Leveraging Digital Marketplaces to Enhance the Contribution of Local Artisans and Craftsmen to Nigeria's Economic Diversification

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ABSTRACT
This study delves into the transformative potential of digital marketplaces for Nigeria's local artisans and craftsmen. Leveraging these platforms aims to significantly enhance their visibility, accessibility, and economic value, ultimately contributing to the nation's vital economic diversification. A simple digital platform was meticulously designed and implemented to achieve this, adhering to the robust Model-View-Controller (MVC) architectural pattern. The Model component efficiently handles data logic and storage, ensuring seamless management of product information and artisan profiles. The View is responsible for presenting this data in a user-friendly and engaging manner to both artisans and prospective buyers. Finally, the Controller acts as the intermediary, diligently processing user inputs and facilitating smooth interactions within the platform. The core methodology prioritized ease of use, accessibility, and scalability, recognizing the diverse needs of both seasoned craftsmen and first-time online shoppers. The findings are compelling: integrating local artisans into these digital ecosystems demonstrably improves market access, leading to increased sales and broader customer reach. Furthermore, it fosters greater customer engagement, bridging the gap between creators and consumers. This, in turn, strongly supports inclusive economic growth across the country.
Keywords: Digital Marketplaces, Artisans, Economic Diversification, Model-View-Controller (MVC), E-commerce

1.0 INTRODUCTION

Nigeria's over-reliance on oil has exposed the economy to global market fluctuations, making economic diversification a national priority. True diversification involves expanding sectors like agriculture, manufacturing, and ICT. One underutilized sector is the artisanal and crafts industry, which holds potential for job creation and cultural preservation. Economists say it is not just about adding new sectors, true diversification ought to encourage sustainable growth of other sectors like agriculture, manufacturing and technology to reduce their dependency on oil. To achieve this, investments in infrastructure, education and policies conducive to the business environment are required (Delechat et al., 2024).

The rise of e-commerce has had a notable effect on small-scale businesses in Nigeria, with the availability of a medium through which small-scale businesses can be more visible and reach a wider customer base. Nevertheless, e-commerce benefits must be fully realized only with a strategic approach that takes into account the needs and limitations of local artisans. The technical side of online selling is very hard for many artisans to do, such as setting up online stores, managing inventory, and handling logistics. Additionally, it can be daunting for newbies in the digital marketplace to build trust with online customers and travel through the perils of online payment systems. As such, a digital marketplace for local artisans needs to be developed in a comprehensive way to fill these digital literacy gaps and provide tailored support to enable the artisans to participate in the digital economy.

E-commerce platforms promote more competitive pricing and improve price discovery. By allowing consumers to easily compare prices from different vendors, digital marketplaces encourage businesses to offer competitive prices to attract customers. This increased competition benefits consumers by providing access to goods and services at lower prices. It also leads to a more efficient allocation of resources, as businesses are incentivized to produce goods and services that are in high demand. Over time, these dynamic fosters a more balanced market structure that benefits both buyers and sellers, preventing price gouging and promoting fairer market practices.

The term 'Digital Market Place for Local Artisans and Craftsmen' is rather self-explanatory in that it refers to websites created to facilitate the sale and marketing of unique and artistic products manufactured and crafted in local areas. This is so because, unlike conventional E- commerce sites which are basically concerned with moving large quantities

of products, this site is focused on eclipsing the creativity of individuals from a certain community or location (Lakshana, Sriram, Muktha, & Magesh,2024).

The expansion of small businesses through digital marketplaces leads to increased productivity and job creation. As businesses experience growth in demand through online channels, they need to increase their production capacity to meet this demand. This increased production sometimes requires more workers to be hired, and with it, new job opportunities inside local communities and within the supply chain. In these new jobs, skilled and unskilled workers can both benefit to reduce unemployment rates and stimulate aggregate demand in the economy. More of these small businesses expanded, meaning that there were ripple effects and positive economic outcomes from the businesses themselves.

The advent of digital marketplaces has given small-scale businesses in Nigeria a much wider market access by simply reducing geographical barriers and allowing sellers to reach a wider consumer base. The level of exposure increases, resulting in more sales volumes and therefore revenue growth, increasing the sustainability of the business. The study of Unegbu, Yawas & Dan-asabe (2024) revealed that Digital Transformation has a great impact on the competitiveness and operations of Nigerian SMEs, which facilitates them to adjust to the changing international business environment.

With the emergence of e-commerce, small-scale businesses now have greater market access. However, local artisans often face challenges such as digital illiteracy, lack of infrastructure, and poor integration into online platforms. Therefore, a dedicated digital marketplace tailored to their needs can bridge these gaps, enhance visibility, and promote fairer trade practices.

