

Salt-making as a stunting enterprise and practice: the case of Ilocos Sur, Philippines

Annabelle B. Francisco ✉; Ilocos Sur Polytechnic State College, Philippines

Noel L. Lllamar; Ilocos Sur Polytechnic State College, Philippines

Ephraime Hyacinth R. Chavez; Ilocos Sur Polytechnic State College, Philippines

Abstract: To document the current circumstances of the salt farmers in Ilocos Sur, Philippines and to confirm if in this side of the country, salt-making is really a ‘dying’ industry, the study used the multiphase case study design. The continuing situation of salt production in the context of the two communities covered in this study, as a low productivity, low-income industry characterized by the presence of a growing intergenerational gap in the transfer of knowledge, skill, and practice in salt making indicates an impending total weakening, if not dying, of the industry in the coming years. Its existence for years without expanding despite its potentiality in sustaining the financial and socio-economic needs of the salt-makers signifies its stunting status, obviously needing an immense recalibration both in the salt makers’ and the government’s mindset of development, process, and technological use.

Keywords: Salt-making industry, salt farmers, case study

✉ bellefrancisco@ispsc.edu.ph

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INTRODUCTION

Salt is a common need worldwide, but the industry is ruined by climate change and the salt producers' dependence to age-old production methods. These severely affects salt farms which led to the incessant deterioration of the industry. In the Philippines, the country depends on imports to keep up with local demands.

Salt production in the Philippines was once a vibrant industry. In 1990, provinces like Bulacan, Pangasinan, Occidental Mindoro, and Cavite could supply almost 85% of the country's annual salt requirement. By 2010, production suddenly dropped to less than half. Unable to withstand the competition, many salt farms started closing one after the other, and salt farmers were forced to sell to land developers. Meanwhile their children, seeing no future in the salt farms, started migrating to the cities or abroad, leaving their elders no one to pass on the trade. Furthermore, there were large producers who were forced to close their salt farms or convert their areas into other profitable avenues such as fishponds, residential, or commercial properties.

To document the current circumstances of the salt farmers in Ilocos Sur, Philippines and confirm if in this side of the country, salt-making is really a 'dying' industry, this inquiry explores how salt-making is viewed both as enterprise and as practice by the Ilocanos.

METHODS

The study used the multiphase case study design. Using convenient sampling where interviewees were based on who were available during the time of the data gathering, the participants of the study were five (5) salt makers and one (1) community leader from two communities, one in the municipality of Santa Maria, and one in the city of Candon, both are situated in the second district of Ilocos Sur. In-depth interviews were conducted using the focus group discussion style.

Imperative protocols and mechanism by each target locale of the study shall be followed prior to the implementation of the project. Upon approval to conduct the study, an interview guide containing a priori codes and interview questions shall be constructed. The interview guide shall also be used in developing the observation protocols which will be used in the class observation and field visits.

Thematic analysis and determination of themes were completed promptly as to the grab the essence of the case and answer the research questions.

To ensure the protection, privacy, and anonymity of the interviewees in this study, their names and the names of their communities were withheld. Instead, the codes Participants 1 to 6 were used to pertain to the interviewees and Barangays A and B were used to refer to their respective communities. The municipality of Santa Maria and the City of Candon, being situated in the second district of Ilocos Sur, Philippines as the study's sites, however, were not concealed as their mention is important to establish the context of the study, at least at the municipal level.

RESULT AND DISCUSSION

The thematic analysis of the transcript reveals five major areas that constitute the salt-making enterprise and practice among the communities covered in this study. These are the salt-making productivity situation, socio-economic essence of salt-making, marketing and financial realities in salt production, gender roles in salt-making practices, and intergenerational transfer of the salt-making knowledge, skill, and practice. Each of these themes were explicated in the succeeding discussions.

Theme 1. Salt-making productivity situation

Salt-making productivity deals with the ability of the salt-makers to produce a considerable and consistent amount of salt. In the context of this study, salt-making, in general, has low productivity. This result is associated with several factors that include the limited daily salt produce resultative from the traditional salt-making practices and preferences by the salt-makers, the limited amount of equipment for brine boiling as affected, in some ways, by the limited manpower. The seasonal salt production brought about by the reliance on dry season to produce salt also affects the productivity. This low productivity level makes salt-making a small-scale industry in the study sites even though salt-making has been the communities' activity for how many decades now as revealed by the interviewees.

