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# Securing Land Transactions with Biometric data in Ghana

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***ABSTRACT***

There is a gap between land tenure and the physical land giving room for impersonation, multiple allocation and sale of plots, loss of possession, land racketeering and fraud through forgery. Hence, the need to identify unambiguously parties involved in land transactions so that the root of title can be traced to ensure tenure security. This paper explores innovative ways of filling the gap with biometric data to secure land transactions. Through interviews and self-administered questionnaire with google forms, and snowball sampling technique, perception of participants across Ghana were assessed on what constitutes secure land transaction. The researchers also assessed participants' knowledge of biometric systems and their acceptability in recording biological traits of grantors and grantees in land transactions. Most participants were conversant with the use of biometric systems and were optimistic that its use might bring sanity in land transactions and enhance the security of tenure in Ghana.

***Keywords :***
*Biometric systems*
*Land transactions*
*Security of tenure*
*Customary tenure*
*Ghana*

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## INTRODUCTION

Corruption in land deals adversely affect livelihoods, impede development, and it is a significant cause of land tenure insecurity in Ghana. Lack of transparency, accountability, and stakeholder participation in official and traditional land administration are sources of corruption and a hindrance to good land governance. Again there is a gap between land tenure and the physical land giving room for impersonation, multiple allocations, multiple sale of plots, loss of possession, land racketeering and fraud through forgery. There is the need to uniquely identify parties involved in land transaction so that the root title can always be traced with certainty. The paper explores innovative means of filling this gap with biometric system to secure land transactions in Ghana. The paper critically examines the use of specific data about unique biological traits to curtail indiscipline in land transactions in Ghana.
In Ghanaian most customary land records are scattered, orally recorded, uncoordinated and cannot be guaranteed to (Bentsi-Enchill, 1964). As such, most transaction histories are either lost or challenged with adverse claims when principal witnesses to the transactions pass on, or boundary marks disappear. Customary land tenure, therefore, suffers security lapses and cannot protect the interest of potential owners of customary land.

Again the laws governing the transfers of customary lands are not codified and lacks legal backing in case the landholder is challenged in court. These reasons make customary land transactions prone to fraud and litigation (Agbosu, 2000). Landholders of customary are not guaranteed any secured tenures by the existing weakened land administration system (Abubakari, Richter, & Zevenbergen, 2018; Barry & Danso, 2014). Thus the Ghanaian land market becomes defective and eventually weakens the land administration system. Landholders find it challenging to derive commensurable benefits from their lands by collateralising them for loans and mortgages (Feder & Nishio, 1998).

Land-use conflicts increase when demand for land becomes high in both urban and peri-urban areas. This abuse of physical planning laws are usually instigated by chiefs and family heads who want to take advantage of the opportunity to make more money by forcefully demarcating public open spaces, conserved areas and recreational areas to building plots (Locke & Henley, 2016)

## Land Rights in Ghana

Land rights generally refer to an individual's ability to alienate, acquire and possess at their free will without infringing on other individuals rights (Adi, 2009). FAO, (2002) also categorises land rights into use rights (grazing, growing subsistence crops), control rights (right to decide what to plant, when to harvest and many more) and transfer rights (allodial rights). Land laws may grant a group of people equal access to own land, but it takes land rights to provide social acceptance of this ownership (Hanstad, 2010). Thus every individual's exclusive right to use, possess and transfer land must be protected by the land laws (Akrofi & Whittal, 2017).
Land right management is a preserve for four divisions of the Lands Commission namely; Public and Vested Lands Management Division (PVLMD), Survey and Mapping Division (SMD), Land Valuation Division and Land Registry Division. These four (4) divisions under the lands commission are by law (Act 767) expected to collaborate at the regional level to serve clients from one location, but power play among them sometimes result in undue delays in their services. Act 767 established the Lands Commission as a corporate entity to give it a more business outlook with an improved workflow for land services especially for government land with oversight responsibility of customary land. Ghana's land administration system recognises both customary and statutory tenure systems.

## LAND ACQUISITION IN GHANA

Ghana has a total land area of 238, 539 square kilometres out of which the customary sector (under control of chiefs, family heads and earth priest) accounts for almost 80%, and public lands constitute 20% (Bugri, 2012; Gyamera, Duncan, Kuma, & Arko-Adjei, 2018). There are five (5) types of land recognised by Ghana's constitution; namely; Individual/ private lands, stool/skin lands, family lands and state and stool vested lands. The process of acquiring any land largely depends on the buyer who has to do due diligence to verify the validity of the documents presented by the vendor. Generally, land acquisition process in Ghana includes; site inspection, title search, negotiations, demarcation/survey, covenant/indenture preparation and registration; either deed registration or land title registration depending on the location of the land. The intrinsic bureaucratic delays with the land title registration and the deed registration, high cost of registration and go-betweens fronting for the staff of the lands commission deter people from dealing with the lands commission (Ekemode, Adegoke, & Aderibigbe, 2017).

