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Sustainable Utilization of “Arak Bali”; Processing It into Liqueur as Base Stuff for Food and Beverage Production

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Abstract

Tourism should properly be studied through the approach of social science, particularly cultural science, closely connected to economics and its impact on environment. As an important industry with its contribution to the prosperity of the society, gastronomy can be the right alternative to be developed in a destination to strengthen its position against its competitors at the global level. For that purpose the study on tourist's motivation in relation to culinary products becomes essential. Hotel as a place that accommodates the tourist's needs and wants should provide not only accommodation but also food, for the production of which the hotel needs certain innovation in utilizing local stuffs in the production food and beverage. This has become the background for this collaborative research between the Politeknik Negeri Bali and St. Regis Resort Bali focusing on the production of liqueur based on the utilization of local stuffs (raw materials), which can in turn be used as the based stuff for food and beverage production. This research aims at identifying the right local stuffs for the production of liqueur. Using soft system methodology (SSM) in its analysis this study found that pineapple is the most suitable local stuff for the production of liqueur for the reason that it is neutral in taste and available all year round.

Introduction

Tourism in the context of social science should be studied through social phenomena, particularly through the perception of cultural science. Cultural tourism comprises various activities both socially and economically with their impact upon both the visitors and the destiny being visited (Bahts, A. M. and Radolfpo.W.Krause, 2018). Tourism as an industry is so basic for economic growth in various countries. This has caused the tight competition between

destinations in their efforts to attract as many visitors as possible (Khandare and Narong Phophueksanand, 2018; Vázquez-Martinez, Ulpiano J., Calos Sanchis-Pedregosa, and Antonio . Leal-Rodrigues, 2019).

Many countries rely on gastronomy as a form of soft power whereby to promote their position in global market as shown by activities done for the economic growth in Asia (Richard,G, 2014; Hussin,H.2018:1). Utilizing creativeness in restaurant industry is essential for popularizing local culinary toward stimulating export as mentioned by Richard G. (2014). Tikkane's opinion in Bozic, Aleksandar, and Sava Janicevic (2016) is in line with the exposition presented above in terms of admitting the importance of understanding the underlying motivation of culinary tourists. In the previous study said that there are five types of motivation are found with culinary tourists. The five motivations of culinary tourists include: 1) those seeing food as attraction; 2) those seeing food as delicious thing to consume and enjoy leading even to their purchase of certain food stuff; 3) those seeking new experience in food matters; 4) those seeing food as cultural phenomena; and 5) those seeking to understand the relation between tourism and commodity production.

In order to reveal the tourist's needs during his stay in a destination Budi (2013) states that the accommodation/hotel can be used as the mediator through its function to meet the tourist's needs, mediating being in line with the hotel's basic function to guarantee the fulfillment of the visitors' needs and wants by means of all the facilities (resources) possessed by the hotel. Imparting clear information to the visitor concerning some product under attention could mean achieving an agreement upon the messages to be imparted internally despite there being the possibility of evaluating the restaurant's products belonging to a certain hotel could create an impact on external/foreign market. Collaboration through national campaign/promotion with maximum effect is essential to be done.

Collaboration with stakeholders should be done in order to share various values in the marketing campaign towards promoting the basic stuff for product production which at the same time means maintaining the gastronomic messages of other countries through networking. This collaboration involves not only food producer and restaurant but also international schools, tourist associations, and international tourist organization. This kind of collaboration can assists the country economically.

Crouch, G.I (2011) states that what needs to be prioritized in the consideration is that some excellent attribute of a destination, despite being important, cannot guarantee its becoming a determinant for competition unless it has its distinctiveness against the attribute of a competing destination. For illustration may be supposed that two competing destinations are promoting their climates in their respective areas, which prove to be of little impact as determinant for the destinations' specific excellent products. It is in this case that hard efforts are needed on the part of the destinations to come up with and explain their respective

uniqueness through their marketing policies. It is on their respective uniqueness that these destinations rely for their success as destinations.