1.1 Traditional salt-making practices and preferences

While most of the salt-making communities in the Philippines utilize the solar evaporation method (for example, see Yankowski 2019; 2007; Delos Reyes et al., 2021; Bartolome et al., 2022; Sadun-De Vera et al., 2021), the two communities covered in this study are among the few salt-making sites that adopt the leached brine boiling method of salt production (Yankowski, 2019) and intend to continue adopting such for the quality of salt produced out of it, interviewees disclosed. According to them, the salt quality out of this method is preferred by their clients as it is more useful for bagoong [fish paste] production. Salt produced by this method has finer texture and whiter color (Nutrition Council of the Philippines, 2010) compared to that one produced by solar evaporation method and can be likened to the Class A salt utilized for home consumption (Bartolome et al., 2022).

Barangay A, whose salt-making area is along the riverbank, relies heavily on natural irrigating technique where water coming from the river whose water comes from the adjacent sea overflows and floods the nearby rice fields during rainy season,

leaving it saline when the water eventually subsides. These fields are left dried during summer and the salt-makers take advantage of this situation by creating plots in these fields and continually watering them with saltwater until there are enough salt deposits visible in the soil. They, then, scrape the *tapok* or *apaya* (soil with salt deposits) from the rice fields and carry the same to the nearby hut along the riverbank which serves as their kitchen for cooking salt. The *tapok/apaya* is then placed in a coffin-like vessel called *kalungkong* with a filter at the base. The *tapok/apaya* is poured over with saltwater to leach out the salt and make the clear brine solution (Yankowski, 2019; Yankowski & Kerdsap, 2013). The brine is, then, boiled in batches in the *anawang*, an improvised rectangular metal sheeting made into a shallow tray (Yankowski & Kerdsap, 2013). The resulting salt is then left to dry in open air to improve its color.

Barangay B, while generally follows the cooking method utilizes by Barangay A, depends much on the sea for its *apaya*. Plots of raked and cleaned sand are made along the seashore and sprinkled with seawater for several days (Yankowski, 2019) until enough salt deposits are visible. The *apaya* is, then, collected and placed in the *kalungkong* situated in the salt makers' front or backyard, with saltwater poured over it and filtered to produce the brine. The brine is, then, cooked to get the salt.

While the salt-makers primarily consider salt-making a business, with the leached brine boiling method, they only produce an average of 12-18 *salop* (a Filipino unit of grain measurement equivalent to liters) of salt from two to three sets of brine cooking per day. Each set of brine cooking lasts for about two to four hours. From the 12-18 *salop* of salt produced, only around two to four *salop* are sold regularly, with the rest being stocked for future selling when the bagoong makers come to buy in bulk.

1.2 Seasonal salt production

As with other salt-making communities that use the traditional method, Barangays A and B are dependent on the dry season for their salt production. The water level in the river (for Barangay A) and the sea (for Barangay B) serve as the determinants of the operationality of salt-making. This makes salt-making a seasonal source of income for many salt-makers while the others construct their bodega (stock house) to stock as many *apaya* as possible so that they can still cook during the rainy season.

The salt-makers' dependence on season for salt production was equally observed by Delos Santos et al. (2021) among salt-makers in Misamis Oriental, with productivity higher during dry season where saltbeds are more likely to dry faster to form salt deposits into bricks which are then scraped for boiling. Consequently, though, while Ilocos Sur has a considerably hot temperature, supposedly making salt production a convenient practice for the salt makers, the dry and rainy seasons, nowadays, are heavily affected by climate change, with rain coming in during summer, for instance; hence, climatic predictability even becomes harder for the salt-makers, making salt-making a constant gamble among many of them.

For Barangay A whose source of *apaya* is flooded during rainy days, the alternative source of income is fishing. Salt-makers in Barangay B, on the other hand, couple salt-making activity with other agricultural tasks as farm workers, i.e., being paid per day for harvesting peanut, rice, and corn crops. A similar result was observed in the studies of Sagun-De Vera et al. (2021) and Prastiwi (2019) where salt-makers often take fishing as alternative sources of income during rainy season where natural sunlight, as an important element in the evaporation process of salt-making, is less likely to be utilized. Also, in the case of the research sites in this study, the potential sources of salt deposits are submerged in water during rainy season.

