the nature of the contract that usually

³⁹ Robertson, A. (2018). Farmer Power. ACCC. Retrieved from https://www.accc.gov.au/system/files/Farmer%2520Power_0.pdf

⁴⁰ Robertson, A. (2018). Farmer Power. ACCC. Retrieved from https://www.accc.gov.au/system/files/Farmer%2520Power_0.pdf

⁴¹ Australian Dairy Industry: Rebuilding Trust and a Fair Market for Farmers. (2018). Retrieved from <http://apo.org.au/system/files/102881/apo-nid102881-416026.pdf>

⁴² Australian Dairy Industry: Rebuilding Trust and a Fair Market for Farmers. (2018). Retrieved from <http://apo.org.au/system/files/102881/apo-nid102881-416026.pdf>

⁴³ Myers, P. (2018). The Australian Dairy Industry. Dairy Australia Retrieved from https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=14&cad=rja&uact=8&ved=2ahUKewjfilW5rsDeAhVmxoUKHbtzD3sQFjANegQIARAC&url=https%3A%2F%2Fwww.austrade.gov.au%2FArticleDocuments%2F5252%2FDairy%2520Australia%2520South%2520East%2520Asia%2520Industry%2520Engagement%2520Seminar%25202017.pdf.aspx&usg=AOvVaw19hu-cCX8ZpSCr26S_7bfm

burdens the farmers, the government needs to set clear and fair rules to set a benchmark for contract formulation⁴⁴.

If we take a look at France's way of controlling and setting the benchmark, since 2014 the government has been improving the dairy contracting situation and reducing the risk shared that normally tends to burden the farmers⁴⁵. Furthermore, the published code of conduct and suggested best-practices, even though not legally binding, it helps the farmers in contract negotiation and understanding the mechanism behind dairy contracting⁴⁶. Through these findings, it can be said that the government support in establishing benchmark and code of conduct/best practices (risk sharing and avoidance) is one of the ways to reduce the risk in dairy contracting.

The next step is to evaluate this proposed method through Kurt Lewin's Force Field analysis in order to observe both the forces that drive and resist this change. Each of the elements are given score from 1 to 4 based on how strong is that factor can influence the suggested change (1 being weak, and 4 being strong), and the end score is calculated to see whether the change is feasible to be implemented and what can be done to anticipate the resisting change⁴⁷. The analysis is shown in Figure 6.

⁴⁴ Trouvé, A., Dervillé, M., Pouch, T., Kroll, J., Briot, X., & Lambaré, P. et al. (2016). Study of Measures Against Market Imbalance: What Perspectives After Milk Quotas in the European Dairy Sector? Retrieved from http://agriculture.gouv.fr/sites/minagri/files/study_of_measures_against_market_imbalance_-_summary.pdf

⁴⁵ Trouvé, A., Dervillé, M., Pouch, T., Kroll, J., Briot, X., & Lambaré, P. et al. (2016). Study of Measures Against Market Imbalance: What Perspectives After Milk Quotas in the European Dairy Sector? Retrieved from http://agriculture.gouv.fr/sites/minagri/files/study_of_measures_against_market_imbalance_-_summary.pdf

⁴⁶ Guide des Bonnes Pratiques Contractuelles de l'Interprofession Laitière. (2018). Retrieved from http://www.fnab.org/images/files/actions/filieres/Guide_bonnes_pratiques_contractuelles_CNIEL_Mars_2011.pdf

⁴⁷ Force Field Analysis Analyzing the Pressures For and Against Change. (2018). Retrieved from https://www.mindtools.com/pages/article/newTED_06.htm

