Faculty of Engineering
University of Nigeria, Nsukka
22nd- 25th June, 2021

Proceedings of the
2021 Sustainable Engineering and
Industrial Technology Conference

A Review on Methods for Selecting E-Commerce Platforms

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Abstract

With technical innovation, the use of digital platforms such as e-commerce continues to expand. However, it has certain drawbacks, such as a lack of technical understanding of the functions that add value to a platform when choosing a business online. As a result, this study was conducted in order to improve user privacy and security, past experience, brand image, customer service, product variety, and motivations. The best way to choose an e-business or start a business online is to reach out to new customers. This research study aims to conduct a broad and systematic review of different methods such as utilitarian motivation, hedonic motivation and Questionnaire for selecting an online platform for an e-commerce enterprise, with the goal of defining and recommending the best approach for selecting e-commerce platforms based on their merits, demerits, and drawbacks, as well as potential solutions to problems on e-commerce platforms.

Keywords: fuzzy Logic, stochastic frontier analysis, meta-frontier analysis, e-commerce platform, utilitarian motivation, hedonic motivation

1. INTRODUCTION

The best way for small businesses or emerging businesses to thrive is to reach out to new clients. As a result, the Internet offers us a wealth of opportunities. Because of the additional costs of running their internet platforms and shops, most of the small and new businesses are uncertain whether they should step into the information age. What they do not realize is that running an online retailer or website is not as expensive as they thought. Many consultants are willing to assist small businesses and their brands in the online world. Because of the fierce competition in the industry, the business climate has changed dramatically. The number of consumers using online vendors is rapidly growing, and as a result, meeting customers' needs will be more relevant than ever. To be able to take care of their clients without complications, business owners will need to constantly develop their plans, advance to new platforms, and own online stores. Companies may reduce their costs and increase their return on investment by advancing into the technological era. Furthermore, as we progress into the information age, most businesses will go multinational or worldwide, which will help them boost revenue and earnings. If a company does not progress to owning an online store, it means that the founders are afraid of growing their company to its full potential. Based on their platform plans, the majority of e-commerce platform providers have evolved a variety of business models. There is a need to consider choosing an e-commerce site for a company owner because there are so many options. Choosing the best e-commerce site for companies is one of the most critical choices every company owner would have to make, as it will eventually shape their business model and potential [1].

2. METHODOLOGY

This study aims to conduct a review that will reflect on the respondents' expectations and perceptions regarding the impact of user experience on e-commerce platforms. E-commerce websites want their clients to accomplish their goals after using their page or platform, as well as provide a favourable response to their experience [2]. Selecting an E-commerce website can be done in four ways:

1. Questionnaire Technique

2. Sampling Technique

3. Meta-Frontier Analysis and Stochastic Frontier Analysis

4. Fuzzy logic

2.1. Questionnaire Approach

We used the questionnaire method to collect appropriate and important data in order to achieve our goal. To source resources, online questions are used to get answers from online users and e-commerce site users [3]. Questionnaire approaches have the following advantages:

1. They are very economical.

2. It is a very realistic system of e-commerce site selection.

3. They provide you with the results you need in a timely manner.

4. You can target a wide audience with this tool.

5. It facilitates the study of data. By using the questionnaire approach, there are already built-in tools that make the research easy.

Questionnaire approaches have the following drawbacks:

1. The respondent to this approach will not be completely honest.

2. By using the questionnaire process, there is a strong chance that the question will go unanswered or be overlooked.

3. Respondents could misinterpret the questions posed, giving you a negative rating.

2.2. Sampling Technique

When faced with a large amount of data and scarce resources, the sampling method is a great option. When dealing with a large amount of data, sampling can be the only choice. However, not all data subjects are used in the questions [4].

The sampling process allows one to pick a small group of people from a larger group. In the case above, if we pick 5000 people from a population of 6.5 million, the sample size is 5000 people, while the overall population is 6.5 million. Once we've determined the sample size, we'll look at the sample's characteristics [5].

The following are the advantages of the sampling method:

1. It saves a lot of time by reducing the amount of data.

2. The sampling process prevents monotony in the workplace. It is not necessary to run the query again and again for each piece of evidence.

3. You are more likely to reach a higher degree of accuracy by using this tool.

4. Even with a limited range of tools, this approach provides accurate information on the data.

The following are some of the drawbacks of sampling methods:

1. The sampling process may leave out any data that is homogeneous to the data collected.

2. A poor choice of sampling methods will render the whole project worthless.

3. Each person has a high risk of being biased.

4. Selecting a representative sample is difficult.

2.3. Stochastic Frontier Analysis and Meta-Frontier Analysis

Stochastic Frontier Analysis (SFA) estimates technical productivity using the frontier output function. As a production function, this represents the relationship between input and output variables and represents the maximum output compared to the input both stochastic-frontier analysis and meta-frontier analysis have advantages [6].

Stochastic-Frontier Analysis and Meta-Frontier Analysis have advantages such as follows:

1. Meta frontier analysis is a mathematical method for combining and objectively evaluating the outcomes of similar experiments.

