# How The Accounting Implementation In "Abon Ikan Tuna Lely Bintang" Ternate City?

# Adinda Rossiana Assor

Department of Accounting, Faculty of Economics, Universitas Terbuka, Indonesia

# Imanita Septian Rusdianti\*

Accounting Tutor, Faculty of Economics, Universitas Terbuka, Indonesia Department of Accounting, Institut Teknologi dan Bisnis Widya Gama Lumajang, Indonesia

## Abstract

This study aims to determine the application of accounting in shredded tuna business in the city of Ternate, North Maluku province. The research method used in this research is descriptive qualitative method. The data collection method is using structured interviews and documentation. This research was conducted on the Lely Bintang tuna shredded business. The results of this study are that in Ibu Lely's business, the recording of financial reports has been carried out, even though only in a simple form. This shredded tuna business records financial reports such as profit or loss and income earned in a day. This was considered important to develop Mrs. Lely's business. The application of an accounting system needs to be done by keeping simple bookkeeping that classifies income and expenses, so that profit/loss is known each month, and managerial decisions can be made to increase or decrease production in the following period.

Keywords: Accounting, Business, Financial Reporting, SMEs

# Introduction

Accounting is a system and process used to identify, measure, record, and report financial information of an entity or organization (Gardi et al., 2021). The main objective of accounting is to provide relevant, accurate and reliable financial information to external and internal users for informed decision making. Accounting involves recording financial transactions, such as purchases, sales, expenses, and receipts, and processing this data into financial reports, such as balance sheets, income statements, and cash flow statements. These financial reports provide an overview of the financial performance of an entity and enable users of the information to analyze the financial health, identify trends and make decisions relating to the entity. In addition, accounting also involves the measurement and allocation of economic resources, such as assets, liabilities and owner's equity. The basic concept in accounting is the principle of double-entry bookkeeping, which requires that every transaction has at least two entries in the accounting records, namely debits and credits, which must balance each other (Beretta & Cencini, 2020). In the business world, accounting is used to manage and control company finances, evaluate performance, carry out budget planning, and fulfill reporting obligations to interested parties, such as shareholders, the government, creditors, and investors (Sulistyan et al., 2022). In general, accounting can be divided into two main categories, namely financial accounting and management accounting. Financial accounting focuses on preparing financial reports for external users, while management accounting focuses on providing financial and nonfinancial information to management in internal decision-making processes. Accounting is an important discipline in the business world and is a strong foundation in managing company finances and making decisions related to financial aspects (Rusdianti et al., 2022).

Accounting methods are the rules and procedures used in recording, classifying, processing, and presenting financial information in financial reports (Scott, 2015). While the accounting cycle is

\*Corresponding Author: Imanita Septian Rusdianti (imanitaku@gmail.com)

Received: 18 May 2023, Revised: 01 June 2023, Accepted: 04 June 2023, Published: 06 June 2023

**Cite this**: Assor, A. R., & Rusdianti, I. S. (2023). How The Accounting Implementation In "Abon Ikan Tuna Lely Bintang" Ternate City?. *Innovation Business Management and Accounting Journal*, 2(2), 63-70. https://doi.org/10.56070/ibmaj.v2i2.36



the steps taken sequentially to process financial information from the beginning to the end of the reporting period. Accounting methods include: 1) Cash Accounting Method (Cash Basis): This method records income and expenses only when money is received or paid in cash. Transactions are recorded on the basis of cash flows that occur. This method is simple but less accurate in describing the financial performance of an entity because it ignores aspects of accounts payable and inventories; 2) Accrual Accounting Method (Accrual Basis): This method records income when there is a sale or receipt of rights to revenue, and records expenses when expenses or obligations occur. Revenues and expenses are recognized when incurred, regardless of whether money is received or paid. This method provides a more accurate picture of an entity's financial performance; 3) Mixed Accounting Method (Hybrid Method): This method uses a combination of cash and accrual accounting methods. Some transactions may be recorded using the cash method, while other transactions are recorded using the accrual method. This could be due to company policies or legal requirements.