### Corrupt practices in the land sectors in Ghana

The WordWeb defines corruption as the use of a position of trust for dishonest gain. This definition supports that of Transparency International, which puts it as abuse of entrusted power for private gain. Research undertaken by Arial, Fagan, Zimmermann, & Hardoon, 2011 revealed that "there is a strong correlation between levels of corruption in the land sector and overall public sector corruption".
Reported corruption cases in land transactions globally are either administrative or political (Arial et al., 2011; Van der Molen & Tuladhar, 2007). Typically corruption in the land sector would involve the following:

- "*Grabbing of land by the elite in society and influencing land titling schemes*
- *Manipulating land records and influencing adjudication and dispute resolution in favour of influential people*
- *Falsifying land documents to obtain title to land*
- *Chiefs and family heads intimidating their subjects and abuse of power*
- *Multiple allocations*" (Arial et al., 2011).

Even though there are laws governing land acquisition in Ghana either by the deed registration system or the land title registration system, the inherent weaknesses in both systems of registration open the door for lots of indiscipline in the land administration systems (Van der Molen & Tuladhar, 2007). The deed registration system is challenged with inaccurate site plans, multiple sales of lands, insecure ownership leading to several forms of land disputes (Gyamera et al., 2018; Sittie, 2006). Thus the deed registration system is prone to fraud through forgery, impersonation and parallel registration for the same plot of land. The land title registration system is impeded by scattered land records, inadequate storage process, snail pace processing of the application, lack of coordination among agencies involved in the land title registration process and many more. (Ehwi & Asante, 2016).
These challenges resulted in bureaucratic delays, loss of trust, rent-seeking behaviour of some staff of the commission, intermediaries fronting for some leaders to charge clients higher fees (Arial et al., 2011; Ehwi & Asante, 2016; Shipley & Pyman, 2018). There are instances where farm owners illegally demarcated their farms to residential plots when land values appreciated(Locke & Henley, 2016). State lands are also demarcated by quark surveyors hired by chiefs and family heads who claim they were not compensated by the government when the lands were compulsorily acquired from their progenitors. In view of the above corruption opportunities discussed above it is very crucial to protect the interests of the poor and the vulnerable in land transaction through the use of innovative technologies (Koeva et al.,

2017; Lemmens, 2011; Yomralioglu & Mc Laughlin, 2017; Zevenbergen, Augustinus, Antonio, & Bennett, 2013).

## Biometric Systems

A biometric system is a technological system that uses information about a person to identify that person (Lemmen & Van Oosterom, 2011; Stoltzfus, 2017). When there is the need to uniquely identifying people in banks, airports, security installations biometric passwords are valid. In Ghana, passwords, signatures, fingerprint, Social Security and National Insurance Trust (SSNIT) numbers, mobile phone numbers are used to identify persons in many transactions undertaken with corporate entities and even government institutions of which the lands commission in no exception. Most of these options have not proven to be too strong in protecting the persons involved in the transaction against security breaches. These interventions have not yielded many benefits to the citizens, government and the private sector in securing transactions against fraud that occur through impersonation. Biometric passwords are the innovative way of protecting data, securing transaction and so on (US 6,317,834 B1, 2001; Tallman, Santner, & Miller, 2006). Human biological traits captured through fingerprint data, iris scan, voice recognition and facial features are encrypted and stored as templates for purposes of authentication (Nandakumar, Jain, & Nagar, 2008; Phillips, Martin, Wilson, & Przybocki, 2000).

Fingerprint biometric password has been used in Ghana to access, passport, driving license, national health insurance services and even in the national elections. Hence if biometric passwords are used to identify the grantors and grantees in any legal land transactions, enough tenure security is given to the new landholder. This security is achieved by making the transaction unique and exclusively held for the new landholder at the point of registration with the biometric details of the two parties. Most biometric systems go through encryption and decryption when there is a need to authenticate a transaction or authorize a user. (Jaiswal, Bhadauria, & Jadon, 2011) postulate that most biometric systems consist of enrollment, template and matching.