This paper presents the design and implementation of a digital platform that empowers local artisans using the Model-View-Controller (MVC) framework. The platform streamlines user interactions, allows artisans to manage inventory, and provides buyers with a seamless browsing and purchasing experience. By promoting accessibility and inclusivity, the platform supports Nigeria's broader economic transformation agenda.

The production of handicrafts is critical to the economy and society in many parts of the world (UKEssays, 2018), including rural development and the sustenance of the area. The handicrafts market consists of three main actors which are; Local craftworkers and artisans (who produce goods from locally sourced raw materials in their villages), To reap maximum benefits from handicraft, there is need to harmonize all actions of the three players but mainly the government should focus on promoting commodities in international markets (Dutta, 2025). The handicraft market is founded on its specific culture and characteristics.

Many studies have attempted to address the gap in terms of the level of awareness and usage of digital media among rural artisans. Haider, Islam, & Kumrawat (2024) explain that there is some level of awareness, with some innovators on this issue being completely unexposed to the digital tools, while others have basic knowledge of these tools but cannot use them with confidence. Such exploration is also at the heart of issues affecting rural economies, such as poor internet connectivity and access to digital gadgets.

Furthermore, Sharma and Jain's (2020) spell out the relevance of education and training programs. It can be stated that if the artisans are exposed to workshops or programs regarding digital skills and the use of digital marketing for their products, they tend to become more receptive and inclined to learn. These findings are corroborated by (Sharma, 2024), who argue that state-sponsored schemes and partnerships with NGOs can help alleviate the digital divide and benefit rural artisans.

However, the literature also points out gaps that go beyond simply awareness. Solomon & Mathias (2020) observed that with some knowledge of different digital media, artisans may also find it hard to navigate online environments or come up with appealing content for marketing over social media. Also, the issue of security while on the internet, as well as the cost of establishing an online business, could be great inhibiting factors, as Padilla (2020) indicated.

A digital platform transcends geographical boundaries, allowing artisans and entrepreneurs to connect with customers across the country and even internationally. This wider reach translates to a larger potential customer base, which in turn can lead to increased demand for their products or services. The resulting higher revenues provide small businesses with the opportunity to grow, invest in expansion, and potentially achieve economies of scale, leading to greater efficiency and profitability. Another important advantage of digital marketplaces is that they are available to everyone, as small businesses in economies with few, if any, access to traditional banking services. It brings fintech solutions such as mobile payments, digital wallets, and microloans to their e-commerce platforms that integrate to allow small-scale entrepreneur with the ability to scale their business financially. Reduction of cash dependence

through such platforms increases credit access as well as investment in productivity enhancing technologies. Qualitative evidence from Saka & Akinde (2024) suggests that digital financial services are important for small scale businesses to continue operating in Nigeria by increasing financial inclusion and business sustainability.

In addition, the digital marketplaces widen price discovery and widen competition by giving consumers the opportunity to see prices from multiple vendors. This brings in transparency and prevents monopolistic pricing, and with that, fair competition and optimum resource allocation in the economy. Better products at lower costs leads to a more efficient market system as businesses compete on price and quality at lower cost as consumers. Unegbu, et.al. (2024) research emphasizes that digital platforms make the market environment more efficient for Nigerian SMEs to improve their competitiveness. Furthermore, digital marketplaces stimulate more productivity, as well as job creation. An increase in demand for businesses through online channels has forced them to scale production and thus add more jobs in the local supply chains. It is a positive multiplier effect on the economy, reduces unemployment and increases aggregate demand. The impact of SME development on economic growth in Nigeria as evaluated by Etale and Light (2021) is that the growth of SMEs through digital platforms has a considerable effect on economic expansion and job creation.

Digital transformation, as discussed by Unegbu et.al. (2024), enables Nigerian SMEs to optimize their operations and, most especially, supply chain processes to boost efficiency and competitiveness. According to Oluremi and Maku (2024), the development of SMEs through digital platforms is very important in the growth and formalization of the Nigerian economy.

2.0 METHODOLOGY

The development of the platform followed the Model-View-Controller (MVC) architectural pattern. This design approach separates the application's logic into three interconnected components to enhance scalability and maintainability. The Model component handles the core data logic and database operations, including managing artisan profiles and product listings. The View serves as the user interface, enabling interactions between customers and artisans. The Controller facilitates communication between the model and the view by processing user inputs and rendering the appropriate outputs.

To bring this structure to life, a variety of technologies were employed. The backend was powered by PHP using the Laravel framework, ensuring efficient and secure server-side functionality. For the frontend, HTML, CSS, and Bootstrap were utilized to create a responsive and user-friendly interface. MySQL was chosen as the database management system to store and organize platform data, while the Paystack API was integrated to enable seamless and secure payment processing.