Meanwhile, the accounting cycle consists of a series of steps that are carried out sequentially to process financial information (Wiguna & Ermawati, 2019). The accounting cycle generally consists of five steps, including: 1) transaction analysis: In this step, financial transactions are identified and analyzed to determine how these transactions should be recorded in the accounting system; 2) General Journal: After the transactions are analyzed, they are recorded in the general journal. The general journal records transactions in the form of journal entries, which record debits and credits for each account involved in the transaction; 3) General Ledger: After being recorded in the general journal, transactions are posted to the general ledger. General ledger is a record that records each account separately and keeps account balances; 4) Adjusting Entries : Final adjustments are required to account for unrecorded or unrecognized transactions or events in the current accounting period. Adjustments may include depreciation of assets, unrecorded income and accrued expenses; 5) Financial Reports: After all transactions are recorded and final adjustments are made, financial statements are prepared. Common financial reports include an income statement, balance sheet, and statement of cash flows. This report provides information about the company's financial performance and financial position. The accounting cycle repeats every accounting period, such as monthly, quarterly, or annually. This cycle ensures that financial information is managed properly and can be trusted in making a managerial decision.

SMEs is an abbreviation of Small and Medium Enterprises. SMEs refer to businesses or business entities that have a small to medium scale (Sulistyan et al., 2022). Typically, SMEs are businesses that are owned, managed, and operated by a limited number of employees, have relatively small assets, and serve local or regional markets. Some general characteristics and characteristics of SMEs include: a) Business Scale: SMEs operate on a relatively small to medium scale. They may have a limited number of employees, lower production volumes, and smaller turnover compared to larger companies; b) Property: SMEs are usually owned and managed by individuals or small groups, such as sole proprietors, partners or families. Nonetheless, there are also SMEs that are run in the form of business entities, such as a partnership of firms or a limited company; c) Target Market: SMEs tend to cater to local or regional markets. While there are some SMEs that can expand their market reach nationally or internationally, their main focus is usually on meeting the needs and demands of the surrounding area; d) Economic Role: SMEs have an important role in the economy of a country. They can make a significant contribution to economic growth, job creation, and industrial development at the local or regional level; e) Innovation: SMEs are often a source of innovation and creativity in the economy. The limited resources and flexibility that SMEs have allows them to adapt to market changes quickly and produce innovative products or services; f) Sector Diversification: SMEs can be found in various industrial sectors, such as trade, manufacturing, services, agriculture, tourism, and so on. They can operate in a wide variety of businesses, from restaurants, retail stores, small manufacturing companies, to consulting services and information technology.

Governments and other institutions often pay special attention to SMEs, whether in the form of financial support, training, market access, or policies that support the growth and development of SMEs. This is because of the strategic role of SMEs in creating jobs, reducing economic disparities, and encouraging economic inclusion (Pakpahan, 2020). The application of accounting to small businesses can vary depending on the characteristics, scale, and specific needs of each business (Mulyani et al., 2017). However, there are some basic accounting principles that can be applied in small businesses to ensure accurate financial records and provide relevant information. Some aspects of applying accounting to small businesses include at least: a) Recording of Transactions: It is important to record all financial transactions that occur in small businesses. Transactions such as purchases, sales, receipts,

expenses, and other transactions must be recorded neatly and regularly. The application of the double-entry bookkeeping method will ensure that each transaction has balanced debit and credit entries; b) Grouping of Accounts: In small businesses, it is important to group financial transactions by type. For example, accounts such as cash, accounts receivable, accounts payable, inventories, revenue, expenses, and owner's equity should be grouped separately. This will assist in the preparation of better financial reports and financial analysis; c) Use of Simple Accounting Systems: Small businesses can use simple accounting systems, such as using spreadsheets or easy-to-use accounting software. With a simple system, business owners can efficiently record transactions and obtain the necessary financial reports; d) Final Adjustments: At the end of an accounting period, it is necessary to make final adjustments to account for unrecorded or unrecognized transactions and events. For example, final adjustments may involve recognizing unrecorded revenue, writing off uncollectible receivables, or depreciating assets; e) Cash Flow Monitoring: Cash flow monitoring is very important in small business. Keep careful records of cash inflows and outflows, including receipts from sales, payment of expenses, and other financial activities. This helps business owners manage their finances better and make informed decisions; f) Preparation of Financial Statements: Small businesses also need to prepare relevant financial reports, such as income statement, balance sheet and cash flow statement. These financial reports provide an overview of the financial performance of small businesses, allow analysis of financial health, and can be used as a tool for making business decisions. Although the application of accounting in small businesses can be adjusted to the needs and available resources, the basic principles of accounting are still important to ensure the integrity and accuracy of financial information.