With reference to Bali, there has been practiced the 'arak' processing based on coconut palm sugar as its raw material for producing traditional drink. The processing includes its fermentation and distillation in a traditional way. Now this is also done for culinary tourism. That this drink has also become the tourist's consumption makes this kind of drink ('arak') enter a commercialization. The resulting lack of palm sugar as the impact of such commercialization demands getting the substitute raw material, which in this case is local fruit. This resort to fruit turns out to give added value to the function of local fruit, which at the same time increases the local people's prosperity and sustaining the existence of that local drink.

Solid collaboration should be done by a destination toward gaining some added value to its products. Collaboration networking is really needed in helping to identify the role of the stakeholders in the production of local products in the destination. Local products can in their turn help the tourist to explore matters pertaining to local food. When local food and culture are understood in their fusion to each other some unique attractiveness would result, uniqueness manifested in 'scenery food'.

In developing culinary tourism, it is not only food stuff which is to be sold but also 'scenery food' (Solunoğlu, 2019; Nyandra et al. 2018; Widana et al. 2020). For the effectiveness of product promotion gastronomy necessarily includes local food with its varied types. All those aspects of local gastronomy mentioned above are potential to leave certain impressions on the tourist's memory after his experience of consuming local product. In that way such product will have certain attribute value for the destination which will serve as a sort of pull motivation for the tourist. Anticipating the fulfillment of the tourist's needs that can be revealed from his motivation and of the hotel's duty to increase the local people's well being, the process of product management by the hotel must then be for achieving certain goals by utilizing the resources that include a group of people in mutual collaboration (Jimenez-Beltran, F, et al. (2016).

Realizing such phenomena as described above, St Regis Bali Resort assumes some creative innovation for promoting the product of the hotel as its attribute in anticipation of the post Pandemic 2019 visit. For this purpose collaboration with the Politeknik Negeri Bali is done by making a breakthrough in the processing of local food and beverage products which will be served to the visitors by constantly taking into consideration the implementation of the three aspects of the 'Trihita Karana' local wisdom with the emphasis given on its 'Palemahan' aspect to match the hotel's commercial standing. This will get manifested in the readiness of the hotel to utilize the available local people's products (resources) (Raka Dalem:2017). As the working partner of the hotel the research team from Politeknik Negeri Bali make the necessary attempts to help the hotel in meeting its

need for alcohol by processing local material into liqueur as the basic stuff for food and beverage production. Based on the situation and the problems faced by the hotel as described above one research problems can be formulated for this research such as the following: What is the best local material can be processed into liqueur?

Literature Review

Gastronomic Tourism

Gastronomic tourism can be defined as culinary tourism, namely tourism related to food and beverage with its underlying culinary culture in the context of local culinary culture. The food processing that reflects the local life style has an important function to enhance the tourist's interest to make a visit to a destination. Some previous study is in support of this when it says that the tourist is interested in making a visit and increasing the length of stay in s destination due to his want to taste local food and to know its cooking technique (Heldak, M. et al., 2020:3).

A destination generally has its own unique product capable of giving new experience to the tourist. This opinion is supported by the website of the International Culinary Tourism Association in (Sandybayev,A. 2016), which further describes very clearly the uniqueness of culinary tourism in terms, among others, of the following: 1) Almost 100 % of the tourists making a visit any time to a destination enjoy the food from the areas outside of their places origin and learn about the local food and its cultural background; and 2) Enjoying activities related to food is considered one of the most attractive favorites for tourists.

Culinary or gastronomy tourism provides new experience for the tourist who through enjoying local food and beverage could feel the unique art of eating in the destination visited (Solunoğlu,Ali, 2019). Such experience can affect the five human senses through the taste, the color, the texture, the stuff, and the processing. By experience is here (in this applied research) meant the experience of enjoying food and beverage made through processing of local stuffs into liqueur as the base stuff for the production of food and beverage at St Regis Resort Bali.

By the local stuff is here meant the pine apple processed by cutting it into small slices to be further fermented and distillated. As for additional flavor infusion of various herbal materials is done for obtaining the required liqueur. And in its turn this liqueur is utilized as base stuff for the production of such products as sauce for food and cocktail in beverage. Moreover, another advantage from processing local stuffs into liqueur is the economic added value that contributes to the prosperity of the local people.

