



# Financial inclusion and economic empowerment of Persons with disabilities in National Union of Disabilities' organisations of Rwanda.

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## Abstract

Financial inclusion is the practice of ensuring that all participants in an economy have access to and use official financial institutions to meet their individual and group needs hence increasing their economic growth within the community. However, PwDs are classified among most vulnerable groups suffering from financial exclusion as a result of unstable economic status observed in the majority of PwDs in Rwanda. Therefore, this research seeks to assess the relationship between financial inclusion and economic empowerment of PwDs in Rwanda. Three theories guided this research such as finance growth theory, community economic empowerment theory and finance and inequality theory. The methodology applied for this research was a mixture of descriptive statistics such as mean, standard deviation, and inferential statistics such as Pearson correlation coefficient and regression analysis model that have been used to analyze data and establish relationship between variables. A sample of 370 PwDs was selected randomly from a total population of 10,071 PwDs from National Union of Disabilities' Organisations of Rwanda member organisations. The data was analysed using IBM SPSS Statistics software. As key findings, descriptive statistics indicated that the first factor for financial inclusion "access to financial services" such as credits, savings, mobile money, cooperative groups can lead to economic empowerment of PwDs as indicated by 4.46 mean and 0.510 standard deviation. For the second factor of financial inclusion which is access to decent work, the findings revealed that having a respectable job is vital and can contribute to economic empowerment for PwDs, as evidenced by a mean of 4.49 and a standard deviation of 0.500. According to respondents, PwDs can work and earn money, allowing them to achieve economic independence. For the third factor of financial inclusion which is financial knowledge and skills, findings revealed that if PwDs are given enough knowledge and skills required to run income generating activities, this can lead to economic empowerment as shown by average mean of 4.55 and standard deviation of 0.515. The regression results indicated that 64.8% of variance in dependent variable were explained by independent variable. Regression coefficients findings indicated that access to financial services was significant and positive to economic empowerment ( $\beta_1 = 0.188$ , with  $p = .000 < 0.05$ ); access to decent work was also positive and significant to economic empowerment ( $\beta_2 = 0.325$ , with  $p = .000 < 0.05$ ) and finally, financial knowledge and skills were also positive and significant to economic empowerment ( $\beta_3 = 0.108$ , with  $p = .024 < 0.05$ ). The research concluded that there is a positive and significant relationship between financial inclusion and economic empowerment of PwDs in NUDOR member organizations. However, the research further recommended that, in order to achieve full financial inclusion, financial institutions should make sure that PwDs have equal opportunities to access financial services by ensuring that information is provided in the appropriate format and is catered for to their needs. National Union of Disabilities' organizations (NUDOR) should also increase advocacy and awareness about disability in general and this can lead to mindset change of the public on their perception in regard to PwDs ability. The best strategy for empowerment should also be to engage PwDs to be active and fight for their rights to be financially and economically empowered.

**Key words:** economic empowerment, financial inclusion, access to financial services, access to decent work, and financial knowledge and skills

## I. BACKGROUND TO THE STUDY

One of the main drivers of global governments' development objectives and aspirations is financial inclusion, which is considered as a requirement for inclusive growth and long-term economic growth (International Finance Corporation, 2014). The process of ensuring that all segments of society, especially vulnerable groups like PwDs, have access to adequate financial products and services at a reasonable cost in a fair and transparent manner is known as financial inclusion (Hema, 2013). Financial inclusion has gained momentum in recent years as a dynamic instrument for achieving multifaceted macroeconomic stability, inclusive and sustainable economic growth, job creation, poverty reduction, and income equality for developed and developing nations alike. Additionally, financial inclusion appears to be a supplemental and incremental strategy for achieving the UN's Millennium Development Goals (Chibba 2009). Through easy access, availability, and use of formally regulated financial services, the rise of financial inclusion fosters social inclusion. These are typically poor population groups, particularly vulnerable ones like rural residents, women, PwDs, and low-income families that gain a lot

from access to simple financial services like insurances, borrowings, and payments (World Bank 2014). There are still millions of persons who are unwillingly excluded from the financial system due to insufficient income levels and market discrimination in developing regions, which poses a risk to savings, investable funds, and wealth growth. Filling in these gaps and giving families and businesses better access to the resources needed to fund consumption and investment helps to increase economic activity. Additionally, financial inclusion promotes inclusive growth because it enables economic agents to participate in long-term participatory investment activities, facilitates efficient resource allocation and lowers capital costs, manages unforeseen short-term shocks, vastly improves day-to-day financial management, and decreases the use of often exploitative informal sources of credit (Demirgüç-Kunt et al. 2015, 2018).

In Africa, more than half of the extremely poor persons on the planet ((50.7 percent) live in Sub-Saharan Africa, according to the World Bank (2016). Although this is a global issue, the financially excluded person in a developing country especially in Africa, is more often than not the average citizen. Evans and Adeoye (2016) used a dynamic panel data technique to look at the factors of financial inclusion in 15 African countries from 2005 to 2014. The results show that adult literacy rate, availability of the internet, Islamic banking activities, GDP per capita, money supply as a percentage of GDP, lagged financial inclusion (also known as the "catch-up effect"), and money supply as a share of GDP are all significant factors in determining the degree of financial inclusion in Africa. According to Allen et al. (2014), compared to other regions of the world, natural resources are strongly connected with both financial development and financial inclusion in Sub-Saharan Africa, while population density and GDP per capita are significantly correlated. Not just the poor and traditionally excluded groups like women, but also PwDs, are vulnerable groups that are primarily targeted for financial inclusion.