Some SMEs are not aware of the importance of financial reports in a business due to limited knowledge of accounting (Akhmad, 2015). Things like this are related to the educational background of the Human Resources (HR) in the UKM. To describe good performance in small and medium enterprises, financial reports are needed that are relevant and in accordance with applicable accounting standards so that they can be used in decision making (Divianto & Febrianty, 2017). The role of SMEs has a strategic value in strengthening the national economy (people's economy) so the government should pay proper attention to empowerment, namely being seen as a group of business units that should be integrated into the business world nationally which can later increase living costs and competitiveness. SMEs as the forerunner of entrepreneurship in the process need to be given more careful attention from various aspects (Yatminiwati et al., 2021).

A financial report is said to be feasible if it meets the following criteria: 1) Reliability: Financial reports must have quality information that is reliable and can be trusted. The information contained in the financial statements must be based on transactions that occurred and disclosed objectively; 2) Adequacy (Completeness): Financial reports must include all relevant and significant information needed by users of financial reports to make the right decisions. No important information may be omitted or hidden; 3) Consistency: Financial reports must be presented consistently from period to period, so as to enable proper comparison of financial performance from time to time. Changes in accounting methods must be disclosed and adequately explained; 4) Fair Accounting Policies (Fair Accounting Policies): Financial statements must be prepared using reasonable and generally accepted accounting policies. The accounting policies used must comply with applicable accounting standards and produce a fair and objective presentation of the company's financial position and financial performance; 5) Compliance with Generally Accepted Accounting Principles: Financial statements must comply with accepted accounting principles, such as financial accounting standards that apply in a country or region. Following these principles ensures uniformity and compliance in financial reporting; 6) Readability and Transparency: Financial reports must be presented in a clear and easy-toread manner so that users of financial reports can understand them. All relevant information must be clearly disclosed without omission or significant concealment of information; 7) Relevance: Information in financial statements must be relevant and have predictive value as well as confirmative value in making economic decisions by users of financial statements. The information must be capable of providing useful and useful insights in evaluating the company's financial performance and future potential; 8) Timeliness: Financial reports must be presented in a timely manner, so as to provide upto-date and relevant information for users of financial statements. Delays in the preparation and presentation of financial reports can reduce the value of the information; 9) Producing proper financial reports is important to ensure the transparency, accuracy and integrity of an entity's financial information. Proper financial reports will help users of financial reports make better decisions and provide confidence in the financial performance of a business.

This research was conducted at Shredded Tuna Business named Lely Bintang. Lely Bintang is a Small and Medium Enterprises or UKM engaged in the production of shredded tuna which was founded by Ms. Lely. This Small and Medium Enterprises produces shredded tuna which has a distinctive taste (Badar, 2023). This Business has the advantage of being able to process spices and fresh Tuna into various kinds of processed food products, quality, taste and appearance that have good competitiveness in traditional and modern markets as well as quite extensive marketing. This small Lely Bintang business was started with a recipe for shredded fish made by grandmother, Lely developed this business in Ternate City, North Maluku. Lely Bintang's business address is Toloko, jl. Oskar, Sangaji subdistrict, Ternate City, North Maluku Province. In the Shredded Fish Business where data is obtained that the Owner records cash receipts and disbursements into a diary. The diary contains the date, sale of merchandise. However, Ms. Lely's shredded tuna business uses a simple accounting system, which is done manually, only recording things that are deemed necessary due to a lack of knowledge about accounting records. Given the importance of a proper financial report for SMEs, and seeing the development of Lely Bintang's business which is quite extensive, the author intends to conduct research to analyze the application of accounting in Lely Bintang's business with the title: How The Accounting Implementation "Abon Ikan Tuna Lely Bintang" Ternate City.

# Methods

This research uses a descriptive qualitative approach that describes and understands an event in depth and detail (Rusdianti et al., 2022). This method is used to collect, analyze, and interpret descriptive data (Sugiyono, 2016). The research is located at the Lely Bintang tuna shredded business in Ternate City, North Maluku Province. This research was conducted using primary data sources. This primary data is in the form of notes from interviews obtained through interviews that researchers conducted. The primary data sources in this study are the owner and the employees involved in the sales accounting system for the shredded tuna business. The results of the interviews are then processed and interpreted into descriptive narratives, so that readers can capture the results of this research (Creswell & Creswell, 2018).