Based on the literature studies above two hypotheses, following Heldak, M. et al., (2020), are under concern in this research: 1) Local product constitutes an

important factor in the tourist's consideration and decision to visit a destination; and 2) Local food is quite potential to support sustainable tourism through its contribution to the authenticity of the destination and to strengthen the local people's economy through presenting friendly environment and infrastructure. So, the commercialization of 'arak' processing into liqueur can bring quite positive impact in the form of added value to the original functions of that substance only as local traditional drink and ritual media for religious ceremony, the added value derived from its potential for processing into liqueur, the base stuff for food and beverage (cocktail) production.

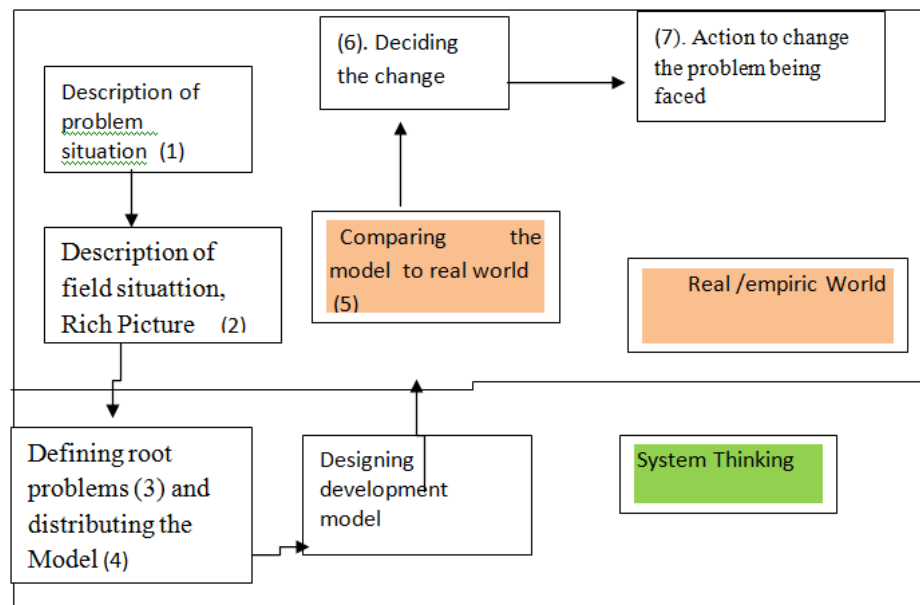
Research Methodology

This research adopts the methodology called SSM (Soft System methodology), which according to Checkland and Poulter comprises 7 processes as basic principles in its application. SSM is adopted because it is considered capable of fulfilling the requirements for processing local stuff in a system that matches human's capability. The adoption of SSM in this research is due to the fact that the research is based on action research of the problem solving category/problem solving interest.

Changes projected as being possible to effect based on all-system cognition as well as constraints and shortcomings being confronted are all matters of the researcher's concern, not of the owner of the problems. The researcher is the practitioner who is the first to do the mapping and discussion to generate improvement through involving the stakeholders from both the hotel and the academic institution in a team to cope with the all-system human activities graspable in terms of knowledge (academic) applicable to factual reality (real phenomena).

Analysis of the problem situation, Checkland and Butler defines human's daily life activities as complex on-going relational changes. The daily life's problems and activities signal the need self improvement through problem settlement. SSM can serve as a systematic way to understand the problematic situation being faced. SSM is concerned with what action to take further. This method is developed by Checkland and Poulter in Gerwel Proches.C.N. and Shamin Bodhanya (2015:1). SSM organizes the cognition of a situation so that the actions being studied or analyzed can be taken as bringing improvement to the situation in which the problems are faced.

Figure 3.1 Steps in SSM (Soft System Methodology) Analysis



Source: Adopted from Checkland in Gerwel Proches.C.N. and Shamin Bodhanya (2015:1)

The figure above can be explained as follows:

1. The first step is to analyze the less structured problems faced by the partner through the identification of the problems found in the location. The researcher tries the best to understand the problems by structuring them. The information (understanding) obtained from the first step which is further elaborated in the next steps (steps 2, 3, etc) is used as the basis for describing the research which represents the condition at this moment.

