

Food Preservation Technology of the Kapuas Hulu Malay Community

Muhammad Basri, Ery Tri Djatmika, Budi Eko Soetjipto, Hari Wahyono

Abstract— The purpose of this study was to analyze local entrepreneurship in the Kapuas Hulu Malay community natural food preservation technology, in increasing food security. This study uses a qualitative approach, researchers as well as research instruments. The main data collection technique of this study was in-depth interviews, with data sources of 6 informants from the indigenous Kapuas Hulu Malay community. The results of the study found that there were eleven types of food processing, namely: (1) salai fish; (2) peja; (3) balor (salted fish); (4) rusit; (5) jukut; (6) blonsong; (7) salted telur biawan; (8) budu; (9) dendeng seluang; (10) tempoyak; (11) lempok durian; & (12) deer dendeng.

Index Terms— Food Preservation Technology, Local Entrepreneurship, Local Wisdom Economy

1 INTRODUCTION

ECONOMIC rational behavior is something that is based on common sense or reason. Rational behavior is in accordance with the results of thought in the form of evaluation of the experiences they have gone through in several generations. Rationality is related to one's thinking ability to make decisions. Humans have common sense, given by God to be able to overcome obstacles, and can set priorities in meeting their needs [1]. One of the economic rational behaviors of the Kapuas Hulu Malay community is reflected in the ability of the community to naturally preserve food. This answers the problem that they often experience, namely the abundance of seasonal natural products, and the frequent occurrence of floods over a long period of time which can paralyze the economic activities of the community, according to the researchers, is local entrepreneurship. This research is important, to uncover local entrepreneurship in the form of local wisdom economy owned by the Kapuas Hulu Malay community, in food processing, which may be an alternative to solving food problems faced by other communities, as well as to build national food security. The local food preservation technology of the Kapuas Hulu Malay community is difficult to find in other communities. Based on the introduction, the focus of this research is local entrepreneurship in the Kapuas Hulu Malay community natural food preservation technology in improving food security, with sub-focus: (1) what are the types of local food preservation for the Kapuas Hulu Malay community?; (2) what is the processing technique?; & (3) what are the objectives of preserving these foods?

2 LITERATURE REVIEW

2.1 Local Communities & Nature

Local people depend their lives on nature, so that there is a diversity of patterns of adaptation to the environment, depending on the conditions and geo-location where the people live. These adaptation patterns are passed down through generations to their next generation and become a

- Muhammad Basri, A doctoral student of Economic Education study program, Universitas Negeri Malang, Indonesia; & Teaching Staff of Universitas Tanjungpura, Pontianak, Indonesia, PH-08115759090. E-mail: muhammad.basri@fkip.untan.ac.id
- Ery Tri Djatmika, Prof., Graduate School, Universitas Negeri Malang, Indonesia, e_djatmika@um.ac.id
- Budi Eko Soetjipto, Prof., Graduate School, Universitas Negeri Malang, Indonesia, budi.eko.fe@um.ac.id
- Hari Wahyono, Graduate School, Universitas Negeri Malang, Indonesia, hariwyn@gmail.com

guideline in utilizing natural resources and the environment, which can be a solution for the community in dealing with various crises, especially in the economic needs [2]. The values of local wisdom are often considered an ancient way to solve problems faced by society, but many events show that local wisdom is the best way to preserve the environment in post-modern times [3]. A lot of local wisdom is local entrepreneurship that is driven by community groups to improve their quality of life.

2.2 Food Security & Local Entrepreneurship

Global food problems are a phenomenon and essence of the main problems in the economy [4]. Food insecurity is a major problem facing the world community, especially in Africa [5]. In developing countries, lack of resources and the difficulty of accessing markets are the main factors that affect household food security [5].

Food security is directly related to health, so it needs to be fulfilled to avoid other problems that arise because of the effects of food that can damage health [6]. Food security in the Malay Kapuas Hulu community is supported by nature. There is evidence that nature supports food security and contributes to the improvement of human nutrition [7]. Community capacity in food security is a result of the local entrepreneurship that they have, which is an effort to increase the value of the food provided by nature around their homes. Entrepreneurship is an action that creates and innovates to increase the value of something [8]. The characteristics of entrepreneurship are not always pursuing wealth or a combination of personality traits, but rather utilize all the resources they have with the potential to add value and promote or build a particular business [9].

2.3 Local Wisdom Economy

Local wisdom is a basic knowledge obtained from people's life experiences that are balanced with natural conditions. Local wisdom can be abstract and concrete, but having the main characteristics comes from experiences & feelings (soul) which are believed to be true [10]. The community's empirical experience with the surrounding events will shape local wisdom, which if it is related to economic behavior, is a local wisdom economy.