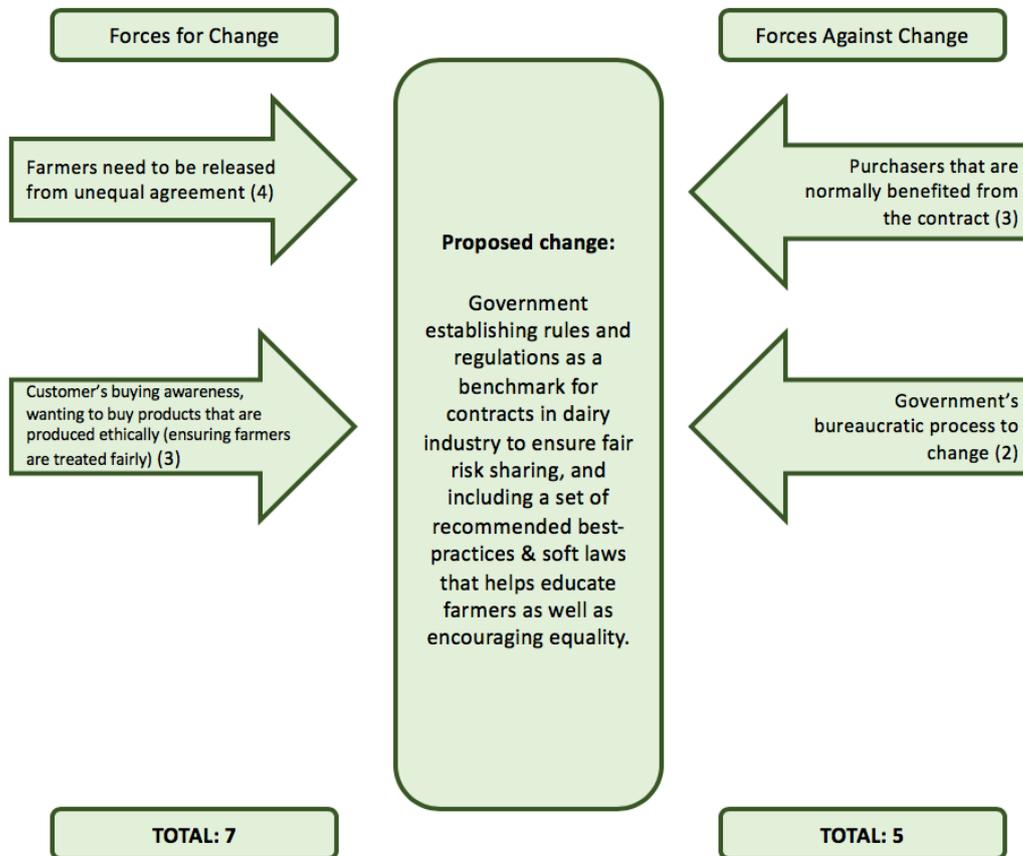


Figure 6: Force Field Analysis for Government's Involvement in Dairy Contracting⁴⁸

Indeed, there are challenges in implementing the proposed method, especially since it involves many stakeholders and changing a part of government's body requires time and lengthy bureaucratic process. Nevertheless, the forces for change shows a stronger force and the research findings have shown the positive impact of this solution as aforementioned⁴⁹.

CONCLUSION & RECOMMENDATION

Contract management in the dairy industry has been increasing in terms of popularity due to its potential to generate benefits if managed conscientiously. Some of these benefits, to name a few, are helping farmers and buyers to solve disputes, steadier supply of the raw material, enhanced quality, and fair risk sharing⁵⁰. It is globally recognized that there are challenges in dairy contracting. This paper answers the questions of:

⁴⁸ By Author.

⁴⁹ Trouvé, A., Dervillé, M., Pouch, T., Kroll, J., Briot, X., & Lambaré, P. et al. (2016). Study of Measures Against Market Imbalance: What Perspectives After Milk Quotas in the European Dairy Sector? Retrieved from http://agriculture.gouv.fr/sites/minagri/files/study_of_measures_against_market_imbalance_-_summary.pdf

⁵⁰ Pultrone, C. (2012). Revue de Droit Uniforme. Retrieved from http://www.fao.org/fileadmin/user_upload/contract_farming/Uniform%20Law%20review_Pultrone.pdf

1. What are the risks in contracts within the projects in dairy industry?
2. What factors trigger the risks?
3. How can we improve the contract clauses in the dairy industry project so that a fairer agreement to all parties (especially farmers) can be achieved?

By conducting a root-cause analysis of these risks, four main causes are found; **pricing** (volatility nature of milk as commodity that often burdens farmers)⁵¹, **contract incompleteness** (no benchmark to be followed in contract formulation)⁵², **unfair contract clauses** (lack of farmer's knowledge in dairy contracting, and no support from government)⁵³, **no clear conciliation procedure** (in case of dispute, no clear procedure to follow)⁵⁴.

After establishing the problem and root-cause analysis, several feasible alternatives are developed based on the project management method in managing risks which are transfer, share, avoid, mitigate, and accept⁵⁵. These feasible alternatives are then evaluated through the quantitative method of a multi-attribute decision-making model. This leads to a further analysis of how risk sharing, risk avoidance, and risk mitigation are implemented in three chosen countries (France, USA, and Australia) in order to identify good practices and bad practices that can be adapted into a final recommendation for best practice to improve dairy contracting.