With the seasonal salt making activities in the two communities under study a regular concern, productivity is least likely to improve. Often, salt making, as an enterprise, becomes more of an alternative source of income rather than a prime one. Salt-makers, then, are at risk of eventually losing their heritage.

1.3 Technology availability and preference for salt quality

Both barangays prefer the quality of salt produced in the leached brine boiling method primarily because their regular buyers are bagoong makers and according to these buyers, as shared by the interviewees, the quality of bagoong produced out of the cooked salt is better than the salt produced out of the solar evaporation method. This delimits the production to leached brine boiling with smaller production space and slower process, eventually resulting to a lower output.

While there have been efforts from government agencies to help the salt-makers improve the process by introducing newer technology, the salt-makers are apprehensive because they believe the technology does not help them. For instance, in Barangay A, as Participant 2 shared, the government has introduced a technology that pumps saltwater from the sea directly to the cooking area. But the salt produced, according to him, is rock salt, which, the bagoong makers rejected, and still preferring the salt produced out of the leached brine boiling method.

A similar reaction was observed in Barangay B regarding the technology. Salt-makers did not want the process of directly boiling seawater because they believe it was impractical to do so. Participant 6 shared:

"Yung [government agency, name withheld], nagpatraining sa amin sa asin, kaso lang yung ipina-training sa amin, hindi namin gusto, kasi sabi nila, yung galing daw

na tubig sa dagat ang luluuin namin, eh paano yung gagawin namin na asin? Kapag naluto ay kunti lang yung makukuha naming asin. Kahoy pa lang, lugi na kami. Tapos sabi nila, yung paglulutan namin, kasi kapag umuulan daw ay doon sa bahay namin, e paano ang mahal mahal ng gasul” [We had a training with the [government agency, name withheld], but we did not like the idea of directly cooking seawater as we only get little salt out of it. Just on the firewood alone, we are already broke. Then, they said during rainy days, we’ll cook at home; it costs us much with the LPG.]

While the effort of the government to improve the productivity of the salt-making industry in Ilocos Sur, through the introduction of newest salt-making technology, may be of pure intention, the salt-makers’ inability to properly comprehend its usage and importance indicates the lack of proper communication and the absence of participatory development that hinders the goal for productivity to prosper. A mismatch of the technology needs and the technology provided is apparent in this situation.

1.4 Salt-making as a small-scale industry

Another factor affecting the productivity of salt-making in the areas covered in the study is the continuing projection of salt-making as a small-scale industry. Based on the interviews, only about 14 salt-makers are actively producing salt in Barangay B while observation indicates an even lower number of salt-makers at less than 10 in Barangay A. This decrease of salt-makers is associated with the aging manpower in Barangay A which is also affected by the continually increasing disinterest among the younger generation to venture on salt-making as an enterprise and a practice (see discussion in intergenerational transfer), a phenomenon initially observed by Yankowski (2007) as a situation among salt-makers in Bohol, predicting salt-making in this province to be extinct in the coming years.

Similarly, salt making activities in both communities are run as family-based venture. As such, the business is rather personal and private than a community-based one. Being private in nature, it is more difficult to find funding agencies that would help with the provision of capital for expansion. Interviewees from Barangay A indicated their need for financial assistance, but an employee from the Department of Science and Technology (DOST) said it would be difficult to help the salt-makers, despite the constant effort of the agency to assist the communities in need through its grants-in-aid program, because they are not part of organized associations. While interviewees from Barangay B indicated their membership in a newly formed salt-makers association, they said the salt-making facility provided by a government agency is yet to be established.

Salt-making in the two barangays is also a low-income enterprise characterized by the unregulated prices and the lack of suggested retail price. As a low-income enterprise, salt-making only provides less than Php 10, 000 gross income for families that regularly cook salt within a month, less the expenses for firewood and maintenance of the cooking facility. The income is even lower as most salt makers do not cook regularly. Relative to pricing, based on the interview, both barangays sell their produce at P50.00 per *salop*. Even so, the price is unregulated and there is no standard price for all. Specific for Barangay B, the price can go up to P60-70 per *salop* when there is abundance of *monamon*, the fish usually used for bagoong making. Participant 5 said when other salt makers increased the price of their products, they would do the same.

