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# Comparative analysis of media use pattern among fish farmers in Lagos and Osun States, Nigeria

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**Abstract:** The influential powers of mass media in the development process had been neglected, underestimated and lop-sided in favour of other areas of interest to planners of development programmes and media practitioners alike. This study investigated the media use pattern among Lagos and Osun State fish farmers. The study population consists of all male and female registered fish farmers with functional fish farms who are into table-size fish farming in Lagos and Osun States, Nigeria. A multistage sampling procedure was employed to select 300 respondents for this study. The data for this study was collected from the respondents using a structured questionnaire and interview schedule, while the data obtained was subjected to both descriptive and inferential statistical tools. Descriptive statistical tools employed include frequency counts, percentages and means, while the inferential statistical tool was a T-test. The study identified a diverse range of media platforms utilized by the fish farmers, including radio, television, ICT facilities such as telephone, internet services and publications, which varied according to the respondents' age, sex, years spent schooling, marital status, annual income, years of experience and ponds size. The t-test result shows a statistically significant difference in the level of media use pattern between the fish farmers in Lagos and Osun States.
**Keywords**: Comparative analysis, media use pattern, fish farmers

## INTRODUCTION

In Nigeria, the role of fish farming in achieving household and national food security and poverty alleviation cannot be over-emphasized. In recent years, increased knowledge and awareness of human requirements for healthy growth have focused on improving attention to the unique roles of livestock and fisheries in developing rural economies in tropical Africa. Fish farming, an artificial method of raising fish for human consumption, is an ancient practice that can still provide a profitable means of livelihood for both rural and urban dwellers (Salau et al., 2014). Fish farming contributes to employment development, with over 41 million people living in developing countries worldwide (Wuyep and Rampedi, 2018).

Similarly, FAO (2020) posited that aquaculture and fisheries combined accounted for 17% of animal-source protein for human consumption. Fish farming generates employment directly and indirectly for people producing fishing output and other allied businesses. It also generates income for all categories of people involved in fish farming and thus contributes to the national income. Compared with livestock, it requires less space, time, and money and has a higher feed-conserving rate (Nwakuche et al., 2019). Fish farming is regarded as a key agricultural and food-producing sector worldwide; however, the growth recorded still needs to be improved, making it challenging to realize the significant goal of fish farming in Nigeria. The low local fish production was due to a need for more necessary technical information and basic knowledge in the science of fish farming that will enhance high productivity.

Like other agricultural sectors, fish farming uses production factors, especially land, labour, capital, and management. Information is another production factor worth mentioning because, without adequate and relevant information, there can be no increase or improvement in production. The primary or fundamental objective of information is to help solve problems. Hence, information is an indispensable factor in fish farming and is the basis of extension service delivery. Webler and Andersen (2022) state that information resolves uncertainty and manifests as patterns. Although complex, most observable phenomena are not random but are associated with deterministic and chaotic systems. Haruna *et al.* (2015) opined that access to adequate information is essential to increase agricultural productivity, especially in fish farming. Among the measures taken to promote fish farming is using mass media to get relevant information to the farmers. Media is critical in disseminating information and knowledge among fish farmers, influencing their farming practices, market access and overall livelihoods. Hence, the media has become an essential source of information dissemination because how they present messages impacts public opinion and constituted authorities (Olsena and Osmundsenb, 2016). The media provides fish farmers with information and allows new entrants who need access to fish farming training to gather information to start their fish farms. Therefore, if local fish production must be boosted, fish farmers must raise their yield using fish farming information relating to modern fish farming techniques.

Modern fish farming techniques are disseminated to the farmers through extension services, which are saddled with information dissemination and persuading the farmers to adopt the new technologies (Alfred and Fagbenro, 2012). However, several factors limit the performance of extension service delivery. The limiting factors include a high ratio of extension agents to farmers (1:5000 and 1:10,000), a workforce of about 7,000

public agents (Davis et al., 2019), insufficient funds and inadequate mobility.