3 RESEARCH METHOD

This study uses a qualitative approach. The main data collection technique of this study was in-depth interviews, with data sources of 6 informants from the indigenous Kapuas Hulu Malay community. In connection with in depth interviewing is

the main data collection technique in this study, the data analysis of this type of phenomenology research uses coding. There are three coding steps that are often used by Strauss and Corbin, namely open coding, axial coding, and selective coding.

4 FINDINGS

4.1 Types of Local Food Preservation of the Malay

Kapuas Hulu Community

The Kapuas Hulu Malay Community has a cuisine that is difficult to find in other regions. In terms of food, the researchers discovered traditional food preservation technology using natural ingredients, which has been hereditary to become the custom of the Kapuas Hulu Malay community. Based on the information from the informant (RA, UT, SUP, NIA, HAM, & SUH) it is known that there are at least eleven types of food processing, nine of which are freshwater fish processing, two durian fruit processing, and one venison processing. This type of food has a distinctive name, namely: (1) salai fish; (2) peja; (3) balor (salted fish); (4) rusit; (5) jukut; (5) blonsong; (6) salted telur biawan; (7) budu'; (8) dendeng seluang; (9) tempoyak; (10) lempok durian; & (11) deer dendeng.

4.2 The Processing Technique of Food preservation of the Malay Kapuas Hulu Community

The processing techniques, types of raw materials, and the period of consumption of each food are described as follows: Salai fish, use raw materials of freshwater fish in the form of lais or toman (other types of fish can also be used), in full form, made by removing fish's stomach contents, then smoked by placing the fish far above the fire using wood (charcoal) fuel, the fumigation process is quite long, usually done from morning to evening. This salai fish can last up to one year. (RA, HAM, SUH) Peja, often using raw materials of freshwater fish such as bauk or entukan, in full form, made by removing the contents of the fish's stomach, and replacing the contents of the stomach with salt, then drained to remove salt water, the next step is filled with rice mixed with salt then stored in a tightly closed container, after one week, peja can be consumed, and can last for a month. (RA, HAM, SUH) Balor (salted fish), processing like this can be found in various places, can use all types of fish, only the Kapuas Hulu Malay community use raw materials of freshwater fish such as lais, biawan, toman, and other fish that are easily obtained by the people on the Kapuas river. Like how to marinate fish in general, fish is sprinkled with salt, then dried in the sun to dry. To obtain good and long-lasting processed products, the fish's stomach contents should be removed first, or the fish will be split into two parts. Balor can last for a matter of years. (RA, HAM, SUH) Rusit made using raw materials of freshwater fish in the form of bilis fish (small-sized fish), or small-sized seluang fish, made with mixed with salt, then drained, then mixed (usually) with tapai rice or rice that has been roasted and mashed, then stored in the jar. After one week, rusit can be consumed. Rusit can last three to six months. (RA, HAM) Jukut, made using raw materials of freshwater fish in the form of seladang fish and jelawat fish, this type of fish is fatty and has a large size. Made by removing the contents of the fish's stomach, then cut into several pieces, given salt, then wrapped in rice that has been given salt (usually added with a little honey), then drained, then stored in a container that is closed tightly for one week, and jukut is ready for consumption. Jukut can last between three and six months. (RA, HAM, SUH) Blonsong, made using raw materials of freshwater fish in the form

of lais bangah (large-sized lais fish), made by removing fish's stomach contents, then the fish's stomach is filled with salt (quite a lot), and hung to dry it to dry, by positioning the fish's head at the top, so that salt water will flow to all parts of the fish. Blonsong can last a long time like balor. (HAM, SUH) Teluk biawan salted, made using raw materials in the form of biawan fish eggs. Made by separating eggs from fish, then mixed with salt and stored in a jar. Teluk biawan salted can last up to three months. (RA, HAM, SUH) Budu', is a decomposed fish, made using raw materials of freshwater fish in the form of tapah fish (thick fleshy fish). The method of tapah fish is cleaned and cut into small pieces, then left for more or less two days in a food place, without salt, after a little rot, can be processed with sauteed or processed in other ways. Budu' can't last too long, less for a week. (HAM) Dendeng seluang fish, made using raw materials of seluang fish, made by removing the contents of the seluang fish, and then given the ingredients in the form of garlic, coriander, salt, tamarind, and sugar. All herbs are mashed and distributed to all parts of the fish, then left for one day, then dried in the sun to dry. (HAM) Tempoyak, using raw material from ripe durian, made by separating the contents of durian from the seeds, then given salt and stored in a closed container, in ancient times, the Kapuas Hulu Malay community used containers in the form of jars. Tempoyak, can last up to several months, to consume it, usually sauteed, or can also be mixed with shrimp or anchovy, it can also be eaten directly without being cooked. In the Kapuas Hulu Malay community there is a special culinary, namely lamboi, which uses raw materials of baung fish and tempoyak, where tempoyak is the main ingredient. (RA, HAM, SUH) Lempok durian, also use the main raw material for durian contents, made by cooking durian contents with their contents, then cooking (usually with a pan) using a small fire, after the seeds are released, then the seeds are removed, can be added with a little sugar or brown sugar. After thickening, then put into the areca nut as a mold, now many have used plastic as a mold. There is also a type of food that can be processed from durian contents, in the same way as processing durian clay, using only a lot of sugar, this food is called durian sugar, usually used as food additives, cakes, compote, and various other types of food. (HAM) Deer dendeng, using raw materials of thinly cut deer meat, with the same processing technique as making dendeng seluang fish. (HAM).