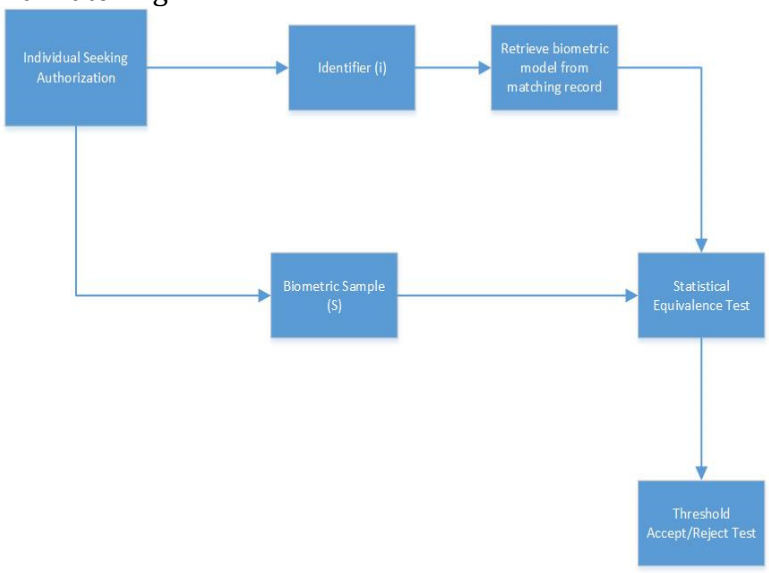


Figure 1 the interaction between users and a biometric system.
Source:(US 6,317,834 B1, 2001)

## Security Implication for Biometric Systems

The use of biometric passwords is gaining roots in most security installations globally overtaking alphanumeric passwords and personal identification number (PIN) within financial services, computer security, education and so forth. (Jaiswal et al., 2011; Phillips et al., 2000). This is done to restrict access, authorise processes and identify users with the stored biometric template belonging to the user (Yang, Wang, Hu, Zheng, & Valli, 2019). When a user wants to access the system, biometric scanner or system undertakes a matching test of the stored data and either grant or refuse access (Anon, 2016; Kumar & Walia, 2011). The biometric security system can be breached when the template is spoofed (Yang et al., 2019). The matching event of the biometric system is prone to errors such as failure to enrol rate (FER) and failure to acquire rate (FTA). The FER is caused by insufficient training, environmental conditions and ergonomics (Stan Z & Anil, 2009). FTA is caused by the biometric device's inability to extract data from the individual, i.e. failed facial recognition of the biometric system (ibid).

## Biometric Device Selection

According to Thakkar 2017, biometric devices are selected based on the following considerations:

- Dot Per Inch (DPI) – It indicates the amount of information available within an inch of space within the image
- Liveness detection – It is the ability of the device to check spoofing
- FAR and FRR- False acceptance rate (FAR) and false rejection rate (FRR) which determine the accuracy of the fingerprint-based biometric device.

Apart from these attributes of the device, some other physical conditions that affect the performance of the biometric device such as temperature, humidity, dust/sand particles, population size and hygiene issues (Thakkar, 2017).

## Use of biometric systems to safeguard land administration in Ghana

Land transfers, under customary tenure, currently proceed without proper verification of identities of grantors and grantees. This makes the transactions prone to fraud through impersonation, forgery, multiple sale and misrepresentation. This menace can be curbed by enrolling all Allodial title holders, usufractuary landholders and other landholders in a biometric system so that future land transaction may proceed with biometric verification of landowners. Similarly, statutory tenure transactions undertaken by PVLMD on vested and public lands without stringent verification of the identities of the allottees leading to impersonation and forgery may be minimised by taking stakeholders through biometric verification.

## MATERIALS AND METHODS

A descriptive research approach was adopted for this study. Personal interviews were conducted by the researchers to solicit for information from people who encountered disputes while developing their lands, those who have lost possession through fraud, impersonation, misrepresentation, forgery, etc. The researchers also inquired about how the interviewees entered into the transactions, their experience after the fraud or dispute and any lessons learnt. The information gathered from the interviews was used to design a self-administered questionnaire with google forms for the purpose of the research. The snowball technique of sampling was used to recruit participants across Ghana to assess their perception of what constitutes a secure land transaction. The researchers also assessed participants' knowledge of biometric systems and their acceptability in recording biological traits of grantors and grantees in land transactions.

