

Development and Deployment of an Integrated System Approach to Social Investment Programs in Nigeria Using Biometric Technology.

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ABSTRACT:The deployment of the integrated social investment program systems in Nigeria will create a unified database which enables the authorities to effectively coordinate the various social investment programs in a centralized system. This system aims to prevent citizens from dubiously participating concurrently in the various programs thereby allowing for only one program at a time in order to maximize funds disbursed by the federal government effectively. The system will be used by the administrators at the national social investment program board. The developed system incorporates several modules such as the unilateral registration of applicants, detection of multiple registration applicants of the different programs using biometric features. The design tools used includes XML, Java and Firebase for the backend. The scope of the research focused more on unifying all social investment programs in a centralized manner in Nigeria. In addition to other existing system, the database deployed would be used to keep integral record of all participants.

KEYWORDS:XML, Firebase, Biometric, Backend

I. INTRODUCTION

Nigeria is one of the developing nations in the world, though richly blessed and endowed with many mineral and natural resources to take care of its citizens but has been confronted with poor leadership style that has subjected its citizens to harsh and abject poverty.

As such, the Federal Government of Nigeria established the National Social Investments Programmes (NSIP) in 2016, to tackle poverty and hunger across the country. The suite of programmes under the NSIP focuses on ensuring a more equitable distribution of resources to vulnerable populations, including children, youth

and women (National Social Investment Program[NSIP], 2020).The various programs include:

- i) The **N-power programme** established to assist unemployed youths not more than 35years old
- ii) The **Conditional Cash Transfer (CCT)** which was designed to lift extremely poor people by supporting their business plan.
- iii) **Government Enterprise and Empowerment Programme (GEEP)**, that supports loan facilities to the artisans.
- iv) **The Home-Grown School Feeding Programme (HGSF)** targeted to improve the nutritional feeding of the children in government schools by providing a one meal per day.

The various programs listed above has its target audience (extreme poor and less privileged) and had also been heavily funded by the government, but it is patinate to note that in spite of these wonderful initiatives by the federal government of Nigeria to tackle extreme poverty ravaging the nation, the targeted citizenshave been short changed and not reached by various factors affecting the initiatives.According to (Adam, 2018) the Nigerian government in 2016 rolled out a comprehensive National Social Safety Net Programme (NASSP) as part of its Social Investment Programmes. The expectation is that the poorest and most vulnerable Nigerians will get access to social safety nets by 2021 through a US\$500 million International Development Association (IDA) credit approved in June 2016 by the World Bank Group's Board of Executive Directors. The Nigerian government was to further contribute \$1.3 billion of its own budget to NASSP to lay the foundation for the establishment of the country's first national social safety nets system.

Many Nigerians has criticized the disbursement process of the social investment funds to citizens and the rationale behind its distribution, i.e whether it actually gets to the targeted class of citizens and as such, the federal government derived a method to monitor the distribution of the disbursement which is another route of waste of resources. Thus, according to naijanews.com, a Nigerian online tabloid titled “FG Deploys 300 Nigerians To Monitor NPower, Other Cash Transfer Schemes”The Federal Government has commenced the process for monitoring National Social Investment Programme (NSIP) in Bauchi State. The Minister of Humanitarian Affairs and Social Development, Sadiya Umar Farouq, revealed this after a brief meeting with the state Governor, Bala Mohammed. Naija News reports that the NSIPs to be monitored are Government Enterprise and Empowerment Programme, N-Power, Conditional Cash Transfer, and National home grown school feeding programme. At least 300 independent cash monitors were deployed to the state for the programme. The employees have received engagement letters and tablets for data capture and daily reports. “The ministry sees a real-time report of activities of the independent monitors on the field”, Farouqsaid. The minister admonished the employees to be diligent while keeping track of the various NSIPs in the state. (Ogunsile,2021). This measure derived by the federal government(FG) is based on the fact of inequality distribution and non-inclusiveness of the targeted class of the exercise.

The social investment program in Nigeria is not entirely restricted to the intended class of citizens, this is why the system is flooded with a lot of applications of unqualified classes of people there by making the system vulnerable to everyone in the sense that even the youths in Nigeria apply for programs made available for children, undergraduates applying for jobs meant for graduates etc. Also, there is no database for poor people in Nigeria thereby compromising the conditional cash transfer program in the sense that even the middle-class citizen who are not aimed to be part of it enroll in this program. This has made it difficult for the effective management and disbursement of funds made available by the federal government enough for each program due to multiple registrations by an individual and also most of the beneficiaries are based in rural areas and are not learned making it extremely difficult to keep track of payments. On Wednesday 8 April, 2020, (Nigeria Punch Newspaper), the National Assembly directed the Minister of Finance to explain how 2 trillion naira was distributed to the

poor in Nigeria. They further asked for their names and explain how they arrived at the database used and the demographical spread.