2. Stochastic boundary analysis is used to generate an accurate approximation of the individual unit.

3. They may be used to track a large number of experiments at once.

4. They offer a valuable method for analyzing large amounts of data.

2.4. Fuzzy logic

Fuzzy logic can sense and represent knowledge similarities and discrepancies. We compared our proposed model to other models from different platforms, and the precision of these models was determined by the overall relative difference in metric [7]. Below are some of the advantages of using fuzzy logic:

1. The performance of a fuzzy logic scheme can be quickly improved by modifying it.

2. It is used to find a quick solution to a difficult problem.

3. No specific inputs are needed by a fuzzy logic scheme.

4. It is easy to use and adaptable.

5. It has a wide range of industrial and practical applications.

6. After you've finished analyzing your customers' reviews, it's a helpful way to figure out how they feel.

Some of the drawbacks of using fuzzy logic are as follows:

1. Fuzzy logic does not necessarily provide accurate outcomes.

2. Precise rules and affiliation functions are difficult to implement in a fuzzy logic environment.

3. Fuzzy logic can be confused with philosophy and terminology in some situations.

4. Validation and evaluation of fuzzy knowledge-based applications necessitate extensive hardware testing.

3. FINDINGS

The analyzed literature revealed that each of the approaches had different flaws that caused them to be less than 100 percent effective. These issues are discussed, as well as their remedies. The following are the approaches' limitations and alternative solutions:

3.1. Questionnaire method's limitations

This approach has the drawback of getting a low percentage of honest responses. In this approach, the respondent could not understand the questions being posed, resulting in a false response. Many people see questionnaires because, for personal purposes, do not want to answer the questions. In certain ways, this makes the questionnaire less reliable and incomplete. Respondents' responses can be skewed, which can cause problems when assessing the data. Language barriers may often be a significant impediment to the process. We usually have a big loss when the interpreter or the person's reading abilities are bad.

3.2. Solution

When creating a questionnaire, keep it as simple as possible. To avoid misleading the respondent, basic and descriptive terminology should be used. When it comes to language differences, make sure you can translate the questionnaire into several languages so that the respondents can properly comprehend the questions and have accurate responses.

3.3. Limitation of sampling process

The sampling method has a major limitation in that it requires selective filtering, which leads to incorrect inference. If the process of selection is flawed, bias occurs. If the larger samples are incorrectly chosen, small samples are preferable to large samples. In sampling techniques, adequate subject knowledge is needed. The mathematical analysis and estimation of possible errors are part of the sampling process. When a researcher lacks experience, he can make significant errors, causing the study to be misleading.

3.4. Solution

When taking samples, the researcher should be careful not to make any mistakes for the results to be correct. Researchers who do not have a complete understanding of the current analysis do not participate in it so that they do not make errors that would invalidate the whole study. Larger tests aren't necessarily safer and an error will always happen when there are a lot of them.

3.5. The following are some of the limitations of the Stochastic frontier analysis and Meta frontier analysis

In stochastic frontier analysis, selecting the incorrect production function may have a significant impact on the outcome. Since the absolute degree of technological performance is so vulnerable to distributional expectations, any misapplication will wreak havoc on the performance. This approach does not allow for the evaluation of accurate inferences in small samples. The development frontier does not allow for the prediction of the technological efficiencies of companies that generate several outputs in Meta frontier research.

3.6. Solution

As a buyer, making the best decision is critical. It is important to exercise caution when using the output feature to avoid obtaining incorrect results. Predicting a company's technological efficiencies can be increased so that production can be multiplied.

3.7. The fuzzy logic approach has several drawbacks

In the fuzzy logic approach, the system may place the respondents' reviews in the incorrect portion, causing the analysis to be inaccurate. Instead of being in the positive, it may be in the negative or neutral. Exact rules and membership features are difficult tasks in a fuzzy logic environment. Fuzzy logic is often confusing with hypotheses and terms. All of this reduces the consistency of fuzzy logic, which is not what we want.

3.8. Solution

The fuzzy logic environment can be streamlined, as well as the membership functions. In addition, the characterizing potential of probability multivalued neutrosophic linguistic numbers (PMVNLNs) can be increased so that incorrect positioning of feedback or facts can be avoided, as well as confusion of hypotheses and expressions.

4. RECOMMENDATIONS

This study suggests and measures the use of the approaches in choosing an e-commerce platform, as well as how moving to the online world and owning an e-commerce platform works. Earlier research on technology acceptance was undertaken from the viewpoint of the consumer, determining the utility and ease of use of the latest technical device. This article discusses the main factors that influence the implementation of emerging e-commerce technologies as well as how to choose an e-commerce site. This research also looks at the intrinsic benefit that an e-commerce website can have. These values can be classified into the following categories:

- Small and medium-sized businesses will now develop their own multi-channel approach, which was only reserved for multinational corporations.

- It aids small and medium-sized businesses in raising brand value and reputation. This research looked at the benefits of e-commerce and how to choose a website. Furthermore, the study of the effect of technological knowledge on the value of information and communication technologies stresses the importance of teaching consumers to help them appreciate the value of basic functions.

5. CONCLUSION

Finally, this research study adds to the telecommunication literature by including an understanding of e-commerce and a selection of methods for choosing an e-commerce platform, their benefits and drawbacks, challenges with each approach and potential solutions, and how e-commerce consumers can rely upon to handle their platforms sequentially and effectively.

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