Rwanda was significantly impacted by the 1994 Tutsi genocide, which resulted in the deaths of over one million persons, many of whom became widows and orphans, and a substantial number of whom became disabled (MINALOC, 2003). In 2012, MINALOC and the African Decade of PwDs identified 522,856 PwDs in the country. The Rwanda National Institute of Statistics performed a national census in 2012, which estimated 446,456 PwDs, or 5% of the population. Children under the age of five were not included in the census (National Institute of Statistics of Rwanda, 2020). The government of Rwanda, through the Ministry of Local Government, has held several national consultative workshops with representatives of PwDs. The most recent one was held in 2017 and highlighted the need to address the specific challenges faced by PwDs, one of which is exclusion from policy and strategy implementation about financial inclusion of PwDs. In addition, PwDs have a hard time getting access to financial services. Poor persons must rely on their own limited savings to invest in their education or become entrepreneurs, while small businesses must rely on their limited profits to explore attractive growth possibilities, according to Levine *et al.*, (2007).

### **Research problem**

One of the priority areas of the first National Transformation strategic vision one (NST1) started by the Government of Rwanda for the period between 2017 and 2024; is the increase of domestic income and position Rwanda as a hub for financial services to promote investments. Of intervention areas include development of specialized skills and establishment of incentive mechanisms to attract investors in the financial sector and develop innovative financial services to increase financial inclusion of the population. This presents an important opportunity to reinforce the financial inclusion of PwDs as most vulnerable groups in this regard. According to Rwanda Fin Scope Report (2020), 9% of PwDs have no access to any financial services and many of them are unemployed or do not have at least a decent work. In addition to the aforementioned, the report emphasizes that many PwDs lack fundamental financial literacy and management abilities, (Silvia Bonaccio, Catherine E. Connelly, Ian R. Gellatly, Arif Jetha & Kathleen A. Martin Ginis, 2020). This category of the Rwandan population exhibits a lower level of financial product awareness including a number of financial services such as credits, mobile money usage, cooperative groups as well as Village Saving groups in their locations; as compared to the rest of the Rwandan Population. Financial literacy programs that pay attention to money management skills that are tailored to the needs of PwDs

are likely to help (Kavita Mittapalli, Sarah Irvine Belson, Halima Ahmadi, 2009). In addition, access to decent work by PwDs would also help in filling the gap (Arthur O'Reilly, 2003). In light of the above, the researcher seeks to determine whether financial inclusion helps PwDs to achieve their economic empowerment.

### ***Objectives of the study***

The general objective of the research was to assess the relationship between financial inclusion and economic empowerment of PwDs in Rwanda. Specific objectives are: to establish the relationship between access to financial services and economic empowerment of PwDs, to examine the relationship between access to decent work and economic empowerment of PwDs, and to assess the relationship between financial knowledge and skills and economic empowerment of PwDs.

### ***Research Hypotheses***

H<sub>01-3</sub>: There is no significant relationship between access to financial services, access to decent work, financial knowledge and skills and economic empowerment of PwDs in Rwanda. ***Theoretical review***

This study used three theories to explain how financial inclusion influences economic empowerment of PwDs: finance growth theory developed by R. Levine, (2005), community economic empowerment theory developed by Douglas D. Perkins & Marc A. Zimmerman, (1995), and finance and inequality theory developed by A. Demircuc-Kunt, (2009). (j) Access to finance, according to finance growth theory, is a primary driver of chronic income inequality and slower growth. As a result, access to a safe, simple, and affordable source of finance is recognized as a prerequisite for accelerating growth and reducing income disparities and poverty, resulting in equal opportunities for economically and socially excluded persons to better integrate into the economy, actively contribute to development, and protect themselves from economic shocks. (ii) According to community theory, communities arise through a self-organization process. Ownership, self-help initiatives, institutional integration, consensus building, social cohesiveness, and the exploitation of indigenous cultural assets for development, empowerment, and long-term income generating are key components of self-organization. Human Economic Empowerment Agency is prioritized by the communitarian perspective over either cultural or economic determinist theories of social development. Culture, and the processes that generate cultural content, are central to everything. Culture and cultural constructions of reality, on the other hand, play an important role in communitarian ideals (Tehrani 1994:286 in Melkotte and Steeves 2001:335). (iii) Finance and inequality theory developed by A. Demircuc-Kunt, (2009) makes contradictory predictions about the relationship between finance and inequality. Financial development, for example, may have a large-scale influence through increasing access to and usage of financial services by those who previously avoided them due to cost or other constraints. According to Greenwood and Jovanovich (1990), financial expansion has the potential to increase economic possibilities for disadvantaged populations while decreasing the persistence of relative wages across generations. Finance can also operate on a high margin, expanding the financial services available to those who already use the financial system, which is generally comprised of wealthy individuals and established businesses. As a result, enhancing financial services may have a direct effect that is felt more strongly by the wealthy, leading to increased inequality. Maintaining cross-dynasty gaps in economic opportunities also highlights the impact that indirect financial processes can have on inequality. Changes in the financial system may cause a shift in demand for both low- and high-skilled workers, affecting aggregate production and income distribution. For example, advances in finance that increase demand for low-skilled labor tend to tighten the income distribution, broadening and equalizing economic possibilities.