II. STATEMENT OF THE PROBLEM

The major problem faced with the poverty alleviation program in Nigeria is based on inequality and unfairness distribution of the various products of the programs to the citizens due to lack of a unified database for the poor in Nigeria. This is because, each of the programs initiated by the FG has a target class, but these target classes are not adhered to. For example, the Npower program is meant for unemployed youths between the ages of 18 to 35 to acquire a long-life skill that will help grow the economy in future. But because of the ₦30,000 stipend paid to this class monthly, other citizens who are gainfully employed and are well above the stipulated ages enrolls in the same program thus denying the targeted class that opportunity and thereby making the poverty eradication initiatives an exercise in futility. Same is applicable to the other programs (GEEP, CCT and HGSF). Also, there is another aspect of sabotage to the initiative, where people will apply and register for the four different programs at the same time and enjoy multiple benefits without minding the fact that other citizens are left out. This is a sabotage as the program should be a one person per one program at a given time period to allow others within the classified strata to receive the social programs.

III) AIM AND OBJECTIVES OF THE STUDY

The aim of this study is to develop and deploy an integrated, unified social investment system in Nigeria, where a citizen can apply for only one social investment program at a time with a compatible criterion based on age and other certain factors. Some of the objectives that can be achieved in this research include.

1. To Examine the extent of the implementation and disbursement of funds to the targeted beneficiaries of the programs.
2. To Identify the factors that constrain the effective implementation of NSIP
3. To Analyse the prospects of using NSIP to reduce poverty on sustainable basis in Nigeria.
4. To implement a unified database record of each citizen and registered program

IV REVIEW OF PREVIOUS WORK AND PROBLEM DOMAIN

Social investment programs were created by the neoliberal market-based policy reforms put up in response to the global economic crises of the 1980s and early 1990s. Such reforms adopted by many developed and developing countries included spending cuts, retrenchments and privatization of public services (Peng, 2011). These policies resulted in increased poverty, social and economic inequality and human insecurity. It is against this global policy backdrop that social investment perspective emerged in the late 1990s as a recalibration of the neo-liberal policy framework (Jenson et al, 2003; Midgley, 2010; Tang, et al 2001; Perkins, et al 2004) quoted in Peng, (2011). States therefore, adopt social investment in response to the significant challenges they face especially that of poverty, social exclusion and unemployment among young people (Bouget et al, 2015).

In Olivier et al (2013), they posited that Over the course of the past 20 years, welfare states are said to have evolved towards a 'social investment' model of welfare – characterized by a focus on equality of opportunity and upward social mobility along with a greater emphasis on individual responsibility. In view of these policy changes, it is necessary to assess whether traditional stratification cleavages (still) affect the occurrence of 'social risks'. Using data from the 2005 EU-SILC intergenerational module, they consider the impact of social class (of origin) on a relevant selection of risks: unemployment, ill-health, living in a jobless household, single parenthood and low-paid employment. The results provide clear evidence of a substantial influence of social class. On this basis, they argued that social investment strategies need to take stock of the persistence of traditional stratification cleavages. Otherwise, a one-sided approach may create new forms of exclusion and give way to 'Matthew effects'.

Based on their assertion above, it will be agreed that a great sense of stratification and proper class target based on different circumstances of individuals is required for effective equal distribution of social investment welfare to the people, hence the aim of the exercise which is predominantly for poverty alleviation will be greatly defeated.

V NEED FOR AN INTEGRATED AND UNIFIED SOCIAL INVESTMENT SYSTEM IN NIGERIA

According to (Ndubisi, 2017), the Minister of State, Ministry of Budget and National Planning identified some challenges that face NSIP. These include the need to design a sustainable enrolment and payment system. This is necessitated by rural terrain as well as long distances between communities. This problem she said, is compounded by the lack of technology and banking infrastructure. The Treasury Single Account (TSA) policy was identified as a disincentive for commercial banks to engage in the programme She also pointed out communication gap and overlap of responsibilities by state actors (especially between the state focal persons and the ministries, departments and agencies) as constituting challenges. The problem of funding to cover logistics was also disclosed. Another challenge is low literacy levels of most beneficiaries which without adequate advocacy and sensitization at the community level, makes seamless integration difficult.