## **Results and Discussion**

The background to the establishment of the Mrs. Lely's tuna fish business, namely, the small shredded tuna business which was initiated in 2015, is a household industry called Lely Bintang. The name Lely Bintang is taken from the name of the owner, namely Lely and the name of their child, namely Bintang, which means that in the future the business that is being developed will shine more like a star. This business is managed by Mrs. Lely herself and assisted by several colleagues who are employed by Mrs. Lely herself. Initially, Ms. Lely started a tuna fish floss product only on a small scalethe target is only offered to close people or family.

However, as time goes by for his shredded tuna, he feels that his business will continue to grow as production and market reach expands. Mrs. Lely saw that the shredded tuna had great prospects. The basis for choosing fish-based products was because the availability of fish in North Maluku was sufficient and had the best quality so she took the initiative to make breakthroughs by creating a company called Lely Bintang, with this breakthrough Mrs. Lely was motivated to expand her business. As a result, he got a great response from the public and the shredded tuna was uploaded via social media. At that time, he was more enthusiastic and sure that his production and market reach were getting wider. Even though the challenges faced were enormous, this did not dampen the enthusiasm and motivation to act and act, with the principles he had, For Mrs. Lely, building a business like this is not easy, ups and downs are certain. However, consistency must be maintained, so that later you will not easily give up, if not all of the products are sold.

Lely Bintang is a business entity engaged in the production of shredded tuna which was founded by Mrs. Lely. This business entity produces shredded tuna which has a distinctive taste. The advantages of this business are being able to process agricultural products into various kinds of processed food products, quality, taste and appearance that have good competitiveness in traditional and modern markets as well as a fairly broad marketing. This small Lely Bintang business was started with a recipe for shredded fish made by grandmother, Lely developed this business in Ternate City, North Maluku. Since she was little, Lely's mother was very happy to see her grandmother making fish floss. Of course, shredded fish is processed the same as other people in general. However, what makes the difference is grandma's recipe which makes processed fish more savory and delicious. Every morning, breakfast is provided by the grandmother, which is porridge which is perfect when accompanied by shredded fish. It became their family custom. So that the recipes and habits don't disappear, Mrs. Lely starts learning the recipes.

It was there that she inspired me to make shredded tuna so that Mrs. Lely took the initiative herself to be creative in producing something with her own hands. Seeing that the City of Ternate has abundant agricultural products, one of which is marine products, so he took the opportunity to utilize these agricultural products into a home industry. Because it uses natural ingredients and raw materials that are still fresh so that processed fish products are easily accepted by consumers. Seeing the good response from consumers to this product, Ms. Lely is trying to continue producing shredded tuna. Initially, Mrs. Lely made shredded tuna on a small scale, when this business had grown, was selling well in the market and had more and more customers, and Mrs. Lely came to the conclusion that she was making a large-scale shredded tuna business using 130 kg of fresh tuna, so when This small business, Lely Bintang's work, already has a production house located inToloko, Jl. Oskar, North Sangaji sub-district, North Ternate Sub-District, North Maluku Province. Besides that, the shredded tuna business also owned by Mrs. Lely also has a stand located at Ternate's Sultan Babullah Airport.



**Figure 1.** Lely Bintang's Work and Product Source: Observation results from researchers (2023)

Based on the results of interviews conducted with informants, Mrs. Lely's Shredded Tuna Business has kept financial records but is not in accordance with applicable accounting standards. Mrs. Lely only records her financial reports in a simple manner. According to Mrs. Lely, recording financial reports is very important to know the development of her business. Recording of financial reports is also carried out with the aim of knowing the increase in the tuna business they have.

According to previous research, Rabuisa et al. (2018) suggests that financial reports can be applied with the aim of being a provider of information related to the position, performance, and changes in the financial position of a company that is useful for making company economic decisions. Meanwhile, according to the Indonesian Institute of Accountants (2017) in PSAK No. 1 it is stated that financial reports aim to be comparable with the financial statements of the previous period as well as financial reports for other similar businesses.