In the study of Delos Santos et al. (2021), based on profitability analysis, salt production was seen as a generally profitable enterprise and a good source of livelihood among the producers in Misamis Oriental. It must be noted, though, that the salt production in this place were held in salt farms, a lot bigger than in the two communities covered in this study. Salt

production in Barangay A is even smaller than that of Barangay B, as salt-makers only produce up to 12 *salop* in a day of cooking, with the cooking periods pegged irregularly at two-three times a week, even lesser at times. Following the current pricing of Php50 per *salop*, a salt-maker can produce up to a gross income of Php 600 per day. This, then, makes the current salt-making activities in the two communities at least able to cover the basic needs of the salt makers' respective families.

Theme 2. Socio-economic essence of salt-making

The contrast of answers relative to the socio-economic significance of salt-making in the study sites is apparent. Interviewees in both communities regarded salt-making as a primary source of income, on the one side, and an alternative/extra job, on the other side. As a major livelihood, salt-making provides for the needs of the families, including the required support for the children's education. In Barangay A, as Participant 2 revealed, salt-making has sent many students to school, eventually graduating as professionals, and several residents have constructed big houses out of it. A similar result was reflected in the study of Sagun-De Vera et al. (2019) where respondents said salt-making allowed them to send their children in school, buy hand tractors, scooters, and cars, put up salt stores, food stalls, and construct salt warehouses.

This result is both interesting and surprising for the communities under study primarily because salt-making here has been regarded as a low-income seasonal activity with low productivity, yet salt-makers testify for its ability to sustain their financial needs. Participant 2 said salt-making has thrived once in Barangay A with almost all residents living near the riverbanks having salt-making facilities established. As years passed, however, salt-making activities have been observed to decrease due to the aging manpower, with

most of the current generation uninterested in salt-making anymore. Evident from the interview, salt-making is now regarded as a "poor man's activity," and the only way to keep away from it is by encouraging the children to finish their education so that they won't experience the same hardship of salt-making as their parents have experienced.

As an extra source of income, salt-making in Barangay A lies in its seasonality, with fishing and fish cage rearing as the primary sources of income during rainy season. Salt-makers have established their fish cages in the river, and it is where they get financial support for their respective families. Farming is also a thriving livelihood in the community.

The scenario in Barangay B is quite different, although the contrast of answers is also evident. The interviewees revealed considering salt-making both a primary and a secondary source of income. As a primary source, salt-making is depended on for the acquisition of financial support for basic daily needs; residents cook salt and sell them to meet the daily needs of the family. As a secondary source, however, embracing the reality that salt-making is seasonal, the residents have other jobs where they get support for their finances. The residents engage in "per day" farm tasks where they are hired to plant or harvest crops like rice, peanut, corn, etc. daily. As the community is situated along the seashore, some residents also do fishing for personal consumption and small-scale business.

What's interesting in Barangay B is its regard for salt-making as a family-oriented business where members of the family are enjoined to participate in the salt-making activities from the preparation of the plots for the *apaya* to the drying of the cooked salt for selling or stocking. This is a contrast to Barangay A whose salt-making activity is struggling due to the aging population of salt-makers (for discussion, see intergenerational transfer).

The socio-economic scenario of salt-making in the communities under study reflect a similar circumstance to that of Yankowski's (2010) observation in Bohol where salt is produced at a household level, making it a low productivity enterprise. Yet, despite the low productivity, salt-making has been continually sustained as a family-owned venture, not expanding but also not dying.

Theme 3. Marketing and financial realities in salt production

Data from the interview reveal several marketing and financial realities on salt production in the study sites. These are presented in the succeeding discussions.

3.1 Marketing realities

In both communities, salt-makers do not have clear and solid marketing strategies to popularize and sell their products. They heavily rely on buyers/traders coming to their place. As earlier mentioned, the primary clients of these salt-makers are the bagoong makers who prefer their salt quality as they were told the salt produced out of the leached brine boiling method preserves the bagoong longer and better than the salt produced by solar evaporation method. While the communities have engaged in salt-making for a long period already, it is astonishing that their salt products remain unbranded with no proper packaging, unlike their iodized counterpart in the market. The researchers have experienced buying a *salop* of salt each from Barangay B, and as observed, the salt-makers did not have a packaging that should identify their product to be coming from them. While retaining a nameless salt product may be the most practical approach as far as the economic condition of the salt-makers is concerned, it is quite astounding to learn that it lasted for years yet the branding has not improved.