On the grounds of the above, the integration of the enrollment system will capture the various strata and class that the program is meant for while including those in the rural areas and the unbanked. The present system relies more on the use of bank verification number(BVN) to identify the intended applicant. The most worrisome in this method is the fact that most rural residents are left out as most are unbanked. Also, the current system in use does not detect multiple application of same individual in the various programs, as such allowing beneficiaries of one program to apply and participate in other programs. This act does not only deprive people from the program but an economic sabotage to the federal government.

VI ANALYSIS OF THE NEW SYSTEM

The new system tends to stand out as it can also feature effectively the unbanked and the rural settlers. The applicant needs to register with an email and a password to get access to the home page, after the registration is completed and full biometrics captured, you will be redirected to a page where you can choose to go ahead and register for a choice of social investment program of interest according to the eligibility and social class target of the program. After which a profile will be created. This profile is shared among the different modules so that a beneficiary of one program cannot apply for another one in the same system. This is to create room and fund availability for other intended applicants. After registering for any social investment program, the applicant data will be filtered for error detection and data

inconsistency through synchronization of the system with the national identity management commission system (NIMC) which will verify the authenticity of the class and social strata of the applicant to avoid people applying for programs

they are not eligible for. If data filtering is successful, it begins verification of data then de-duplication takes place, after all processes are concluded, all information and data is exported and stored in the database.

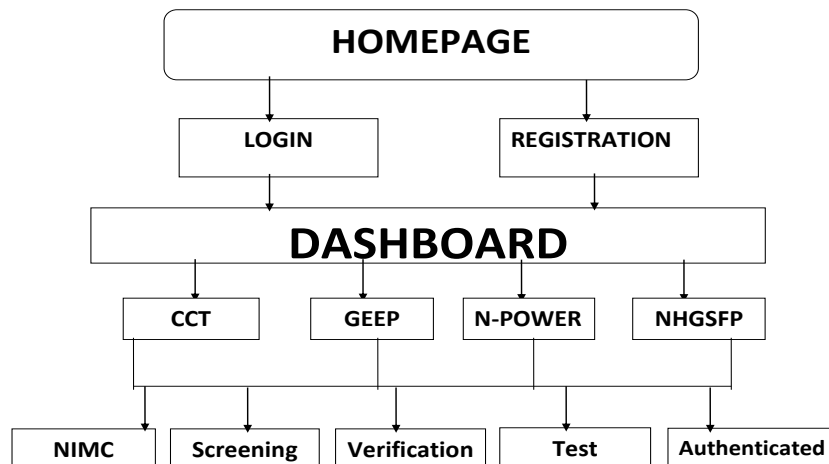


Fig 1. Shows an Overview of the New System.

System Implementation and Output

System driver/Homepage/Main menu design

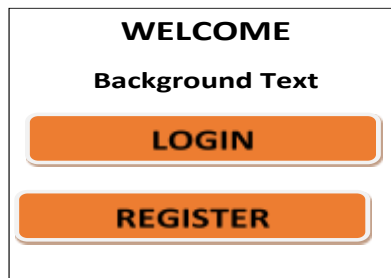
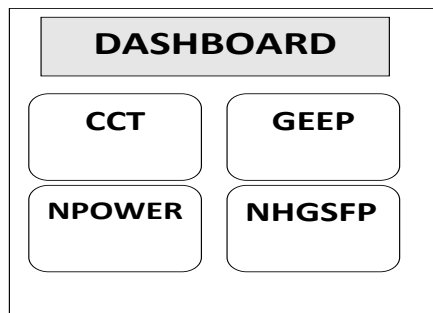