The platform was designed with two primary modules tailored to its key user groups. The Consumer Module allows users to browse products, place orders, make payments, and provide feedback. On the other side, the Supplier Module enables verified artisans to upload and manage their product listings, track customer orders, and oversee fulfilment processes. This modular design ensures that both consumers and suppliers experience intuitive and efficient interactions tailored to their respective needs.

Comprehensive testing was carried out to validate the platform’s performance and security. Usability testing was conducted through User Acceptance Testing (UAT), ensuring that end users found the system intuitive and functional. On the security front, robust measures were implemented, including data validation processes, password hashing, and stringent access control protocols to protect user information and maintain data integrity. This methodological approach ensured a secure, reliable, and user-centred digital environment.

System Design Architecture

The architecture illustrated below (Figure 1) represents a standard Model-View-Controller (MVC) framework designed for a digital marketplace system. The Controller acts as the central unit, receiving user inputs and directing them appropriately. It communicates with the Model, which handles data logic, processes information, and interacts with the Database to store and retrieve data.

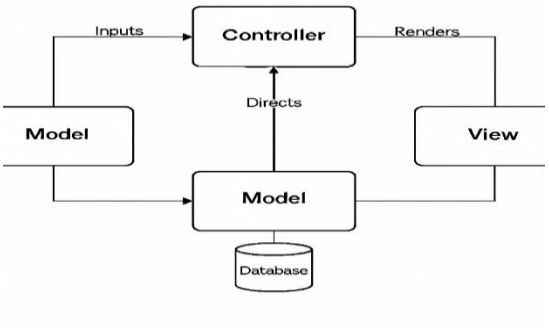
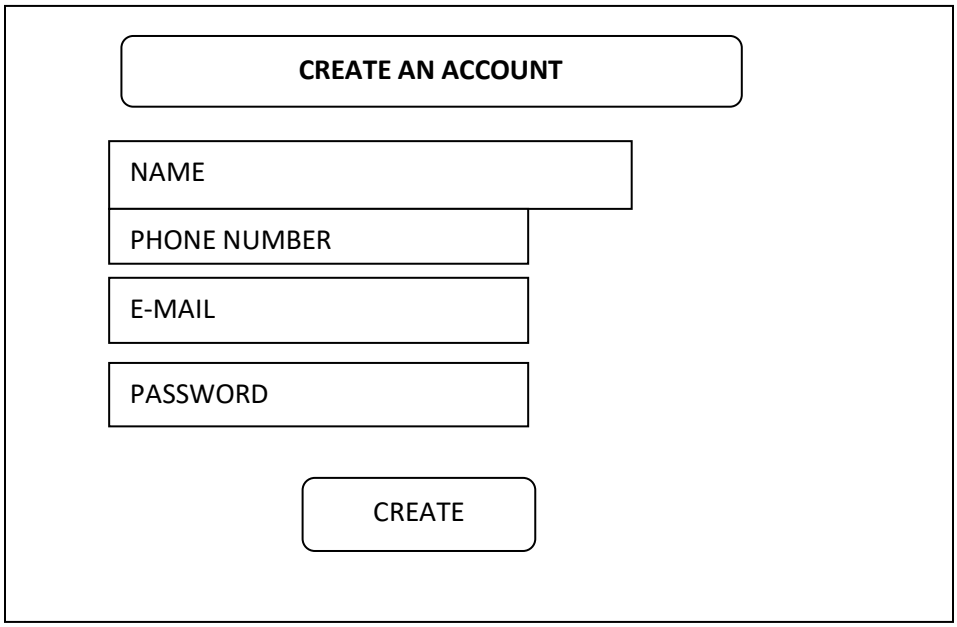


Figure 1: System architecture

The View presents the processed data to users in a user-friendly interface, completing the user interaction cycle. A single directional flow from user input to controller, then to model, and finally to the view ensures separation of concerns, modularity, and efficient system maintenance. This structured design enhances scalability, flexibility, and clarity in system operation.

Design

Users register by providing their name, email, phone number, and password. The system captures this data securely and grants access to the dashboard.



Output Design

Registered users can browse artisan product catalogs, add items to the cart, and view transaction history.