The sample size for the research was then determined with the Cochran's formula using the following parameters:

- Estimated population of 17million of Voters on the electoral roll of Ghana (Frimpong, 2019; Mahama, 2016)
- Estimated proportion of the population p= 10% or 0.10
- The confidence level of 95% where z= 1.96
- The margin of error of 5%

$$n = \frac{\frac{1.96^2 \times 0.1(1-0.10)}{0.05^2}}{1 + \frac{1.96^2 \times 0.1(1-0.1)}{0.05^2 \times 1{,}700{,}000}} \approx 138\ participants$$

n= 138 participants

The researchers were expecting 138 responses from the self- administered questionnaires but only 124 were received and analyzed with the IBM SPSS Version 23.

## Results and Discussions

Table 1: Gender of Respondents

**Gender of Respondent**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Male | 88 | 71.0 | 71.0 | 71.0 |
| | Female | 36 | 29.0 | 29.0 | 100.0 |
| | Total | 124 | 100.0 | 100.0 | |

From the responses obtained, 88 (71%) of the research participants were males and 36(29%) were female

Table 2: Level of Education of respondents

**Education Level**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Basic Education | 1 | .8 | .8 | .8 |
| | Technical / Vocational / Secondary | 2 | 1.6 | 1.6 | 2.4 |
| | Tertiary | 121 | 97.6 | 97.6 | 100.0 |
| | Total | 124 | 100.0 | 100.0 | |

Majority of the respondents had attained a tertiary level of education i.e. 97.6% the rest had attained basic education and second cycle education.

Table 3: Marital Status of respondents

**Marital status**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Married | 71 | 57.3 | 57.3 | 57.3 |
| | Separated | 2 | 1.6 | 1.6 | 58.9 |
| | Divorced | 3 | 2.4 | 2.4 | 61.3 |
| | Never Married | 48 | 38.7 | 38.7 | 100.0 |
| | Total | 124 | 100.0 | 100.0 | |

The results also showed that 71 (57.3%) were married, 48 (38.7%) never married, two were separated from their spouses and 3 were divorcees.

Descriptive Statistics of research variables

The researchers conducted descriptive statistics with the results obtained. Cross-tabulation of the research variables was done to ascertain their dependence on each other through a chi-square test and nominal confirmatory test with Lambda. The details are shown in Table 1

Table 4: Descriptive statistics of research variables

| S/n | **Item** | **Chi-square** | **Lambda** | **Interpretation** |
|---|---|---|---|---|
| 1 | Cross-tabulation of gender against land ownership | P=0.473 | 0.000 | No relationship between the variables & no association between gender and land ownership |
| 2 | Cross-tabulation of the level of education against land ownership | P=0.437 | 0.000 | No relationship between the variables & no association between level of education and land ownership |
| 3 | Cross-tabulation of marital status against land ownership | P=0.05 | 0.113 | A significant relationship between the two variables & moderate association, marital status is dependent on land ownership |
| 4 | Cross-tabulation of the method of acquisition of land against challenges encountered after the acquisition | P=0.289 | 0.123 | No relationship between the two variables. However, a moderate association exist between "challenges encountered after acquisition" is dependent on the method of acquisition |
| 5 | Cross-tabulation of "documents received from the acquisition "against "challenges encountered after the acquisition | P=0.292 | 0.158 | No relationship between the variables. However, moderate association exist between, "challenges encountered after acquisition" dependent on documents received from the acquisition". |
| 6 | Cross-tabulation of "preventive measures" against "challenges encountered after acquisition." | P=0.142 | 0.193 | No relationship between the variables. However, moderate association exist between "challenges encountered after acquisition" dependent on "preventive measures." |

Source: Field survey data analysis

## DISCUSSIONS

The study results show no relationship between gender and land ownership and no valid land ownership association between gender and land ownership. Anybody in Ghana with the economic means can own land irrespective of gender. Contrary to the study of (Ajala, 2017) and FAO, 2002 which revealed that land ownership is discriminated against women. The study also showed no relationship between the level of education and land ownership and no association between level of education and land ownership. Land ownership in Ghana can be acquired irrespective of the level of education through inheritance, purchase, tenancy arrangement or received as a gift (Kidido, Bugri, & Kasanga, 2018). However some studies (Abdelmagid, Abdelmageed, Basheer, Eltahir, & Ibrahim, 2017; Gomes Maciel, da Silva Bezerra, da Silveira Cavalcanti, de Oliveira, & Cavalcante Filho, 2018) indicate higher level of education directly relating to land access security. The study also shows a significant relationship between marital status and land ownership. It further showed that marital status is dependent on land ownership. The result agrees with (Duncan & Brants, 2004) who averred that marriage has significant impact on land ownership. Men in patrilineal inheritance are not affected by change in their marital status, but the women lose land ownership when they marry. Thus a woman's access to land may be determined through marriage(Budlender, Mgweba, Motsepe, & Williams, 2011). Women may lose their ownership when they are divorced, or they become widows. Hence there is the need to secure women access to land especially in the customary setting such that they do not lose their investment in the land.