As a result, theory exposes a number of direct and indirect tactics that can be employed to alter the way financial institutions operate in order to either widen or shrink the economic opportunity gap (Demircuc & Levine, 2009).

### ***Empirical review***

There has been limited empirical study on financial inclusion and economic empowerment of PwDs. Access to financial services, for example, has become an increasingly significant instrument for financial inclusion, giving persons control over

their care and support, including managing personal budgets and fostering control and independence. Evidence from the Ghanaian living standards survey published in the publication "Persons with disability and access to financial services: evidence from Ghana" by James Atta Peprah, Eric Atsu Avorkpo, and Evans Kulu on July 22, 2022 demonstrated that having a disability of any kind prevents persons from using banking services. According to this survey results, holding an account with a commercial bank, rural and community banks, and having at least one financial product or service with a bank or any other financial institution constitutes the usage of financial services. Being a person with disability decreases the likelihood of dealing with a commercial bank and a rural bank, however the likelihood is greater for commercial banks (0.063) than rural banks (0.026). Similarly, being a person with disability diminishes the likelihood of having at least one financial product or service with a bank. PwDs are 6.3 percent less likely to use a bank for at least one financial product or service. PwDs are less likely to use financial services for a variety of reasons. Financial institutions, for example, view PwDs as dangerous because they may lack collateral security. Furthermore, PwDs are seen to be low-income earners or to have no income at all. Again, for personal reasons, most PwDs may choose not to go to the bank to conduct business because they are discouraged by their own mind-set that their applications will be denied. Some bank branches and other storefront financial service providers are not designed to accommodate a wide range of this category of customers. Furthermore, due to their poor perceived creditworthiness, PwDs are more prone to self-exclude from the loan market. This circumstance is likely to exacerbate those with disabilities' financial fragility. Impaired females are more likely to use financial services than their fellow males, demonstrating that a gender gap exists among PwDs. Except for voluntary occupancy, marital status affects the use of financial institutions in general. Being married, for example, influences having an account with a traditional bank, particularly a commercial bank, and also allows access to at least one financial product. Sex matters among PwDs. According to the report, being a female diminishes the likelihood of utilizing a traditional bank, although this is not the case for mobile money. Another study conducted in Africa by Zins and Weil (2016) found that being a woman reduces the likelihood of having a mobile account and holding a formal account (1.9% and 1.7%, respectively). When it comes to financial services, location is important. In all of the models, living in a rural area as opposed to an urban area diminishes the likelihood of having a commercial bank account. This is hardly surprising given that financial institutions are typically located in urban areas; hence rural residents are typically excluded from using regular commercial banks. Some disabilities are more difficult to manage than others. PwDs are grouped in a wide range of disability types and severity (Morris, 2018). According to Morris, (2018), persons with vision impairment are 9.6 percent less likely to use commercial banks for products and services, while those with other impairments are 17.2 percent less likely to use commercial banks. Financial services are more inaccessible to those with different types of disabilities than to those with sight, hearing, or physical issues. The survey found no significant correlation between disability status and access to at least one financial service.

Concerning access to decent work and economic empowerment of PwDs, UN Article 23(1) stipulates that "everyone has the right to work, to free choice of job, to reasonable and advantageous working conditions, and to protection against unemployment" (UN, 1948). Many PWDs are well educated and have bright ideas for contributing to the growth of their communities and, indeed, their nation through public service; nevertheless, they are frequently denied the opportunity to do so due to their disability. It is absurd for African governments to believe that they can accomplish genuine progress in all areas of human endeavour without integrating PwDs in the planning and implementation process.

If PWDs are to be involved, they must be properly represented through employment in all government ministries and agencies. To some extent, most African governments and non-governmental organizations (NGOs) provide protected work for PwDs. Although this system accommodates their particular needs, it promotes social marginalization, raises stigma, and denies them the right to equal work possibilities as other individuals without a disability. The business sector, which is expected to control approximately 50% of work prospects in most African countries, is unaware of PWDs' capabilities and potential. During an examination of the activities of a CBR project in Benue state, Nigeria, a restaurant owner was asked if

she would hire a person with a disability, and her response was quick and unequivocal, "NO". When asked why, she replied, "they can't do anything well, and they will bring bad luck to my business." Unfortunately, 80% of the private business owners in this district agreed with her! One of the most difficult difficulties for CBR programs to address is the public's negative attitude toward PWDs. PWDs, on the other hand, must strive hard to change this picture, via hard work and credible performance in any given job chance. CBR should encourage the hiring of PwDs in positions of leadership in order for them to take use of such opportunities to develop themselves and use their initiative in carrying out their responsibilities.