4.3 The Purpose of Food Preservation Technology

The purpose of food preservation is as follows:

First, in preparation for fulfilling long-term needs, this is as told by informants (RA, SUP, & NIA) that the Kapuas Hulu region has always faced flooding with annual cycles, in some areas it can occur for up to three months, so people are used to preparing themselves for facing these problems, one of which is by preservation of food. Second, utilizing natural products and abundant crops. As the informant (RA & SUP) said that food processing technology is an effort to utilize the catches in the Kapuas river in the form of fish, and forest products in the form of durian, in addition to using captive fish in the river when the harvest season arrives. Third, increase the value of goods. As the informant said (HAM, & SUH) that the other goal of food preservation technology is to increase the value of goods, which means that it will be resold after processing, the results of food processing can become a broader commodity after being preserved.

5 DISCUSSION

5.1 Local Community Food Security

The cultural perspective views food as not something that is viewed solely in relation to the physiological and biological aspects of humans but is thoroughly absorbed in a system of food culture. The food culture system includes food production, distribution and consumption activities in which the fulfillment of human needs is implied, in the form of primary, social, and cultural needs in order to sustain life and improve the welfare of themselves, their families, and their communities. The local food-based culinary tradition is a form of local wisdom as an illustration of people's lifestyle that is able to present the identity of collectivity and socio-cultural representation in conceptualizing food, and the social function of food [11]. In order to realize food sovereignty, all groups should be involved in developing food diversification. Efforts that can be done are to get used to consuming local food, increasing production, and developing the local food processing industry. Can also develop healthy categorized food processing technology, which harmonizes food production and industry policies with food consumption policies; promotion of healthy, comprehensive and continuous local food; creation of local food markets at national and regional levels; and followed by the provision of local food products that are able to compete with foreign products [12]. Communities can be involved in food security programs by utilizing local food ingredients in the vicinity. The potential of local food in Indonesia should be an alternative to the main ingredients of the basic food of the community. The potential for housewives who are quite large in number can be used to support the family economy or reduce household budgets through the use of local food resources in the vicinity [13]. Research conducted by Deller & Stickle which explores the role of small-scale food processing in economic growth in the United States. The results of his research found that small-scale food processing and neo-classical growth models had a mixed role in helping the growth of the local economy [14]. To popularize the results of research on food diversification carried out by dissemination through training / counseling activities on processing, packaging and marketing technologies followed by mentoring activities, especially in small food industries, so that local food-based food development activities are continuously guaranteed [15].

5.2 Local Entrepreneurship and Welfare

Local food contained in the local market is very important in contributing significantly to increasing income, employment and community welfare. The results of research conducted by Ekanemia et al. shows that the local market will continue to grow and play an important role in economic development in the future [16]. The food sector has great potential to improve people's welfare. Local governments have many opportunities to support and promote local agriculture and food production and infrastructure and marketing needed to increase local food supply and demand. Preliminary data show that there are several benefits from the local food sector for local farmers and food producers and communities [17].

5.3 Natural Food Preservation Technology as a Local Wisdom Economy

The technology of preserving natural food as the findings of the research above are part of the local wisdom economy in the Kapuas Hulu Malay community. There is a lot of local wisdom related to the ability of the community to maintain its existence and improve its economic life in an effort to improve

prosperity, and it all comes down to the local wisdom economy [18]. Sungkharat in his research found that the concept of local culture in Thailand became a concept of self-sufficiency and food independence. Communities have reduced the use of chemicals in their agricultural production processes, which are intended for efficient production and reducing pollution. This is certainly in line with the natural preservation technology carried out by the Kapuas Hulu Malay community who avoided using chemical preservatives in their food processing [19].

6 CONCLUSION

The results of the study found that there were eleven types of food processing. The natural preservation technology of the Kapuas Hulu Malay community shows the food security they have. Most people live on the banks of rivers, and floods often occur, sometimes floods are very long. This gave rise to the adaptive behavior of the Malay people of Kapuas Hulu, so that long-lasting floods were not a matter of significance to people's daily lives.