The research showed no significant relationship between "methods of acquisition and documents received" concerning challenges encountered after the acquisition". However the confirmatory test showed moderate association where "challenges encountered after acquisition" is found to be dependent on "methods of acquisition" and "documents received after acquisition" respectively. Thus an altered document will always result in challenges in the acquisition through ownership disputes, land-use conflicts and many more. The Land Registry Act 1962 and the Land Title Registration Act 1986 or Provisional National Defence Council Law (PNDCL 152) which are supposed to regulate land transactions in Ghana are not enforced to the later. Any fraudulent act or alteration of any land document done by the grantor/vendor is deemed to be an offence punishable by the PNDCL 152 Section 130(Government of Ghana, 1986). Any act of impersonation done by the grantor/vendor or misrepresentation during the land transaction tantamount to violation of section 34 of the Land Registry Act 1962. By virtue of the fact that the land registration services are not well decentralized in Ghana and lack of stringent check on the identities of persons submitting instruments for registration; land transaction fraud still prevails (Elkins & McGinley, 2015; Siebrasse, Murray, Johnstone, & Cockburn, 2003; Thompson, M, 1985).

Hence the validity of documents received by the grantee any land transaction remains indeterminate baring any future fraud detection. The research conducted by (Krauss & MaCGahan, 1979; Lijia, 2012) suggested "file alteration and substitution as a source of fraud in computer transaction". This supports the assertion that documents can be faked, forged even though the process might be legal. Fraud detected in any land transaction invalidates the transaction; titles acquired through such transactions also become void when challenged by the rightful owners in court (Kiwana & Gantungo, 2019; Siebrasse et al., 2003).

The study shows a moderate association between the "preventive measures" and "challenges encountered" where challenges encountered is dependent on "preventive measures". The results further

revealed significant cases where respondents agreed that they encountered multiple allocations (27), multiple sales (25), impersonation (24) and forgery (20). When participants were asked about steps to take to avert future occurrence of transaction challenges, 72 (58%) indicated that they would search for ownership before paying for the land. It is therefore evident that the identity of the grantor (vendor/mortgagor) in the current land transaction regime must be verified to prevent fraud by impersonation, misrepresentation and forgery (Elkins & McGinley, 2015; Siebrasse et al., 2003).

Where it is likely to lose the root title through "epidemics, civil war, and tsunami" the ownership of land could be maintained using the biometric attributes or DNA of the first rightful owner. Future verification of ownership may be used to restore the land ownership to his/her successor (Lemmen & Van Oosterom, 2011). In line with the statement made by Lemmen and Van Oosterom, the researchers sought to find out how biometric details of both grantor and grantee in any land transaction be used to enforce tenure security. ImageWare Security Systems claims that identity is the new security perimeter (Bannister, 2019). Land transaction between two people can therefore be made unique with the biometric templates of the grantor and grantee. The biometric template is far better than signatures and PINS, contact numbers, to ward off impersonation and grabbing of land from the vulnerable in society (IFSEC, 2019). Although biometric systems are not 100% secured but for unsophisticated crimes such as fraud by impersonation and forgery are efficiently dealt with (Siebrasse et al., 2003).

Ghana is prepared with the digitisation drive to accept the use of technology to secure land transaction (Yeboah, 2019). Taking cognisance of the fact that Ghana has successfully gone through two (2) national presidential and parliamentary elections, it is possible to roll out policies that will make it mandatory for grantors and grantees to be subjected to full proof of identity using the voter's ID for citizens and other forms of verifiable identities for non-citizens resident in Ghana.

Hence the need for a quick and efficient way of identifying persons is suggested by the researchers as a biometric system to be made part of land transactions in Ghana which received massive support of the participants 120 (96%). Almost all the respondents are familiar or have experienced a biometric application in Ghana (voter registration-36, National Health Insurance Registration- 5, Passport acquisition-8 and all the three (3), i.e. (Voter registration, National Health Insurance Registration and Passport acquisition) – 75.