Employers should also allow PWDs who are working to join labour unions so that they can express their ideas and feelings about general concerns and issues affecting their lives. CBR programs can encourage open employment of PWDs by raising awareness about the importance of equal opportunities for PWDs, educating the public about their abilities, and encouraging DPOs to participate in the political process by forming pressure groups capable of influencing government policies. According to Albright (1993), "self-directed employment is an alternative that is increasingly appealing to PwDs in both economically developed and developing countries". This could be a powerful tool for economic empowerment of PwDs, not only because they take the initiative, but also because they play a key part in their organizational structure and day-to-day decision making and management. Running small businesses and working in cooperatives controlled by PwDs are examples of self-directed employment. According to Toit (1991), one of the good examples of self-directed efforts to empower, develop, and generate employment opportunities for young persons with physical impairments is the Self-Help Association of Paraplegics (SHAP) in Soweto, Republic of South Africa. SHAP has a factory that employs 130 PwDs on a contract basis, conducting packing and assembly work, as well as repairing sophisticated mechanical and electronic items such as cameras and calculators. In its fundraising efforts for self-sufficiency, this association earns the admiration and support of the government and indigenous businesses. Another noteworthy example of self-directed work is the Social Assistance and Rehabilitation for the Physically Vulnerable (SARPV) initiative in Chakoria, Bangladesh. Mr. Shahidul, who is physically challenged, founded the company in 1989. SARPV's Build your Own Small Entrepreneur Project is a skill development and credit program (BOSEP), to empower and support the district's underprivileged disabled persons, who desire to be successful entrepreneurs but lack the necessary skills and cash to do so. Although SARPV is mostly funded by Caritas-Netherlands and UN ESCAP, its ability to tailor its actions to the culture and needs of the persons in this area distinguishes it. Members are taught business skills, and following graduation, loans are made available to groups of disabled members. Members of the association are encouraged to collaborate with family members and other able-bodied community members in carrying out their respective economic pursuits. The APDK (Association for the Physically Disabled, Kenya) project in Mombasa, Kenya, runs a community-based employment creation program in which 360 microenterprises have been founded, with 80% of them successfully operating. It is insufficient for CBR programs to end at "teaching them how to fish" without providing them with the essential equipment for "catching the fish." PWDs who have completed vocational training but have been unable to find wage-earning positions must be assisted in setting up workshops or relevant income generation activities (IGAs) in order to make a living. In Nigeria, the Services for PwDs Revolving Loan Fund provided loans to 40 persons in 2003. The loan amounts ranged from 1000N (7 USD) to 50,000N. (370 USD). Loans are determined, among other things, by the person's handicap condition, the type of the business, and the PWD/economic family's circumstances. PWDs whose IGAs require significant funding are offered a combination of grants and loans.

Concerning financial knowledge and skills, findings of a global survey done by CBMI (2021) to examine the success and failure of vocational training and livelihood programs reveal that PWDs who get both grants and loans are more likely to succeed than those who just receive loans (Caswell, 2008). Experience in supervising the economic integration project in Nigeria by CBR programs (Daniel Vershima & Al. 2014) demonstrates that significant sums of money are not always required to make a difference in the lives of the majority of PWDs living in rural areas. Funding for PWDs wishing to establish IGAs could come from the government's Poverty Alleviation Programmes (PAPs), community banks, philanthropists, local non-

governmental organizations (LNGOs), international non-governmental organizations (INGOs), community members, PwDs 's families, and so on. Community Based Rehabilitation (CBR) and Economic Empowerment of PwDs by Daniel Vershima & Al. (2014), strategies for ensuring economic empowerment of PwDs through training, education, and other forms of obtaining required knowledge and skills. Education opportunities are critical for the economic empowerment of PwDs. This is supported by Rifkin and Pridmore (2001), who claim that "knowledge (education) is power; Persons who lack information, lack power and options for improving their lives or controlling what occurs to them... ". PwDs can learn knowledge and skills needed to execute functions, tasks, or carry out some socioeconomic activities for personal and community development through educational programs (either formal or informal). Education for empowerment should begin in preschool and continue through adulthood. CBR programs should not undervalue the importance of pre-school skills such as speech, sign language, sorting/measuring, and orientation for individuals who can only afford loans (Caswell, 2003). Experience in supervising the economic integration program in Nigeria shows that it does not always take significant sums of money to make a difference in the lives of the majority of PwDs living in rural areas. Funding for PwDs who want to start IGAs could come from the government's Poverty Alleviation Programmes (PAPs), community banks, philanthropists, local non-governmental organizations (LNGOs), international non-governmental organizations (INGOs), members of the community, PwDs 's families, and so on. Early pre-vocational skill training boosts self-confidence, self-esteem, and perfection, which improves task performance in the future. In Nigeria, as in many other African countries, there are a small number of inclusive schools that provide special education and vocational training. The handful that exist do not have proper curriculum that address the particular requirements of PwDs. Curriculum for special and vocational training schools should also include activities that prepare PwDs for an effective transition from school to working life. To facilitate learning, CBR programs and relevant government services must provide PwDs in schools with necessary assistive devices such as hearing aids, talking calculators, mobility aids, and so on, as well as provide learning materials/equipment and encourage disability friendly school environments (e.g., accessibility). Empowerment via education cannot be achieved solely by training PwDs; rehabilitation specialists who work with them must also be trained. In partnership with Indira Gandhi National Open University (IGNOU) and Madhya Pradesh Bhoj Open University (MPBOU), the Indian Rehabilitation Council has launched distant education programs in 25 notable training institutions and 67 study canters across the country. Speech therapy, hearing aid and ear mould technology, special education, vocational counselling, and other courses are available. This aids in the updating and enhancement of professional rehabilitation workers' knowledge/skills, hence boosting the level of empowerment of the PwDs with whom they deal (Singh 2004). Long-term and short-term formal training is also provided in nations like as Uganda, Malawi, Zimbabwe, and Nigeria, among others. Christoffel Blindenmission International (CBMI) operates a National Training Program for CBR fieldworkers in Nigeria. This is a short-term training effort in which workshops on various rehabilitation topics, including economic integration program administration, are held. Each year, an average of 8 workshops are held. CBR fieldworkers, special education teachers, PWD parents, and government rehabilitation workers are among those who will be trained.