The success story associated with agricultural development in other parts of the world has been attributed to an appropriate development framework with effective communication components. Media practitioners alike have the content released by the media, whether through television, radio, newspapers, or the internet, and it has the power to shape or evolve cultures, trends, and beliefs into society with benefits and implications (Soroka, 2012). However, information on the media use patterns among fish farmers is scanty or yet to be adequately addressed. Therefore, this study analysed media use patterns among Lagos and Osun States fish farmers. Specifically, it described the socio-demographic characteristics of fish farmers and identified the types of information available to the fish farmers in the study area. It was hypothesised that there is no significant difference between the level of media use patterns among fish farmers in Lagos and Osun States.

## METHODOLOGY

This study was conducted in Lagos and Osun States, which are located in the southwestern part of Nigeria. Lagos State occupies 3,345 square kilometres and shares boundaries with Ogun State in the north and east. It is bounded on the west by the Republic of Benin, and in the south, it stretches for 180 kilometres along the coast of the Atlantic Ocean; Osun State has Osogbo as its state capital, occupies an area of land of about 14,875 square kilometres and shares boundaries with Kwara State in the north, in the east partly by Ekiti State and Ondo State, in the south by Ogun State and the west by Oyo State. The 2 States are essentially a Yoruba-speaking environment, mostly farmers producing food crops such as yam, maize, cassava, cowpea and cocoyam, while other income-generating activities also abound in the 2 States.

The study population consists of all male and female registered fish farmers in table-size fish farming using functional fish farms in Lagos and Osun States, Nigeria. A multistage sampling procedure was employed to select respondents for this study. In the first stage, two states were purposely chosen from states constituting Southwestern Nigeria, namely Lagos and Osun states, due to having a higher concentration of fish farmers. In the second stage, a simple random sampling technique was used to select four fishing zones from Lagos (Western and Eastern zones), and Osun (Osogbo and Ife/Ijesha zones) states out of the six (6) zones, in the two (2) states. A list of registered fish farmers (997) was obtained from the two Agricultural Development Programmes in the selected states. Specifically, in Lagos and Osun states, there were 445 and 552, respectively. Lastly, three hundred (300) fish farmers were proportionally selected from the list to constitute the sample size for the study. Primary data was collected using a well-structured questionnaire and interview schedule. Data was analysed using descriptive and inferential statistical (t-test) tools to test the stated hypothesis.

## RESULTS AND DISCUSSION

### Respondents' socio-demographic characteristics

The study found that fish farmers in Lagos and Osun States spent 14 years in formal education, indicating valuable knowledge and insights that can be shared through knowledge exchange and experience sharing.

Similarly, on the years of fish farming experience, the fish farmers in Lagos State had put in nine (9) years of fish farming, while, in Osun State, the mean years of experience was eight (8) years. Comparatively, fish farmers with nine years (9) of experience may better understand fish farming practices and require more advanced or specialized information to improve their operations. These findings align with Gbigbi and Achoja (2021) and Iruo *et al.* (2018), who found in their studies that the mean farming experience of fish farmers was eight (9) years and nine years, respectively.

Furthermore, fish farmers in Lagos State had a mean pond size of 0.52ha, and 0.44ha was the mean pond size in Osun State. These ponds were operated on a small-scale level, producing relatively low production capacity. This supports previous studies by Galib et al. (2013) and Tim et al. (2023) when they discovered in their different study areas that the average pond size was 0.44ha and 0.52ha, respectively.

In Lagos State and Osun State, 71% and 69.4% of respondents used hired labour for fish farming, respectively, while 19.3% used family and hired labour (Table 1). This implies that hired labour is the primary source commonly utilized by the respondents in the study areas. This finding is supported by Ayeloja, Adebisi, and Oyebode's (2021) report on paid labour.