## Relative Importance Index (RII) ranking of variables assessing the reason for the use of biometric data

$$\text{Relative Importance Index} = \frac{\sum w}{AN} = \frac{5n_5 + 4n_4 + 3n_3 + 2n_2 + 1n_1}{5N}$$

Let Variable 1 (V1) = I use biometric data because the data cannot be stolen
Variable 2 (V2) = Biometric documents cannot be used by another person
Variable 3 (V3) = Biometric data transaction is unique and secured
Variable 4 (V4) = Biometric data brings certainty in identifying a person

$n_5$= strongly agree, $n_4$= agree, $n_3$= undecided $n_2$=disagree, $n_1$ =strongly disagree
$n_5$= 5, $n_4$=4, $n_3$=3, $n_2$=2, $n_1$=1

$$\text{RII of V1} = \frac{\sum w}{AN} = \frac{5n_5 + 4n_4 + 3n_3 + 2n_2 + 1n_1}{5N}$$

$$\text{RII of V1} = \frac{\sum w}{AN} = \frac{5(94) + 4(15) + 3(10) + 2(2) + 1(3)}{5(124)} = 0.915$$

**Relative importance index of the variables assessing the ranking of importance for the biometric system in a land transaction in Ghana**

V1= land cannot be transferred by another person who is not part of the transaction
V2= land cannot be registered by another person
V3= ownership can be verified easily
V4= land transfer history can be traced easily

| s/n | Variable | RII | Rank |
|---|---|---|---|
| 1 | Biometric data brings certainty in identifying a person | 0.926 | 1st |
| 2 | I use biometric data because the data cannot be stolen | 0.915 | 2nd |
| 3 | Biometric data transaction is unique and secured | 0.910 | 3rd |
| 4 | Biometric documents cannot be used by another person | 0.908 | 4th |

$$\text{RII of V1} = \frac{\sum w}{AN} = \frac{5(97) + 4(16) + 3(7) + 2(2) + 1(1)}{5(123)} = 0.935$$

$$\text{RII of V2} = \frac{\sum w}{AN} = \frac{5(82) + 4(23) + 3(12) + 2(4) + 1(1)}{5(122)} = 0.887$$

$$\text{RII of V3} = \frac{\sum w}{AN} = \frac{5(92) + 4(22) + 3(5) + 2(0) + 1(3)}{5(122)} = 0.928$$

$$\text{RII of V4} = \frac{\sum w}{AN} = \frac{5(96) + 4(19) + 3(5) + 2(0) + 1(2)}{5(122)} = 0.940$$

| s/n | Variable | RII | Rank |
|---|---|---|---|
| 1 | land transfer history can be traced easily | 0.940 | 1st |
| 2 | land cannot be transferred by another person who is not part of the transaction | 0.935 | 2nd |
| 3 | ownership can be verified easily | 0.928 | 3rd |
| 4 | land cannot be registered by another person | 0.887 | 4th |

## CONCLUSIONS

The current system of land transactions in Ghana is not foolproof in verifying the identity of persons undertaking land transfers in checking impersonation and easily tracking transaction history. Thus land transactions in Ghana irrespective of the method of acquisition or documents supplied by the vendor

are still prone to multiple sales, multiple allocations, forgery and protracted land disputes that hinge on ownership verification. Level of education of grantee notwithstanding, land transaction challenges can still occur since the identity of the grantor can be problematic. A current search of ownership in various Lands Commission Offices are shrouded in secret with many uncertainties; the biometric system comes in handy to deal with this gap. Biometric system of land transfers will come with the following benefits in order of importance:

- land transfer history can be traced easily
- land cannot be transferred by another person who is not part of the transaction
- ownership can be verified easily
- land cannot be registered by another person

Biometric system of transfer will eventually improve tenure security in Ghana if the biological traits of the grantor and grantees are captured and stored with other details of the transaction to make the transaction uniquely linked to them. Ghana has a huge potential when it comes to its implementation as the majority of adults in Ghana have gone through national elections, national health insurance and other government services to the citizenry. There will be personnel to train the lands commission staff locally, and the experience from two national biometric verification elections will be helpful.

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**KEY TERMS AND DEFINITIONS**

**Biometric systems**: Biometric systems include devices and Softwares for capturing biological traits of persons in order to give them unique identification.

**Land transactions** : Land transactions occur when legal entities acquire interest in a land

**Security of tenure**: Security of Tenure refers to effective protection of rights of individuals or group of people against forcible evictions or loss of title to the land.

**Customary tenure**: Customary tenure is a set of rules, norms and tradition that govern the allocation, use, access and transfer of land.