Financial reports have a significant influence on business development, because financial reports can be said to be a guidebook for entrepreneurs to determine the selling price that must be set and find out profit and loss. Even financial reports that comply with accounting standards are needed to carry out business forecasting or commonly known as forecasting and calculating the break-even point (BEP).

After observing further, Ms. Lely's shredded tuna business still uses simple or manual recording. Mrs. Lely only records what she thinks is important to record. Based on Wahyuni et al. (2019) previous research, business owners keep financial records with the aim of being able to see the amount of profit received and to see the profit earned every day going up or down. After being observed, Mrs. Lely was very thorough in recording income and expenses. Mrs. Lely recorded all expenses, such as spending on materials for making shredded tuna, paying employee salaries, and expenses outside the business.



**Figure 2**. Production Process Source: Observation results from researchers (2023)

In terms of financial management, Mrs. Lely does it with her own understanding so that it is easy to understand and easy to remember. Implementing structured and neat financial records in accordance with accounting standards is considered very complicated, this is because Ms. Lely has no experience in accounting or finance. For Mrs. Lely, taking notes simply is very detailed. The most important thing is to have daily notes. Financial expenditures are only recorded from notes obtained when shopping at the market.

Even though the recording format is not by journalizing accounting, Ms. Lely makes reports based on her own understanding, and is recorded neatly without having to study journalism accounting. Mrs. Lely's financial records are far from accounting standards, the information provided cannot yet be useful for making decisions related to the running of the shredded tuna business.



**Figue 3**. Financial Reports Source: Observation results from researchers (2023)

Theoretically, financial records greatly influence financial management in any business, including the shredded tuna business. By recording structured and consistent financial reports, it becomes easier for business owners to find out about the progress of their business. Based on research conducted by Yatminiwati et al. (2021) that the benefits and business decisions that can be carried out based on accounting and accounting reports include: 1. Assessment of business performance and as evaluation material for the future. 2. Useful as a basis for consideration of purchasing raw materials for production and production equipment. 3. Decisions regarding prices, for example determining selling prices, slashing prices, increasing prices for goods/services, and so on. 4. Apply for financing to the bank. 5. For business development, the decision to open or close a branch. 6. Adding and developing

human resources, increasing employee income, giving bonuses to employees. 7. Preparation of the budget for the next period. 8. Adding business assets. 9. Business promotion.

Another principle that must be adhered to properly, without tolerance, is the principle of business unity. Related to financial matters related to personal and business interests, it must be distinguished so that business owners can find out about the development of their business, but this is difficult to implement in SMEs, because there is little capital and generates profits for business capital turnover too little. As in the shredded tuna business owned by Ms. Lely, she does not separate the money to be used for business turnover and for personal gain, the money she earns tends to be considered the same and is used without distinction.

In this case the government's role is highly expected in the development of SMEs in Indonesia, because of the potential for abundant natural wealth and the creativity of SMEs in processing business ideas and the role of SMEs themselves in alleviating poverty and reducing the number of unemployed. This is because the more an UKM develops, the more labor it absorbs, so that the number of unemployed is smaller and the economy and welfare of the nation are increasing. The government can play a role in providing training or outreach to SMEs in developing businesses and compiling a proper financial report, so that the development of their business can be identified and from these financial reports financial information can be seen about income and expenses that give rise to profits or losses of a business, so that the SMEs are able to make decisions for the continuity of their business.

## Conclusion

Based on the research described above, it can be seen that the level of knowledge regarding the application of the accounting system is still very minimal in the Lely Bintang tuna shredded business. To find out the development of the business, the owner of shredded tuna keeps financial reports in a simple way so that they are easy to understand and remember. This shredded tuna business records its income as profit/loss every day. This is considered very important to know the development of Ms. Lely's business. The efforts made by Lely Bintang in recording its financial statements are still not in accordance with applicable accounting standards. The need for local government concern in providing knowledge and learning through training or socialization regarding the preparation of an accounting system that can produce information from financial reports that can be used by small business actors in developing their businesses, which can then contribute to improving the economy and prosperity of the country.