Interviews also disclose the impact of the pandemic to the salt-makers, particularly during the first few months

from its onset. This is understandable since series of lockdowns have been implemented which delimited the mobility of the buyers/traders to go to the communities. Interviewees in Barangay A shared that with the lockdowns in effect and with no clients coming to their place, they were forced to strategize how to sell their produce. Since the community was near the national highway, the women sold their salt there and had the motorists as their clients. With this strategy, they were able to sell around 2-5 *salop* of salt daily. Nonetheless, as alert level status in Ilocos Sur improved, the salt-makers were back to their business, continually serving their pre-pandemic clients who come to their place. This is another astounding observation on the part of the researchers, as the salt-makers' pre-pandemic clients are also their clients during the pandemic ---- no improvement.

The communities also did not have to contact their clients whenever they have the produce because according to them, the clients look for them. Interviewees from both barangays revealed that in most cases, they just cook salt whenever possible even if there were no clients because they would not know when these clients order from them; and when they do, they order in bulk. In Barangay B, they have the *kamarin* (salt storage facility) to store their produce if there are no clients. The strategy of stocking has also been observed by Bartolome et al. (2022) in their mapping of salt makers in Visayas and Mindanao. Small farmers in the Visayas, for instance, were seen to maintain a storage area in their houses where the harvested salt is stored until traders come to buy.

3.2 Financial realities

Salt-making in the communities covered in this study has been existing for years, even decades, as this venture is a heritage from the owners' ancestors, yet the usual issue raised was the lack of financial support for expansion. Interviewees signified their interest to receive financial support from the government, yet their

experience suggests a very limited government assistance. For Barangay A, the interviewees indicated that they have not experienced getting assistance from the government yet, although Participant 2 said there was a new technology provided for salt-making where seawater is directly pumped from the sea to the cooking station. This is the same technology that salt-makers in Barangay B rejected because of its perceived impracticality on their part.

Several salt-makers in Barangay B, on the other hand, have formed their association and have initially received government assistance through the salt cooking facility provided for them, but it is yet to be assembled/established. Even so, Participant 6 indicated her apprehension of the technology as it seeks to produce rock salt, not the usual finer salt produced in their traditional cooking method. With the change of salt product, they might be losing their regular bagoong maker clients who prefer their finer salt for bagoong production.

Theme 4. Gender roles in salt-making practice

The process of traditional salt-making, both with the leached brine boiling method and the solar evaporation method, among others, undergoes various labor-intensive steps before the salt is produced (Sagun-De Vera et al., 2021). Physical strength is undeniably very important in every step of the process as it requires carrying weight and being exposed to the heat of the sun and the cooking facility. Gender role in salt-making, then, is a factor considered in the practice and enterprise of salt-making.

Relative to the study, interview data from the research sites reveal a quite dichotomous gender role reality in salt-making practices where salt-making is seen as a prime task for men with women as helpers and assistants on the one hand and an opportunity for observing man-woman equality in performing salt-making

activities on the other hand. As observed in Barangay A, for instance, the role of women was limited to helping the men sprinkle the plot with saltwater, scraping it when enough salt deposits are observed, then collecting the *apaya* and placing the same to the *kalungkong* for leaching. The process of collecting the brine and cooking the same to make the salt is left to the men while the women go back home to prepare food. This scenario was confirmed in an interview with Participant 1, a male, indicating his wife “helped” him in the plot sprinkling, soil scraping, and soil transporting steps of salt making. Participants 3 and 4, both were women, also affirmed their role as limited to the functions stated above, with the addition of selling the salt along the national highway during the onset of the pandemic as an extra role.

On the other hand, while an imbalance on the men-women role in salt-making was still observed in Barangay B, with husbands doing much of the labor-intensive process of cooking and transferring salt to the *kamarin*, a more equal distribution of salt-making tasks between men and women was also apparent. Herein, some women, in the absence of men to perform the job, do all the processes of salt-making, including cooking the salt. Participant 5, a woman in her 50s, was an example of this role. During the time of the interview, she just finished cooking her salt product.