This form of short-term training is extremely beneficial to the economic empowerment of PwDs. To establish the effectiveness of these training programs, CBR must boost evaluation of the impact of services offered by employees who benefit from trainings, particularly how negative attitudes are altered and the economic standing of PwDs is improved. CBR can support economic empowerment of PwDs at the community level by providing for pre-vocational training in various occupations, preferably through apprenticeship arrangements, utilising relevant services within the local community. An examination of questionnaires administered in some of the CBMI-supported vocational training projects in Bangalore, India, revealed that the majority of CBR Vocational Training Officers "fitted trainees into preconceived vocational training programmes that are out of date and for which there are no job opportunities" rather than involving them/their families in decision making (Breisacher, 2002). In-service training for PwDs in open employment provides them with full qualification for beneficial competition with able-bodied individuals, and can also assist them in holding their jobs, so stabilizing their

income.

### Research Framework

This study has two variables: the dependent variable, economic empowerment of PwDs, for which three indicators (creation of business activity, income generation, and improved living conditions) were examined; and the independent variable, financial inclusion, for which three factors were examined: access to financial services, access to decent work, and financial knowledge and skills. The following figure 1 depicts the relationship between the two variables.

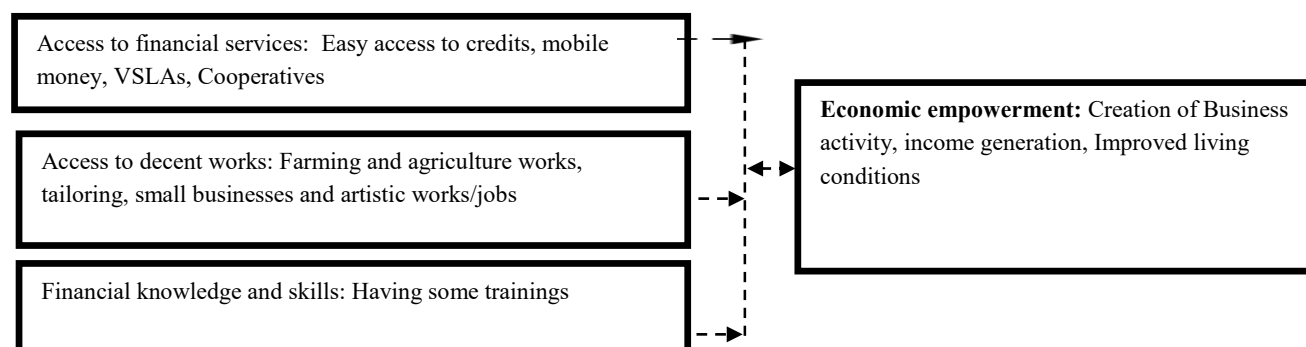
**Figure 1: Conceptual framework**

**Dependent variable**

**Financial inclusion**

**Independent variable**

**Economic empowerment**



## II. RESEARCH METHODOLOGY

This study employed a combination of descriptive, empirical, and inferential research designs. Descriptive design employs metrics of central tendency such as the mean, as well as measurements of dispersion or variance such as the standard deviation (Yellapu, 2018; Nassaji 2019; Faith, 2022). The research embodies the following elements by empirical design: a research questionnaire, a specific and planned design for the research, the collection of primary data, a specific methodology for collecting and analysing the data, the limitation of the data to a specific group, area, or time scale, known as a sample, the ability to recreate the study and test the results, known as reliability, and the ability to generalize the findings to a larger sample and population (Dan, 2017). Inferential design was applied by computing correlation analysis of the variables and regression analysis that allows to test a hypothesis or assess whether the data is generalizable to the broader population. The total population of this research is 10,071 individual members of NUDOR member organisations selected randomly. The research used Yamane method, (1967) to get 370 respondents.

$$N = \frac{10,071}{1 + 10,071(0.05^2)} = 370$$

The sample of 370 respondents were selected by applying probability sampling where each respondent had equal chance to be selected; and the researcher applied cluster sampling by subdividing those respondents into types of disability such as visual impairment category of disability, deaf category of disability, deafblind category of disability, mental category of disability, physical category of disability, Little persons category of disability and albinism category of disability. In each category, a number of respondents were selected randomly based on their availability and their consent. Data collection method applied is a questionnaire designed in five levels Likert scale where the scale of measurement was 1 = Strongly disagree (SD); 2 = Disagree (D); 3 = Uncertain (U); 4 = Agree (A); 5 = Strongly Agree (SA) (Warmbrod, 2014). Interval of Means are: very low (1.00-1.80), low (2.81-2.60), high (3.61-3.40) and very high (4.41-4.20) (Freankel and Wallen, 2006). Evaluation of standard deviation is based on the following limits:  $SD < 0.5$  (Homogeneity/ if SD is small here the respondents understand the things in the same way),  $SD = 0.5$  (Moderate) and  $SD > 0.5$  (Heterogeneity/ if SD is large here the respondents understand the things in the different way), Aggesti and Franklin (2000). Reliability was tested using content reliability test

by Bryman, (2015) and analysed four key elements namely: relevance, simplicity, clarity, and ambiguity. The results indicated that the tool was valid; and reliability was tested by computing Cronbach's Alpha and the results indicated that the tool was reliable at 94.3%. The data was analysed using IBM SPSS Statistics to compute descriptive as well as inferential statistics. **Model specification**

The research model of data analysis applied are the following: Economic empowerment =  $\beta_0 + \beta_1$  Access to Financial Services +  $\beta_2$  Access to decent work +  $\beta_3$  Financial Knowledge and skills +  $\epsilon$ . Where: economic empowerment is a dependent variable (Y);  $\beta_0$  = intercept;  $\beta_1$ -3 indicate access to financial services, access to decent work and financial knowledge and skills while  $\epsilon$  is error term or other factors.