## References

- Akhmad, K. A. (2015). Pemanfaatan Media Sosial bagi Pengembangan Pemasaran UMKM (Studi Deskriptif Kualitatif pada Distro di Kota Surakarta). Duta.Com: Jurnal Ilmiah Teknologi Informasi dan Komunikasi, 9(1), 43-54.
- Badar, N. A. (2023). *Lely Bintang Camilan Nusantara*. https://www.karyakreatifindonesia.co.id/umkm/lely-bintang
- Beretta, E., & Cencini, A. (2020). Double-entry bookkeeping and balance of payments: the need for developing a new approach. *Insights into Regional Development*, 2(3), 610-629. https://doi.org/10.9770/ird.2020.2.3(1)
- Creswell, J. W., & Creswell, J. D. (2018). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (5th ed.). SAGE Publications, Inc.
- Divianto, & Febrianty. (2017). Pengaruh Pemahaman Pelaku Ukm Dalam Menyusun Laporan Keuangan Terhadap Implementasi Laporan Keuangan Berdasar Sak Etap Dengan Persepsi Pelaku UKM Sebagai Moderating Variable. *nternational Journal of Social Science and Business*, 1(3), 166-176. https://doi.org/10.23887/ijssb.v1i3.11318
- Gardi, B., Hamza, P. A., Sabir, B. Y., Aziz, H. M., Sorguli, S., Abdullah, N. N., & Al-Kake, F. R. A. (2021). Investigating the effects of Financial Accounting Reports on Managerial Decision Making in Small and Medium-sized Enterprises. *Turkish Journal of Computer and Mathematics Education*, 12(2), 2134-2142. https://doi.org/10.17762/turcomat.v12i10.4733

- Mulyani, S., Nurkamid, M., & Gunawan, B. (2017). Kedisiplinan Pencatatan Akuntansi Menuju Penerapan Teknologi Informasi Akuntansi Ukm Batik Bakaran Juwana. *J-ABDIPAMAS (Jurnal Pengabdian Kepada Masyarakat)*, 1(1), 31-39. https://doi.org/10.30734/j-abdipamas.v1i1.76
- Pakpahan, Y. E. (2020). Pengaruh kualitas laporan keuangan terhadap kinerja usaha UMKM. *Akuntabel*, 17(2), 261-269. https://doi.org/10.30872/jakt.v17i2.8222
- Rabuisa, W. F., Runtu, T., & Wokas, H. (2018). Analisis Laporan Keuangan Dalam Menilai Kinerja Keuangan Perusahaan Pada Bank Perkreditan Rakyat (BPR) Dana Raya Manado. Jurnal Riset Akuntansi Going Concern, 13(2), 325-333. https://doi.org/10.32400/gc.13.02.19518.2018
- Rusdianti, I. S., Irmadariyani, R., & Kustono, A. S. (2022). E-Finance : Mitigation of Fraud Tendency in Indonesia. International Journal of Entrepreneurship and Business Development, 5(2), 574-582. https://doi.org/10.29138/ijebd.v5i3.1857
- Scott, W. R. (2015). *Financial Accounting Theory*. Library and Archives Canada Cataloguing in Publication.
- Sugiyono. (2016). Metode Penelitian Kuantitatif, Kualitatif dan R & D. CV. Alfabeta.
- Sulistyan, R. B., Carito, D. W., Cahyaningati, R., Taufik, M., Kasno, K., & Samsuranto, S. (2022). Identification of Human Resources in the Application of SME Technology. *Wiga : Jurnal Penelitian Ilmu Ekonomi*, 22(1), 70-76. https://doi.org/10.30741/wiga.v12i1.799
- Wahyuni, I., Sutomo, H., & Nugroho, A. (2019). Analisis Aplikasi Implementasi Sak Emkm Untuk Meningkatkan Perkembangan Umkm Pada UMKM Kota Bogor. *Jurnal IKRA-ITH Ekonomika*, 2(3), 66-75.
- Wiguna, K. Y., & Ermawati, D. (2019). Analisis Penerapan Siklus Akuntansi Pada Usaha Kecil Dan Menengah Di Kota Lubuklinggau (Studi Kasus Di Kecamatan Lubuklinggau Utara I). Jurnal AkunStie (JAS), 5(2), 20-34.
- Yatminiwati, M., Setyobakti, M. H., Sulistyan, R. B., & Ermawati, E. (2021). Social Entrepreneurship in MSME Development. *International Journal of Environmental, Sustainability, and Social Sciences*, 2(3), 239-243. https://doi.org/10.38142/ijesss.v2i3.111