A similar result on the varying degree of men and women role in salt farming in Western Pangasinan has also been recorded in the study of Sagun-De Vera et al. (2021). Herein, the women’s role was much concentrated on helping in salt bed preparation, pre-cooking (i.e., scraping salt flakes from the bed and transporting the same to the cooking area), and post-cooking activities (i.e., packing and selling the salt). While their study acknowledged equality in terms of accomplishing several salt-making practices, the degree of regularity of their accomplishment varied, with men more

inclined to regularly accomplish the more labor-intensive practices than the women.

The aforesaid results implicate the prevailing presence of gender role disequilibrium in labor-intensive activities such as salt making. This reality can be associated with the prevailing stereotype of seeing gender roles as being “masculine” or “feminine,” (Kachel, Steffens, & Niedlich, 2016), and the notion that men are physiologically designed to carry out physically demanding activities and withstand heavier weights more durably than women. Yet, as gender and development progresses in the Philippines, through for instance, the passage and implementation of the Republic Act No. 9710 or the Magna Carta for Women which affirms the role of women in nation building, and thus, provides for their substantive equality with men, more women are venturing and are seen to be successful in accomplishing tasks that have been regarded as work for men; hence, women are seen as partners and co-equals in the performance of salt-making activities.

Theme 5. Intergenerational transfer of salt-making knowledge, skill, and practice

One essential aspect of ensuring the longevity of the salt-making enterprise is the transfer of its “know-what” and “know-how” from generation to generation. This is crucial because the success of doing so means a longer life for the business, while failure to do so means its gradual death. In the context of the communities covered for the study, the intergenerational transfer of salt-making knowledge, skills, and practice, or the lack of it, significantly affects the life of this venture which is, essentially, a heritage for many salt makers. In this study, there were two contrasting scenarios of intergenerational transfer of salt-making knowledge, skills, and practice ---- the first scenario projects the presence of intergenerational connection while the

second one displays the presence of intergenerational gap.

Results indicate, on the one hand, the presence of intergenerational connection among salt-makers, particularly those treating salt-making as a family affair where all members of the family have their respective roles in the salt-making process. This was apparent in Barangay B where the children have early exposure and engagement in the salt-making business as helpers of the parents in sprinkling the sand plots and collecting the same for leaching. Participants 5 and 6 shared having experience a similar exposure at young age; hence, the knowledge, skill, and practice of salt-making had been successfully transferred to them. This is evident to how they manage their respective salt-making businesses and that’s also what they do to their children; they engage them in salt-making as helpers/assistants as early as possible.

Data gathered in Barangay A show a contrasting result. The presence of gap in the intergenerational transfer of salt-making knowledge, skill, and practice is apparent. As earlier mentioned, the manpower of salt-making in Barangay A is aging and children are not engaged to the salt-making endeavors; rather, they are obliged to focus on their studies. In this sense, salt-making is only seen as a steppingstone for the children to finish their studies and eventually make a better living and move out of this “poor man’s activity.” Additionally, the growing disinterest of the younger generation in salt-making, is somewhat associated by Participant 2 with the children’s technological exposure nowadays, where, instead of helping their parents with the salt-making activities, they tend to rather focus on their gadgets.

Yankowski (2007) observed a similar trend in Bohol. As she predicted the nearing extinction of salt-making activities in several areas in the province despite the regular transfer of the salt-making knowledge from generation to generation,

she cited “intensive amount of labor and small economic return” (p. 37) as the primary reason why children of the present-day salt makers may no longer be interested in continuing the salt-making activity. This possibility is now, little by little, becoming visible in Barangay A as less and less community members become interested in taking over their families’ salt making business, with some forming their families away from the place, and some working far from their families.

CONCLUSION

The continuing situation of salt production in the second district of Ilocos Sur, Philippines in the context of the two communities covered in this study, as a low productivity, low-income industry characterized by the presence of a growing intergenerational gap in the transfer of knowledge, skill, and practice in salt making indicates an impending total weakening, if not dying, of the industry in the coming years. Its existence for years without expanding despite its potentiality in sustaining the financial and socio-economic needs of the salt-makers signifies its stunting status, obviously needing an immense recalibration both in the salt makers’ and the government’s mindset of development, process, and technological use. The initial step to this redevelopment of the salt production industry in the province is the need for attention from the authorities. This study provides for the base data of the situation which can be used in mapping out potential solutions to save the industry from its eventual death.

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