The data obtained from the first step (the primary data) is based on observation, while the secondary data through informal interview with the informants is obtained in the series of visits (1, 2, 3, 4, 5).

2. The second step for the description of the problems is done based on group discussion and communication. In outline the description includes the description of 5 aspects such as the following: (a) describing the characteristics of the local gastronomy; (b) identifying the most attractive feature of the gastronomy; (c) identifying the target market; (d) fostering internal awareness; and (e) designing external communication policy by St. Regis hotel realizing that this creativity will be potential to become a sustainable resource for the destination and the hotel.

The description of the problems is presented the CATWOE, whose items can be used as reference in operating the system through its root definition.

Table 1. Description of CATWOE and Its Elements

CATWOE'S ELEMENTS	DESCRIPTION
Customer, people influencing and influenced by the system	Who obtain the benefit from the goal of the activities? (The tourists, hotel, and the community)
Actor, the people assuming roles in the system	Who does the activities? (The stakeholders, research's team members and the experts involved in the field)
Transformation, the process and the changes effected	What should be changed so that input will change into output?
Worldview, the impact due to the implementation of the system	What kind of worldview will make the system meaningful?
Owner, the person in authority to facilitate the activities	Who can stop the activities? (Condition of the availability of stuffs/farmers)
Environment, environmental constraint and its implication	What constraints are faced in the environment of the system? (Spiritual, natural, social)

Source: Adopted from Gerwel Proches.C.N. and Shamin Bodhanya (2015:1)

If given an illustration, SSM is placed face to face with the real world in steps 1 and 2, while steps 3 and 4 illustrate the condition of the all-system thinking. The development model is built up that allows a comparison between the real world and the world projected in the all-system thinking. The result of this comparison will provide a solution for problems 1 and 2 based on the application of the formula in root definition which simplifies the reasoning in a systemic way, in which the system does the change to P through the method of Q in order to arrive at a result of R. (This is applied to all items in the CATWOE).

With reference to the selection of local stuffs for producing liqueur the model described above can serve as a solution for the hotel's need of alcohol. The responsibility of the hotel as a business company is to maintain local products as produced by local people to guarantee their prosperity. By adopting system thinking model, the stuff for food and beverage can be provided by processing (fermentation and distillation) local material into 'arak' substance. With necessary infusion of various herbal substances to the 'arak' product can be obtained the alcohol as the stuff for food and beverage needed by the hotel. In his manner the solution achieved comprises identifying local stuffs that can be processed into liqueur and then thinking of the methods that can be adopted for further processing the liqueur as base stuff for food and beverage. This experimental research is conducted the period June-December 2020.

This applied research is based on experiment of processing certain local stuffs suitable for fermentation to be later on distilled to produce good quality liqueur. The whole of this experiment is intended for improving both the process and the product as represented by the quality liqueur with excellent taste. For that purpose, all phases in the processing are well controlled so that the sustainability

of the production can be guaranteed for the fulfillment of the on-going needs. In this case concern is much given to the kinds of fruit which guarantee their availability all year round.

In order to carry out the experiment with good and objective result the experiment is supported with literature study and surveys done at some hotels and interview with the chef pertaining to stuffs which are good to be processed. (This represents real world condition). This research needs implementation at several stages in accordance with the steps contained in the SSM. These steps include the following:

1. Doing need analysis of the hotel industry and literature study in response to the demand and determination of research's objectives, which represents the description of the situation.
2. Identifying the good local stuffs to be processed into liqueur as base stuff for food and beverage production.
3. Preparing some checklist questions to be asked to the chef under interview (for model development).
4. Doing an experiment of processing local stuffs into liquor into which certain herbals are further infused to achieve the necessary liqueur as stuff for food and beverage production, a process necessarily comparing the fact of the real world and system-based reasoning.
5. Doing a group discussion with the chefs for the verification of research result.
6. Doing necessary corrections/improvement.