**Table 1: Distribution of respondents by socio-demographic characteristics (n=300)**

| Characteristics | Lagos State | Osun State |
|---|---|---|
| **Years spent schooling** | | |
| No formal education | 2(1.3) | 2(1.3) |
| 1 to 6 | 10(6.7) | 2(1.3) |
| 7 to 12 | 50(33.3) | 66(44) |
| 13 and above | 88(58.7) | 80(53.4) |
| Mean | 14yrs | 14yrs |
| SD | 4.724 | 4.856 |
| **Fish farming experience** | | |
| <10 | 73(48.7) | 92(61.3) |
| 10 to 14 | 45(30) | 46(30.6) |
| 15 to 19 | 17(11.3) | 10(6.7) |
| 20> | 15(10) | 2(1.4) |
| Mean | 9yrs | 8yrs |
| **Fish farm size (ha)** | | |
| <1 | 114(76) | 136(90.7) |
| 1 to 2 | 30(20) | 8(5.3) |
| 3> | 6(4) | 6(4) |
| Mean | 0.52ha | 0.44ha |
| **Sources of labour** | | |
| Hired | 107(71) | 104(69.4) |
| Family | 10(7) | 17(11.3) |
| Family/Hired | 30(20) | 29(19.3) |
| Family/Friends | 3(2) | - |

**Percentage Figures in parentheses**
**Source: Field Survey, 2023**

**Respondents' sources of information types**

As presented in Table 2, it could be seen that in Lagos State, the common source of information that fish farmers had access to was telephone (96%), closely followed by publications (88.7%). At the same time, the computer and laptops were not as frequent as other sources in terms of accessibility. Similarly, in Osun state, telephone (92.7%) topped the list of information sources, followed by television (86%) and radio (84.7%). Over 50% had access to computers, laptops, and internet services. This implies that all the sampled respondents had access to multiple information sources. This finding aligns with Ejiogu-Okereke et al. (2016) finding that information sources available to the fish farmers include mobile phones, radio, television, newspapers, magazines, journals/pamphlets, internet and email.

**Table 2: Distribution of respondents by sources of information in Lagos and Osun State (n=300)**

| | Lagos State | | Osun State | |
|---|---|---|---|---|
| **Types of information sources** | ***Frequency** | **Percentage** | *** Frequency** | **Percentage** |
| Radio | 132 | 88 | 127 | 84.7 |
| Television | 130 | 86.7 | 129 | 86 |
| Publications | 133 | 88.7 | 99 | 66 |
| Telephones (Mobile/Smart) | 144 | 96 | 139 | 92.7 |
| Computer/laptop | 95 | 63.3 | 95 | 63.3 |
| Internet service | 100 | 66.7 | 97 | 64.7 |

**Source: Field Survey, 2023**
***Multiple responses**

**Test of hypothesis**

**Difference in the level of media use pattern between fish farmers in Lagos and Osun States**

The t-test result revealed a statistically significant difference in the level of media use pattern between the fish farmers in Lagos and Osun States ($t=3.152$, $p=0.002$) at $p < 0.05$ significance level. Fish farmers with higher media use patterns may have better access to important information related to fish farming practices, market trends, and new technologies, thereby giving them a competitive advantage over fish farmers with limited access to media. This finding corroborates the assertion of Rashid, M. (2018) that the farmers differ significantly in utilising information communication media.

**Table 3: Summary of T-test results showing the difference between the level of media use pattern among fish farmers in Lagos and Osun States**

| Variable | Mean | t-value | p-value | Decision |
|---|---|---|---|---|
| Media Use Pattern | 42.85 | 3.152 | 0.002 | Significant |
| | 36.72 | | | |

**5% level of significance**
**Source: Field Survey, 2023**

## CONCLUSION AND RECOMMENDATIONS

The study concluded that media is critical in disseminating information and knowledge among fish farmers, influencing their farming practices, markets and overall livelihoods. There was an enormous difference in terms of the media use pattern between the fish farmers in Lagos and Osun States. Accessibility to different media sources significantly impacts their choice of media channels. Hence, the following recommendations are made based on the findings of this study;

1. Providing accessible and comprehensive fish farming information by media organisations through multiple media channels will enhance fish farmers' access to relevant information.
2. Media organisations should actively engage with the fish farming communities to understand their information needs and tailor their content to meet them.

## REFERENCES

Adewale, A.T, Lawal, O.A., Aberu, F. and Toriola, A. K. (2022): Effect of Credit to Farmers and Agricultural Productivity in Nigeria. East Asian Journal of Multidisciplinary Research (EAJMR). Vol.1, No.3: 377-388 ISSN-E: 2828-1519;DOI prefik: 10.55927 https://journal.formosapublisher.org/index.php/eajmr

Alfred, I.S.D and Fagbenro, O. A. (2007): Perception of tilapia farmers on information sources in the Coastal region of of Ondo State, Nigeria. Available online@:Arizona.edu/aZaqua/15TA7/papers/ fagbenro/perdception,doc.