### III. RESULTS

The data collected from the questionnaire were computed and at each variable, seven questions were asked in forma of five levels Likert scale and we computed the mean and standard deviation. Regarding economic empowerment of PwDs, results from table 1 revealed that respondents consider economic empowerment to be highly essential, as evidenced by the average Mean (4.49) and Standard deviation (0.510). The factors that support their understanding of economic empowerment are the creation of a business activity with mean (4.57) and standard deviation (0.502); the generation of income with mean (4.44) and standard deviation (.514); the improvement of living conditions with mean (4.54) and standard deviation (0.499); the increase of confidence in the community with mean (4.49) and standard deviation (0.500); and access to basic needs with mean (4.51) and standard deviation (0.506). As can be seen from the table below with average mean (4.49) and average SD (0.51), PwDs want to be economically empowered in order to boost their economic standing and meet their day-to-day requirements.

**Table 1. Descriptive statistics regarding Economic Empowerment of PwDs**

Statement	N	Mean	Std. Deviation
The creation of a business activity helps in generating an income that is used for daily leaving	370	4.57	0.502
The generated income is used to pay health insurance, to buy a goat, a cow, buy land or build a house	370	4.44	0.514
From the time income is generated, living conditions starts to improve for PwDs	370	4.54	0.499
Once a person with disability starts to generate income, he/she confident and neighbours respect his/her opinion in community meetings	370	4.49	0.5
Once a person with disability start to generate income , he/she can easily get basic needs such as food, pure drinking water and shelter	370	4.51	0.506
When income increases significantly, a person with disability can get what he/she desires	370	4.46	0.536
It is very true that there is a significant relationship between financial inclusion and economic empowerment of PwDs	370	4.47	0.516
<b>Average</b>	<b>370</b>	<b>4.49</b>	<b>0.51</b>

**Source: Field data, 2022**

For access to financial services, results shown in table 2 below, revealed that respondents view access to financial services as an efficient tool that can help them to be economically empowered as indicated by the average Mean (4.46) and Standard deviation (.502). Financial services suggested by most of the respondents are village savings associations with mean (4.44) and Standard deviation (0.508); credits from financial institutions with mean (4.51) and standard deviation (0.501); Cooperatives with mean (4.45) and standard deviation (.498) and use of mobile money savings accounts with mean 4.44 and standard deviation (0.498). They emphasize on the fact that financial institutions should remove barriers such as collaterals required by financial institutions but also the change of mind-set of staff working in these institutions that PwDs cannot be able to manage finances as shown by the mean of (4.52) and the standard deviation of (0.500). Respondents believe that



Access to financial services such as credits, savings, mobile money, cooperative groups is very important for PwDs and it is indicated by mean (4.46) and 0.510 standard deviation.

**Table 2. Descriptive statistics about Access to Financial Services by PwDs**

Statement	N	Mean	Std. Deviation
Joining village savings and loan associations helps persons with disability to start an economic activity in their community by using a little savings made	370	4.44	0.508
Removing barriers such as collaterals required, change of mind-set about inability of PwDs by financial institutions in granting them credits may help in business diversification by PwDs	370	4.52	0.5
Credit provision to persons with disability are important tools for economic empowerment	370	4.51	0.501
Cooperatives are very important in improving standards of living and conditions of PwDs	370	4.45	0.498
Saving through mobile money, airtel money, banks and micro-finance and other savings channels are effective tools for economic empowerment of PwDs	370	4.44	0.497
Particularly, having a mobile money account is important since it provides the possibility to pay or save money very quickly without having to travel a distance to seek for financial service	370	4.45	0.503
Access to financial services such as credits, savings, mobile money, cooperative groups can lead to economic empowerment of PwDs	370	4.46	0.51
<b>Average</b>	<b>370</b>	<b>4.46</b>	<b>0.502</b>

**Source: Field data, 2022**

In regards to access to decent work, table 3 shows that respondents are interested to have Access to decent works to help them become economically empowered and become earners of income as indicated by the average Mean (4.49) and Standard deviation (.501). Most of decent works done by respondents, are among others agriculture and farming with mean (4.45) and standard (.498), followed by doing businesses with mean (4.44) and standard deviation (.497); tailoring works with mean (4.57) and standard deviation (.502), carpentry with mean (4.44) and standard deviation (.514) and finally artistic works such as painting with mean (4.54) and standard deviation (.499). Respondents believe that having a respectable job is vital and can contribute to economic empowerment for PwDs, as evidenced by a mean of (4.49) and a standard deviation of (.500). According to the data in the table above, persons with impairments can work and earn money, allowing them to achieve economic independence.