“Different countries have utilized different definitions and conceptions of contracting in the dairy industry and have chosen to regulate it in different ways as well”⁵⁶. The findings show that France has been implementing all three risk management strategies. A contract framework is established by a government body to ensure fair treatment⁵⁷, and a set of code of conduct is also published to

⁵¹ Trouvé, A., Dervillé, M., Pouch, T., Kroll, J., Briot, X., & Lambaré, P. et al. (2016). Study of Measures Against Market Imbalance: What Perspectives After Milk Quotas in the European Dairy Sector? Retrieved from http://agriculture.gouv.fr/sites/minagri/files/study_of_measures_against_market_imbalance_-_summary.pdf

⁵² Schaper, C., Lassen, B., & Theuvsen, L. (2009). Risk Management in Milk Production: A Study in Five European Countries. *EAAE*. Retrieved from https://www.researchgate.net/publication/46473132_Risk_Management_in_Milk_Production_A_Study_in_Five_European_Countries

⁵³ Schaper, C., Lassen, B., & Theuvsen, L. (2009). Risk Management in Milk Production: A Study in Five European Countries. *EAAE*. Retrieved from https://www.researchgate.net/publication/46473132_Risk_Management_in_Milk_Production_A_Study_in_Five_European_Countries

⁵⁴ Bachev, H. (2016). Risks and Risk Management in Agri-food Chains. *Journal of Economics Bibliography*, 3(2). Retrieved from <http://www.kspjournals.org/index.php/JEB/article/view/742>

⁵⁵ Berg, H. (2018). Risk management: procedures, methods and experiences. Retrieved from <https://cyberleninka.ru/article/v/risk-management-procedures-methods-and-experiences>

⁵⁶ Pultrone, C. (2012). *Revue de Droit Uniforme*. Retrieved from http://www.fao.org/fileadmin/user_upload/contract_farming/Uniform%20Law%20review_Pultrone.pdf

⁵⁷ Perrot, C. (2017). The Dairy Sector in France. Retrieved from https://www.moag.gov.il/yhidotmisrad/research_economy_strategy/publication/2018/Documents/4%20Christophe%202017%2012%2019%20ENPARD%20idele_final.pdf

improve farmer's knowledge in contracting so that they can be well-equipped to negotiate⁵⁸. In the USA, there are several incentives and regulations for risk sharing and risk mitigation such as the MPP-Dairy that acts as an insurance for the farmers in case price fluctuates⁵⁹, and the DPDP that has the role to mitigate risk. In Australia, there has been some heat between the farmer's organization and the government due to unfair clauses in the contract that burdens the farmers. Weighing in Australia's uncertain climate, the risk of price fluctuation is even higher than in other countries. Currently, the government has not established a benchmark to a transparent and standardized contract⁶⁰.

To conclude, the same elements that are discovered in those findings is the importance of government's role in dairy contracting. Be it through establishing a benchmark to standardize contract clauses that are implemented with transparent and fair principles, or by providing support and increase farmers' knowledge in contracting through a code of conduct⁶¹. This 'change' is then analysed through Kurt Lewis' Force Field analysis, which evaluates a proposed change against the forces for and against change. Indeed, there are always challenges in implementing a change. Yet, the total score from the analysis supports the benefit of implementing the change.

All in all, the way to improve dairy contracting that can be concluded from this research paper is to encourage government's role in establishing rules & benchmarks for contract clauses that treats the parties involved equally, and to publish (as well as mediate) the code of conduct for best practices in order to help farmers gain knowledge about contracting which will enable them to gain an equal position in negotiating⁶². Through this, the risk in contract within the dairy industry can be minimized and a fair practice can be implemented to benefit all parties.

⁵⁸ Guide des Bonnes Pratiques Contractuelles de l'Interprofession Laitière. (2018). Retrieved from

http://www.fnab.org/images/files/actions/filieres/Guide_bonnes_pratiques_contractuelles_CNIEL_Mars_2011.pdf

⁵⁹ Trouvé, A., Dervillé, M., Pouch, T., Kroll, J., Briot, X., & Lambaré, P. et al. (2016). Study of Measures Against Market Imbalance: What Perspectives After Milk Quotas in the European Dairy Sector? Retrieved from

http://agriculture.gouv.fr/sites/minagri/files/study_of_measures_against_market_imbalance_-_summary.pdf

⁶⁰ Myers, P. (2018). The Australian Dairy Industry. Dairy Australia Retrieved from

https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=14&cad=rja&uact=8&ved=2ahUKEwjfiW5rsDeAhVmxoUKHbtzD3sQFjANegQIARAC&url=https%3A%2F%2Fwww.austrade.gov.au%2FArticleDocuments%2F5252%2FDairy%2520Australia%2520South%2520East%2520Asia%2520Industry%2520Engagement%2520Seminar%25202017.pdf.aspx&usg=AOvVaw19hu-cCX8ZpSCr26S_7bfm

⁶¹ Trouvé, A., Dervillé, M., Pouch, T., Kroll, J., Briot, X., & Lambaré, P. et al. (2016). Study of Measures Against Market Imbalance: What Perspectives After Milk Quotas in the European Dairy Sector? Retrieved from

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⁶² Trouvé, A., Dervillé, M., Pouch, T., Kroll, J., Briot, X., & Lambaré, P. et al. (2016). Study of Measures Against Market Imbalance: What Perspectives After Milk Quotas in the European Dairy Sector? Retrieved from

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About the Author



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