Ashley-Dejo, S. S., Olaoye, O. J. and Adelaja, O. A. (2017): Comparative evaluation of economic benefits of adopters and non-adopters of improved fish production technologies in Oyo State, Nigeria. © Nigerian Society for Animal Production, Nigerian Journal of Animal Production. Pg. 230-247

Attah, Otene and Waya (2020) in their work titled: Assessment of Internet and Mobile Phone Usage in Enhancing Fish Farming in Makurdi Local Government Area of Benue State, Nigeria.

Ayeloja, A. A., Adebisi, G. L. and Oyebode L. A. (2021): Contribution of fish farming to the socio-economic status of fish farmers in Oyo State, Nigeria. Ghana Journal of Agricultural Sciences; 56 (2), 75 – 84: https://dx.doi.org/10.4314/gjas.v56i2.7

Davis, K. Lion, K. and Arokoyo, T. (2019): Organisation, capacity and management of Agricultural Extension Services in Nigeria: Current Status. South African Journal ofAgricultural Extension.

Edet, E. O., Udoe, P. O. and Uwah, E. D. (2018): Costs and return analysis of fish farming in Calabar metropolis, Cross River State, Nigeria. Global Journal of Agricultural Sciences Vol. 17: 23-31 ISSN 1596-2903. DOI:https://dx.doi.org/10.4314/gjass.v17i1.3. www.globaljournalseries.com

Ejiogu-Okereke, N. E., Chikaire, J. U., Ogueri, E. I. and Chikezie, N. P. (2016): Roles of Information and Communications Technologies in Improving Fish Farming and Production in Rivers State, Nigeria. Library Philosophy and Practice (e-journal) Libraries at University of Nebraska-Lincoln Spring 7-27 University of Nebraska – Lincoln DigitalCommons@University of Nebraska – Lincoln

Food and Agriculture Organization (FAO) (2020): The state of world fisheries and aquaculture (SOFIA). FAO, Rome, Italy. PP. 244. ISBN:978-92-5-132692-3. http://www.fao.org/documents/card/en/c/ca9229en.[PubMed]

Galib, S. M., Mohsin,A. B. M., Chaki, N., Fahad, M. F. H., Haque, S. M. M. (2013) An overview of the traditional rice-prawn-fish farming in Kalia of Narail district,Bangladesh. Journal of Fisheries 1(1): 1-6.

Gbigbi, T. M. and Achoja, F. O. (2021): Backyard fish farm features and farmers personal characteristics as correlates of profitability of aquaculture in Nigeria. Ege Journal of Fisheries and Aquatic Sciences. Volume: 37 Issue: 3, 223 – 228. https://doi.org/10.12714/egejfas.

Haruna, M. A., Obaroh, I. O.Yahaya, A. and Muhd. I. U. (2015): Access of fisheries information to fish farmers in Hadejia, North Western Nigeria. European Journal of Physical and Agricultural Sciences Vol.

3 No. 2, ISSN 2056-5879. Progressive Academic Publishing, UK Page 49 www.idpublications.org

Iruo, F. A., Onyeneke, R. U., Eze, C. C., Uwadoka, C. and Igberi, C. O. (2018): Economics of Smallholder Fish Farming to Poverty Alleviation in the Niger Delta Region of Nigeria. Turkish Journal of Fisheries and Aquatic Science. Published by Central Fisheries Research Institute (SUMAE) Trabzon, Turkey in cooperation with Japan International Cooperation Agency (JICA), Japan, http://doi.org/10.4194/1303-2712-v19_4_06

Kainga P. E., Adesope O. M., Ijeoma M. C., and Ugwu J. E. (2016): Adoption of proved Fish Production Technologies by Fadama III users in Bayelsa, Nigeria. Proceedings, 21st Annual National Agricultural Extension Society of Nigeria, held at the University of Ibadan, Ibadan (16th-21st April, 2016). ISSN: 1595 – 1421

Namonje-Kapembwa, T. and Samboko, P. (2020). Is aquaculture production by small-scale farmers profitable in Zambia?. International Journal of Fisheries and Aquaculture, 12(1), 6-20.