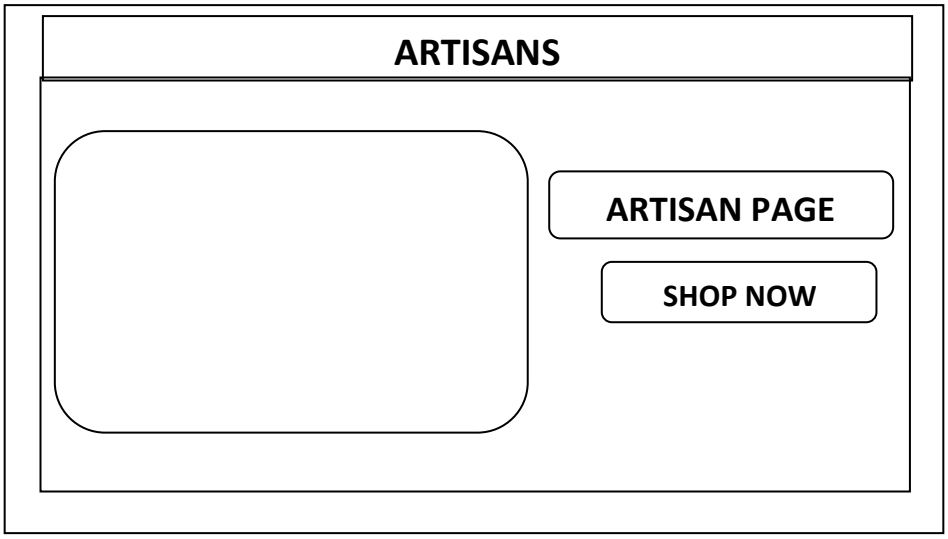


Fig 2b output design

Website Design

The system implementation, as depicted in Figure 3, outlines the core functionalities of the platform. Users can register, log in, browse product catalogs, and add items to their cart. The database stores and retrieves information, ensuring seamless integration between users and the website. This implementation demonstrates how digital platforms can enhance the economic contributions of artisans, providing them with sustainable market access and driving Nigeria's broader economic diversification agenda**.**

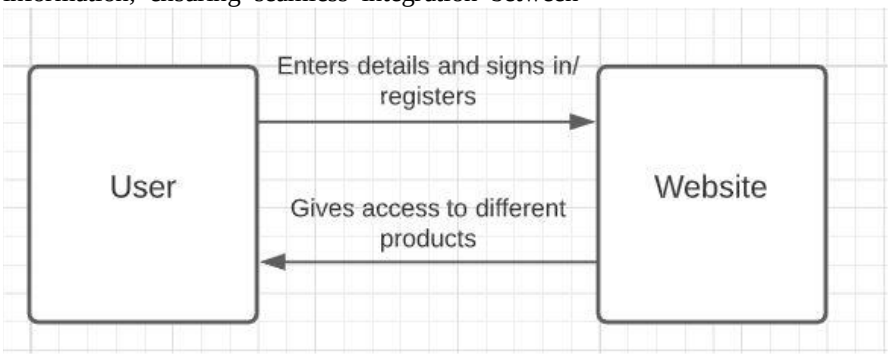


Figure 3: Core functionalities

3.0 RESULTS AND DISCUSSION

The developed system demonstrates how a dedicated e-commerce platform can enhance artisan engagement in the digital economy. Increased exposure led to improved sales volumes among early test users. The system successfully reduced barriers to entry, and the inclusion of a secure payment system built trust among both customers and artisans.

Feedback from UAT showed improved confidence in using the platform, while security testing confirmed robustness against SQL injection and unauthorized access. These results validate the effectiveness of MVC architecture in promoting modular, scalable, and user-friendly platforms for local businesses.

5.1 Homepage

The homepage is the main or the first page of the website or set of hyperlinked documents when it starts or when the home function is invoked.

Fig 4a Home Page

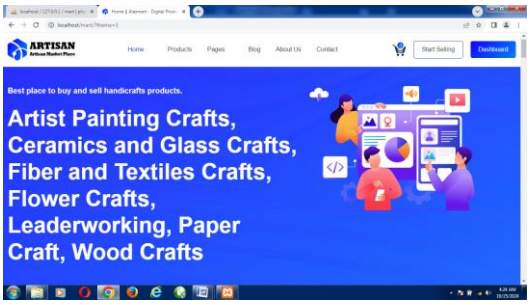


Figure 4b: Home Page

5.2 Browse Best Categories

The browse best categories and select our product on Digital Market in the website or hyperlink to secure your goods

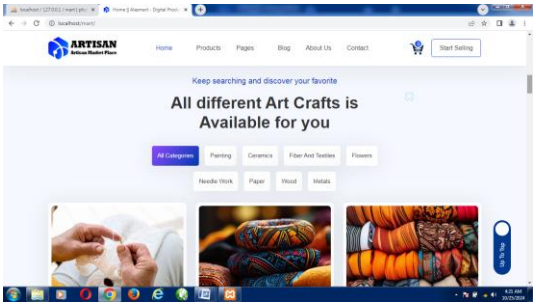


Figure 5: Browse Best Categories

4.0 CONCLUSIONS

This study successfully implemented a digital marketplace tailored for local artisans using the MVC architecture. By integrating technology into artisan commerce, the platform enhances access to markets, increases revenue opportunities, and contributes to Nigeria's economic diversification. It is recommended that government and stakeholders should invest in digital infrastructure and literacy. Further developments can integrate AI tools for product recommendation and customer behavior analysis. Adoption of the platform should be promoted through artisan cooperatives and trade unions.

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