**Table 3. Descriptive statistics about access to decent works by PwDs**

Statement	N	Mean	Std. Deviation
Having something to do by PwDs can lead to economic empowerment in the community	370	4.51	0.501
Even with a disability, one can still be able to generate an income from farming and agriculture	370	4.45	0.498
Even with a disability, one can still be able to generate an income from doing a business in the community	370	4.44	0.497
Even with a disability, one can still be able to generate an income from tailoring activities	370	4.57	0.502
Even with a disability, one can still be able to generate an income from carpentry activities	370	4.44	0.514
Disability is not inability because PwDs can do artistic works like painting that help them to generate income to support them in their daily living	370	4.54	0.499
Having decent work by PwDs improves living conditions hence leading to their economic empowerment	370	4.49	0.500
<b>Average</b>	<b>370</b>	<b>4.49</b>	<b>0.501</b>

**Source: Field data, 2022**

With regards to financial knowledge and skills, table 4 suggests that having different trainings about income generating activities help PwDs to overcome the fear of starting economic activity as shown by mean (4.48) and standard deviation of (.505). Respondents also revealed that lack of financial knowledge and skills can be a challenge for their economic empowerment as indicated by the mean (4.46) and standard deviation (.510), and that is why some of them are reluctant or hesitant to start an economic activity as they think that they would end up failing as shown by (4.51) mean and (.501) standard deviations. Generally, if PwDs are given enough knowledge and skills required to run income generating activities, their economic status can improve as shown by average mean of 4.55 and standard deviation of .515 in the table below. Therefore, PwDs should be equipped with various trainings, financial knowledge and skills that can help them perform economic activities that would help them to be financially included and economically empowered.

**Table 4. Descriptive Statistics regarding Financial knowledge and skills of PwDs**

Statement	N	Mean	Std. Deviation
Having different trainings about income generating activities help PwDs to overcome the fear of starting economic activity	370	4.45	0.503
Lack of enough financial knowledge and skills hinder/prevent PwDs in economic empowerment	370	4.46	0.510
PwDs are sometimes reluctant to start businesses as they think that they would end up failing because of lack of knowledge and skills to do it	370	4.51	0.501
PwDs need enough trainings and mentoring about starting income generating activities	370	4.45	0.498
If PwDs are given enough knowledge and skills required to run income generating activities, this can lead to their economic empowerment	370	4.55	0.515
<b>Average</b>	<b>370</b>	<b>4.48</b>	<b>0.505</b>

Source: Field data, 2022

The correlation analysis in table 5 indicated that access to financial services and economic empowerment of PwDs are linked. The findings demonstrated that the p value utilized to establish a link between the two variables was significant. Access to Financial Services and Economic Empowerment of PwDs, were shown to have a (0.309) correlation and it shows a strong relationship between The two variables, financial inclusion and economic empowerment among PwDs; as a result, the association between the two variables is statistically significant above the 0.01 level.

The same table shows that access to quality jobs and economic empowerment of individuals with disabilities are linked, since the results show that the p value used to establish a relationship between the two variables was significant. The association between access to decent work and economic empowerment of PwDs was found to be (0.397). This Pearson link demonstrated that the two variables have a significant association. According to the following correlation table, there is a positive relationship between respondents' access to respectable jobs and their level of economic empowerment of PwDs; as a result, the relationship between the two variables is fairly significant above the 0.01 level. The relationship between financial knowledge and skills and economic empowerment of PwDs is shown in table 5. The findings demonstrated that the p value utilized to establish a link between the two variables was significant. The two variables, Financial Knowledge & Skills and Economic Empowerment of PwDs were shown to have a (0.179) correlation. This Pearson Link revealed a strong relationship between the two variables. According to this table, there is a positive correlation between respondents' financial knowledge and skills and their level of economic empowerment of PwDs; as a result, the association between the two variables is fairly significant above the 0.01 level

**Table 5. Correlation analysis**

		<b>Economic empowerment</b>	<b>Access to financial services</b>	<b>Access to decent work</b>	<b>Financial knowledge and skills</b>
Economic Empowerment	Pearson Correlation	1	.309**	.397**	.179**
	Sig. (2-tailed)		0	0	0.001
	N	370	370	370	370
Access to financial services	Pearson Correlation	.309**	1	.348**	.121*
	Sig. (2-tailed)	0		0	0.02
	N	370	370	370	370
Access to decent work	Pearson Correlation	.397**	.348**	1	.155**
	Sig. (2-tailed)	0	0		0.003
	N	370	370	370	370
Financial knowledge and skills	Pearson Correlation	.179**	.121*	.155**	1
	Sig. (2-tailed)	0.001	0.02	0.003	
	N	370	370	370	370

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

**Source: Field data, 202**

The results indicated in table 6 shows that the coefficient of determination R-squared value for this research is 0.648 indicating a moderate effect size. It demonstrates how the model moderately fits the data. According to these findings, financial inclusion accounts for 64.8% of the variation in economic empowerment, with other factors accounting for 35.2% of the variation.

**Table 6. Model Summary <sup>b</sup>**

Model	R	R Square	Adjusted	Std. Error of the Estimate
			R-Square	
1	.805 <sup>a</sup>	0.648	0.631	0.191

a. The Predictor (Constant): Financial Inclusion

b. Dependent variable: Economic Empowerment of PwDs.

**Source: Field data, 2022**

The analysis of variance (ANOVA) in table 7 shows that the entire variation in the dependent variable that the model can account for is described by the ANOVA and it can be shown by the regression (F=30.949 with p=000<0.05) indicating that the regression model explains approximately 30.95% of the data set's variability at the 5% level of significance. This indicates that the regression model employed for this investigation adequately accounts for the outcome effects and fits the data.