Nwakuche, E. I., Akinyoade, O. F., Akalonu, G. C., Oyelade, O. A., and I. O. Opowoye (2019): Problems Facing Fish Farming Business in Kwara State: A Case Study of Four Local Government. Continental Journal of Sustainable Development; 10 (2): 27 – 34. ISSN: 2251 – 0486 DOI: 10.5281/zenodo.3547751.

Nzevu, J. M., Amwata, D. A. and Mutua, A. K. (2018) Status of Socio-Economic Parameters of Fish Farmers in Kitui Central Sub-County, Kitui County: Journal of Research in Agriculture and Animal Science. Volume 5 ~ Issue 1, pp.: 28-41.ISSN(Online) : 2321-9459

Olaoye O. J., Ojebiyi W. G., Soyoye V. O. and Makinde, K. O. (2020): Comparative analyses of socio-economic characteristics of Nigerian agricultural insurance corporation (NAIC) participants and non-participants fish farmers in Ogun State, Nigeria. Ife Journal of Agriculture, Volume 32, Number 3. Pp.141-155

Olsena, M.S and Osmundsenb, T. C. (2016): Media farming of aquaculture. Marine policy. 76: 19-27. http://doi.org/10.1016/j.marpol.2016.11.103.

Oyediran O. O. Efitre, J., Musinguzi, L. and Falaye, A. E. (2021): Potential adaptation strategies for climate change impact among flood-prone fish farmers in climate hotspot Uganda. Journal of Environment, Development and Sustainability. Vol.:(0123456789). 23:12761–12790 https://doi.org/10.1007/s10668-020-01183-1

Rashid, M. (2018): Fish farmer's Access to Information Communication Media: A Gender Based Comparative Study in a selected Village of Bangladesh: International Journal of Fisheries and Aquatic Studies 2015; 2(4): 168-173; ISSN: 2347-5129

Salau, E. S., Lawee, A.Y, Luka, G.E and Bello, D (2014): Adoption of improved fisheries Technologies by fish farmers in Southern agricultural zone of Nasarawa State, Nigeria; Journal of Agricultural extension and Rural Development, 6(11), pp. 339-346.

Soroka, S. N. (2012). The Gatekeeping Function: Distributions of Information in the Media and the Real World. The Journal of Politics, 1-4.

Tavershima, T., Ugwuh, M. G. and Ameh, D. E. (2022): Economic Effect of Improved Fish Production Technology on the Output of Fish Farmers in Otukpo Local Government Area of Benue State, Nigeria Official Publication of Direct Research Journal of Agriculture and Food Science: Vol. 10(8) Pp. 185-205. ISSN 2354-4147

Tim, S Isabelle Providoli, Teamhy Sien, Soksophors Yim, Soben Kim and Hanspeter Liniger (2023). Strengthening climate resilience of rural communities by co-producing landscape-specific integrated farming systems in Ca Saurabha Karmbodia, Journal of Land Use Science, 18:1, 152-175.

Webler, F. and Andersen, M. (2022): "Measurement in the Age of Information" (https://doi.org/10.3390%2Finfo1303011) Information. 13 (3): 111.doi:10.3390/info13030111. (https://doi.org/10.3390%2Finfo1303011).

Wuyep,S. Z and Rampedi, I. T.(2018): Urban Fish Farming in Jos, Nigeria: Contributions towards Employment Opportunities, Income Generation, and Poverty Alleviation for Improved Livelihoods Agriculture 2018, 8(110), x; doi: for Peer Review www.mdpi.com/journal/agriculturepp1-16

Yusuf, S. A., Ayanboye, A. O., Azeez, K. A., & Adesina, M. A. (2022). Food insecurity and its correlates: Empirical evidence from fish farming households in Nigeria. Interdisciplinary Journal of Rural and Community Studies, 4, 60-70. https://doi.org/10.38140/ijrcs-2022.vol4.06