Result and Discussion

The result of analysis of the situation shows that the hotel need product development based on processing local stuffs into base stuff for food and beverage production. This leads to the creation of integrated strategy to be utilized by the hotel in generating certain added values. From the experiments conducted its decided that the local fruit to be utilized is pine apple and red rice for producing liqueur after their fermentation and distillation.

The development model in the production of liqueur from local stuffs is the continuation of steps 3 and 4 (defining the root problems) using the formula comprising the action P the method Q and the result R. The model should apply the elements of CATWOE which are based on system thinking. CATWOE refers to customer, namely the tourist as the culinary consumer, the local farmers who get the impact of the model being developed in which they learn the gastronomy practiced in the destination being visited. This idea is in line with the statement made by Polat,S & S Aktas-Polat (2020) that local food can be used as an element of attraction.

The tourist should be made aware of the difference between gastronomies of deferent regions, their variedness in terms of manners of production, of the

peoples' eating habits, and of their histories. And it is further explained that the marketing of such products should involve the right steps so that it signals a clear message to the tourist, a message to be imparted based on consensus.

The stakeholders as actors (such as the researcher, competent people, and hotel staff) should describe the gastronomy by explaining the product's special characteristics, identify the target market, and build up the necessary awareness that the success of the product in the market could cause prosperity to the local people (Mulcahy, H. D., 2012) and generate certain added value due to the utilization of the local stuffs by the process of transformation based on system thinking. So, system thinking in this case brings about some real outcome (Gerwel Proches, C., Naomi and Shamin Bodhanya, 2015).

System thinking also takes into account the owner's commitment to guarantee the availability of the stuffs to be processed any time to meet the needs of the hotel. In this case the choice of pine apples is considered to be the right choice because this kind of fruit plant is much cultivated in Bali and, therefore, easily obtained in times of need.

The availability of the stuff needs to be ensured to guarantee the working of the solidly structured relation of the five components of C, A, T, W, O, and E in the whole industry. In this case the researcher and the hotel (A) assume the role of effecting change toward system thinking because they are most informed about what stuff as input is to be processed into an output (T) based on awareness of the kind of product to be achieved through innovation and experimentation conducted in collaboration with the researcher (W) using the right choice of the local stuffs to be processed into the product liqueur (O) whose sustainability is guaranteed by the easy access to obtain without any constraint the raw stuff needed (E).

Conclusion

The result of this applied research is in line with the study conducted by Kivela, J. (2006:3561) which mentions that gastronomy affects the travel experience of the tourist during his stay at the destination. Therefore, it can be concluded that gastronomy can be a sustainable alternative in developing a destination the conventional destination which invests on sun, sea, sand, or nature and culture.

Gastronomic tourism is different from conventional tourism which only involves the tourist to visiting and enjoying tourist objects because gastronomy never stops its presence all the times, all year round, in any climate. Therefore, gastronomy can survive and in that way support the economy of a destination, even a destination in its critical struggle, toward maintaining the ongoing cycle of tourist product. However, this needs necessary justification through a research to prove that gastronomy can meet the tourist's needs reflected in their demands. It is based on these demands that the local culinary resources can be explored (Solunoğlu, Ali, 2019), which in the context of this research has been proved

through the existence of traditional alcohol 'arak bali' originally distilled from coconut sugar now replaceable for commercial purpose by pine apple fermented and distilled and then infused with necessary substance to produce liqueur to be further used as base stuff for such food and beverage production as sauce and cocktail drink.

This condition is in line with the opinion of Reguia, C (2014:141) who mentions the existence of 5 (five) areas of innovation introduced to a company, one of which is about the adoption of the process of production of new products. This is also adopted in the processing of pineapple into liqueur as the base stuff for food and beverage production. This means that the traditional 'arak bali' whose existence is limited to its used as a substance in religious rituals in Bali now can go global due to its commercialization in tourism industry.

It is this research's recommendation that other potential resources be explored and processed into liqueur as base stuff for food and beverage production which in that way would guarantee the sustainability of the existence of 'arak bali' both for its traditional function and for its commercial function.

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