**Table 7. The analysis of variance (ANOVA)**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	19.853	3	6.618	30.949	.000 <sup>b</sup>
	Residual	78.258	366	0.214		
	Total	98.111	369			

a. Dependent Variable: Economic Empowerment of PwDs

b. Predictors: (Constant), Financial Inclusion

**Source: Field data, 2022**

The results in Regression Coefficients table 8 revealed that access to financial services had contributed to the economic empowerment of PwDs as shown by the regression coefficient that  $\beta_1 = .188$ , with  $p=.000 < 0.05$  at a 5% level of significance.

The regression coefficient of  $\beta_2 = .325$ , with  $p=.000 < 0.05$  at a 5% level of significance also showed that access to decent works by PwDs had a positive and statistically significant role in economic empowerment of PwDs. Finally, the regression coefficient of  $\beta_3 = .108$ , with  $p=.024 < 0.05$  at a 5% level of significance showed that financial knowledge and skills had a positive and statistically significant role in economic empowerment of PwDs.

**Table 8. Regression Coefficients**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.678	0.312		5.377	0
	Access to financial services	.188 ( $\beta_1$ )	0.051	0.186	3.728	0
	Access to decent work	.325 ( $\beta_2$ )	0.052	0.316	6.294	0
	Financial knowledge and skills	.108 ( $\beta_3$ )	0.047	0.108	2.274	0.024

Source: Field data, 2022

#### IV.CONCLUSION

Findings are summarized based on how they are presented in regards to the objectives of this study and they include: (i) to establish the relationship between access to financial services and economic empowerment of PwDs in Rwanda, (ii) to examine the relationship between access to decent works and economic empowerment of PwDs in Rwanda and (iii) to assess the relationship between financial knowledge and skills and economic empowerment of PwDs in Rwanda. The findings revealed that financial services were easily accessible and had an impact on the economic independence of PwDs, as per respondents' responses. Those financial services are for example local cooperatives, mobile and Airtel money, banks, and voluntary community savings programs. PwDs also believe that once they have access to financial services, they are able to begin economic activities such as small commerce, farming and agricultural businesses, and some of PwDs eventually undertake artistic works such as painting, drawings among other things. They did emphasize however, that financial institutions should remove barriers that hinder them to access financial services and that financial institutions staff should change their perception about viewing PwDs as weak persons that cannot be able to manage their finances. This is consistent with the regression results showing that  $\beta_1 = 0.188$ , with  $p = 0.000 < 0.05$  at a 5% level of significance which has shown that access to financial services contribute to the economic empowerment of PwDs in NUDOR's member organizations. The results also revealed that access to decent work had a favorable and significant influence on economic empowerment of PwDs in Rwanda, according to the findings. PwDs, who provided data believe that having a decent work is important as it allows them to generate income that can be used to meet basic needs such as purchasing a shelter, purchasing health insurance, purchasing a domestic animal, and thus improving their overall living conditions. For access to decent work, the results also agree with the regression coefficient of  $\beta_2 = .325$ , with  $p=.000 < 0.05$  at a 5% level of significance which has shown that access to decent work contributes to economic empowerment of PwDs in NUDOR's member organizations.

Finally, findings revealed that financial knowledge and skills have a favorable and significant influence on economic empowerment of PwDs in Rwanda. Respondents stated that having various financial management including formal education, trainings and workshops is highly significant because it helps people overcome their anxiety of starting income-generating activities. They also believe that a lack of financial understanding and abilities can lead to business failures, or that even if firms are formed, they end up failing.

The findings agree with the regression coefficient of  $\beta_3 = .108$ , with  $p = .024 < 0.05$  at a 5% of level of significance which has shown that financial knowledge and skills contributes to the economic empowerment of PwDs in NUDOR's member organizations. The research concluded that there is a positive and significant relationship between financial inclusion and economic empowerment of PwDs in NUDOR member organizations

## V.RECOMMENDATIONS

Based on study findings, the following recommendations can help to successfully achieve and improve the empowerment process for PwDs.

### *To Management of NUDOR and staff in organizations of PwDs*

Financial service providers should guarantee that PwDs have equal opportunity and access to financial services by providing them with information that is appropriate for their needs and in an accessible format. PwDs may benefit most from increased information and encouragement to participate in income-generating activities. When PwDs are integrated, economic rehabilitation begins by combining social protection and the resources needed for revenue generation. It would be critical to encourage a transformation in how financial institution staff PwDs.

### *To Persons with disabilities*

PwDs themselves should have a spirit of winning, confidence and capacity to perform equal activities like persons without disability. They should never feel like they can't do anything right.

### *To the Government of Rwanda*

The government should make sure that there is equal opportunity for all and reasonable facilities and accommodation in all angles have been put in place for PwDs. They should be included in all government policies and strategies.

### *Suggestions of areas for further research*

This research assessed the relationship between financial inclusion and economic empowerment of PwDs in Rwanda, specifically, the research three independent factors access to financial services, access to decent work, and acquisition of financial knowledge and skills. However, due to limited time, the assessment of the relationship between financial inclusion and economic empowerment of PwDs was not covered all by this research. Further studies can be extended on:

- 1.How Negative mind set on disability can affect financial inclusion of PwDs or
- 2.How the travel distances to and from financial services can affect financial inclusion of PwDs.

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