REFERENCES

- [1] U. Putranto, "Buku Ajar Ekonomi untuk SMP Kelas VII," Surakarta: Citra Pustaka, 2006.
- [2] Suhartini, "Kajian Kearifan Lokal Masyarakat dalam Pengelolaan Sumberdaya Alam Dan Lingkungan," Prosiding Seminar Nasional Penelitian, Pendidikan dan Penerapan MIPA, Fakultas MIPA, Universitas Negeri Yogyakarta, 16 Mei 2009
- [3] I. Indrawardana, "Kearifan Lokal Adat Masyarakat Sunda dalam Hubungan dengan Lingkungan Alam," Komunitas, 4 (1): 1-8, 2009.
- [4] M.A. Abdulkadyrova, A.H. Dikinov, H.E. Tajmashanova, L.A. Shidaeva, & E.A. Shidaeva, Global Food Security Problems in The Modern World Economy, International Journal Of Environmental & Science Education, Vol. 11, NO. 12, 5320-5330, 2016.
- [5] U.I. Ahmed, L. Ying, M.K. Bashir, M. Abid, F. Zulfiqar, Status and determinants of small farming households' food security and role of market access in enhancing food security in rural Pakistan, PLoS ONE, 12(10), 2017.
- [6] K. Havas, & Mo. Salman, Food security: its components and challenges, International Journal Food Safety, Nutrition and Public Health, Vol. 4 (1), 2011.
- [7] T. Sunderland, B. Powell, A. Ickowitz, S. Foli, Pinedo- M. Vasquez, R. Nasi, and C. Padoch, Food security and nutrition: The role of forests, Discussion Paper. CIFOR, Bogor: Indonesia, 2013
- [8] W.K. Bolton, and J.L. Thompson, Entrepreneurs: Talent, Temperament, Technique, Butterworth Heinemann, Oxford, UK, 2004.
- [9] R. Smith, R. Bell, & H. Watts, Personality trait differences between traditional and social entrepreneurs, Social Enterprise Journal, 10 (3), 200-221, 2014.
- [10] S. Nakhornthap, Report of the Study on Patterns of Process in Promoting Teacher and School Participation for Prevention and Solution of Problems Concerning Child Labor in Thailand, Journal of Research on Humanities Information Study, Office of the National Education Commission, 1996.
- [11] A. Fadhilah, Kearifan Lokal dalam Membentuk Daya Pangan Lokal Komunitas Molamahu Pulubala Gorontalo, Al-Turā, Vol. XIX (1), 2013.
- [12] G.S. Hardono, Local Food Diversification Development

- Strategy, Analisis Kebijakan Pertanian, Volume 12 (1): 1-17, 2014.
- [13] R.E. Masithoh, & H. Kusumawati, Pemberdayaan Ibu Rumah Tangga dalam Implementasi Teknologi Pengolahan Sumber Karbohidrat Nonberas dan Penganekaragaman Pangan Nonterigu untuk Mendukung Ketahanan Pangan. Indonesian Journal of Community Engagement, Vol. 02 (1), 2016.
- [14] S.Deller, & M. Stickel, Small Food Processing in the Context of Local Foods, Paper prepared for presentation at the Annual Meetings of the North American Regional Science Association, Washington DC, Support was provided by the Wisconsin Agricultural Experiment Station, University of Wisconsin – Madison, 2014.
- [15] C. Wariyah, Peran Perguruan Tinggi dalam Mendukung Kebijakan Pemerintah Untuk Meningkatkan Diversifikasi Pangan Berbasis Pangan Lokal, Prosiding Seminar Nasional, Fakultas Agroindustri Universitas Mercu Buana Yogyakarta, 2012.
- [16] E. Ekanemia, M. Mafuyaib, & A. Clardyc, Economic Importance of Local Food Markets: Evidence from the Literature, Journal of Food Distribution Research, Volume 47 (1), 2016.
- [17] A. Dilleuth, Community food systems and economic development: the role of local governments in supporting local food economies. In Kimberley Hodgson and Samina Raja (Series Editors), Planning & Policy Briefs, Growing Food Connections, 2017.
- [18] Soetomo, Kesejahteraan dan Upaya Mewujudkannya dalam Perspektif Masyarakat Lokal, Yogyakarta: Pustaka Pelajar, 2014.
- [19] U. Sungkharat, P. Doungchan, C. Tongchiou, B. Tipangnga, Local Wisdom: The Development Of Community Culture And Production Processes In Thailand, International Business & Economics Research Journal, Volume 9 (11): 115 – 120, 2010