Fig 3 Homepage Design

User interface design



VII DATABASE IMPLEMENTATION

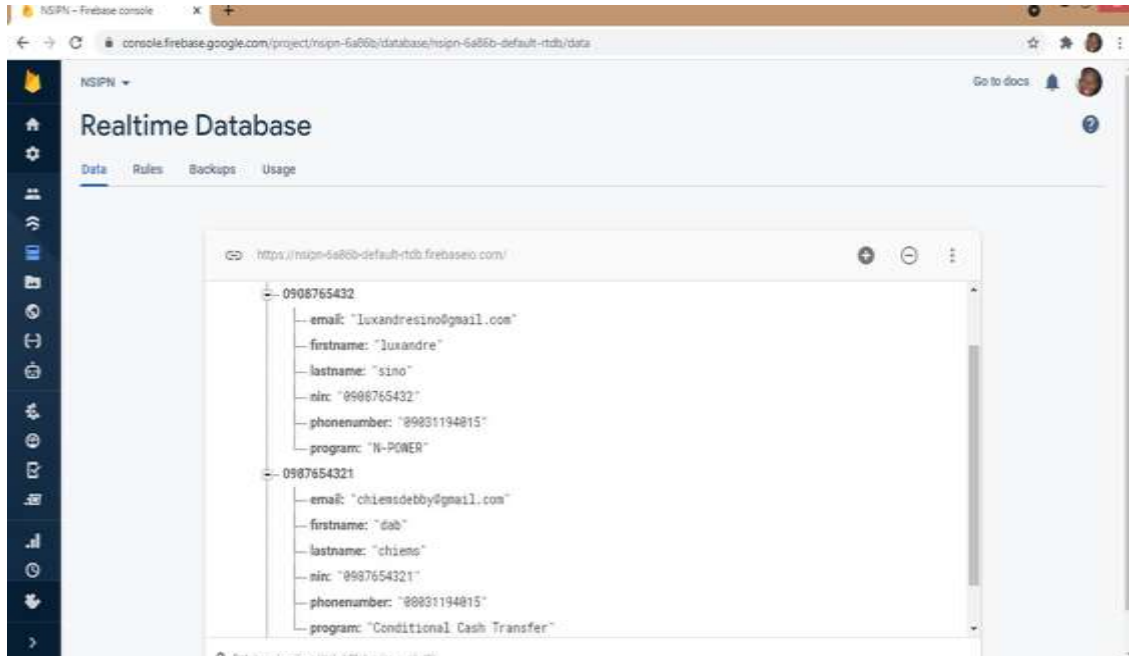


Fig 5 Database Deployment

Design Output

System Driver/Homepage/Main Menu Deployment

It is the default page that loads when you start the application.



Fig 6 Homepage Deployment



Fig 7 Login menu



Fig 8 Registration menu

One of the subsystem module is the user authentication , the users database contains the name, username, Nimc and password of all users of the system. Access is granted or denied based on a match between the user’s input value and the

values stored in the database. If the users record already exists in any of the programs, the system will deny the applicant the access to another program.

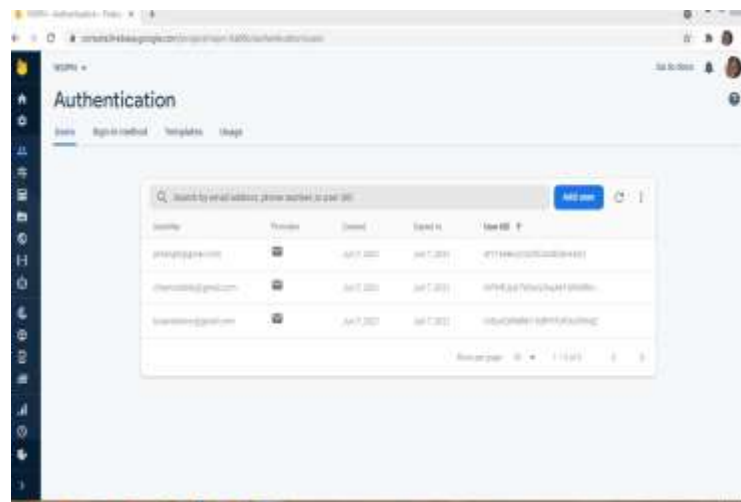


Fig 9 User Database

VIII CONCLUSION

The new integrated system for social Investment Program in Nigeria will strike a balance between the various programs initiated by the government as the system will capture the appropriate social class designed for the establishment of the programs. This system will eradicate the usual norm of people who are above poverty level applying for this program as it is designed to alleviate the poor and not to enrich few individuals. Also, the issue of multiple participation in the various programs will be

eradicated too as that amount to sabotage of funds by the applicants who does not give room for others to benefit from the program there by making the program an exercise in futility. This system, if adopted by the government will allow every eligible citizen that wishes to participate to do so effectively and also makes it easier for the funds dispersed by the federal government be sufficient for every program.

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