

Effect of Mobile Payment on Revenue Performance of Kenya Power and Lighting Public Liability Company, Western Region, Kenya

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Abstract: The world is changing everyday as a result of mobile payment. Large and small companies are therefore forced to reinvent their business models and simplify their business operations to provide services that can meet the needs of their customers. Mobile payment has grown in popularity and application in most developed countries with a projection of \$4573.8 billion by 2023. Mobile payment trend is also increasing in Africa, where it is quantified at approximately \$178 billion by 2020, while in Kenya the figures stood at \$810.9million by 2020; showing increased adoption. The widespread application is common to all regions including western Kenya. Audited Kenya Power and Lighting Company (KPLC) report indicates that the company lost ksh 1.335 billion in the financial year 2019/20 yet the company is a monopoly in power service provision. The specific objectives were to establish the effect of mobile payment security on revenue performance, determine the effect of mobile payment cost on revenue performance and establish the effect of mobile payment convenience on revenue performance. The study was guided by Financial Intermediation Theory (FIT), Technology Acceptance Model (TAM) and Resource Based Theory or View (RBV) in a correlation research design. The study target population was 120 management staff. A sample size of 92 respondents was selected using Yamane's formula. Both primary and secondary data, consisting of management opinion on mobile payment mechanism and annual accounts' extracts of revenue performance were used. Validity was ensured through expert judgment while reliability, through Cronbach's Alpha that yielded coefficients of more than 0.7 meaning that the instruments were reliable. A response rate of 98% was achieved. Regression and correlation were used for data analysis. The findings revealed that mobile payment explained 25.1% ($R^2=0.251$) variation of revenue performance. The study also established that the predictors significantly affected revenue performance: mobile payment security ($\beta = 0.373$, $p = 0.039$), mobile payment cost ($\beta = -0.326$, $p = 0.002$), except for mobile payment convenience ($\beta = 0.084$, $p = 0.507$) which did not affect an organization's revenue as much as cost and security did. The study concluded that mobile payment platform has overarching significance in the financial health of Kenya Power and Lighting Company. The study recommended that given the proliferation of mobile devices in almost every economy, the centrality of mobile payment should not be gainsaid in all industries to enhance revenue performance and Kenya Power and Lighting Company should reduce mobile cost and enhance security to boost their mobile payment platforms. The study findings could be useful for policy, practice, and as secondary material for other researchers researching on related phenomenon.

Keywords: Mobile Payments, Revenue Performance, Financial Intermediation Theory (FIT), Technology Acceptance Model (TAM) and Resource Based Theory or View (RBV).

1. BACKGROUND OF THE STUDY

Revenue performance and mobile payment are interwoven inexorably yet the efficacy of mobile payments varies profoundly. According to Do, Tham, Khatibi, and Azam (2019), the extent to which mobile payment is useful to an organization is dependent on its proper deployment and the capacity of the organization customers to adopt the model. Given the proliferation of mobile devices in almost every economy, the centrality of mobile payment cannot be gainsaid not just in bigger enterprises controlled by governments, but also other enterprises outside the scope of governments. According to Munyao (2020) revenue performance is the increase of revenue generation within an organization as a result of efforts geared towards ensuring the improvement of revenue. Revenue performance can thus increase daily, weekly, monthly or yearly depending on the business model and level of customer transaction. On the contrary, reduced revenue is said to be poor revenue performance. According to Do *et.al* (2019), mobile payment is the use of computer devices such as mobile phone tablets or any other mobile device to execute payment requirements remotely with or without the use of internet. Mobile payment helps with ease of payment and therefore ensures that customers get services without interruption and that the service provider is guaranteed of payment without consideration of location. According to Kang (2018) mobile payment security ensures that the payment system has end-to-end encryption and therefore is less likely to be hacked. As such mobile transactions are protected and neither the customer nor the business receiving the payment cannot lose money. Li *et.al* (2020) further asserts that mobile payment cost is taken care of by the party making the payment and hence removes the burden on the party receiving the payment making it even more preferable for business organizations. According to Boden *Et.al* (2020), the convenience that results from using mobile payment methods helps both the customer in terms of not having to travel and the business in terms of instant transactions.

According to Kwok and Xie (2019), revenue performance is the extent to which organization revenue increases, decreases or remain stagnant after a given period of time. The increase of revenue after a financial year is therefore a good revenue performance while on the contrary, the decrease of revenue performance is known as a poor revenue performance. According to Munyao (2020) revenue performance is affected by a variety of factors including efficiency that is brought about by technology. Revenue performance is also measured in a variety of ways. It can be measured in a given financial year such as a period of 12 months usually beginning in January and ending in December. Other times, revenue performance can be measured on a daily basis, weekly basis, and monthly basis or bi-annually depending on what the business does and how revenue streams are designed. Mobile payment could contribute to revenue performance. According to Do, Tham, Khatibi, and Azam (2019) mobile payment variables such as security could ensure that there are no pilferages in the process of handling finances that would have arisen if the finances pass through the hands of employees. Such conclusion is supported by Munyao (2020) who asserts that mobile payment ensures that costs are reduced. For instance, instead of an organization recruiting more employees to manage the finances and daily revenue inflows from the customers, mobile payment ensures that the organization has the right number of customers. Therefore, the reward that would have gone into paying salaries, training, as well as retirement plans of employees becomes part of the organization revenue and hence the revenue performance.

Additionally, Humbani and Wiese (2019) asserts that mobile payment also results in convenience on the part of the business receiving the payment. For instance, services such as power tokens are not usually bought for a daily use, it is bought in most cases on a monthly basis. As such, the moment services are bought in advance, it means that the money is paid before the service is enjoyed. Such advance payments contribute to daily revenue performance. The fact that mobile payment can be made within 24 hours also counts towards revenue improvement of the organization receiving revenue. A number of studies have looked at how mobile payment improve performance with respect to three variables which are mobile payment security, mobile payment cost as well as mobile payment convenience. In regard to mobile payment security, studies established mixed results. For instance, Munyao (2020), Park, Ahn, Thavisay, and Ren (2019), Pantelimon, Georgescu, and Posedaru (2020), as well as Jung, Kwon, and Kim (2020) all established that mobile payment security has a significant favourable impact on revenue growth. In contrast, Zhao and Bacao (2021) established contrary findings. The studies also had different motivational focuses and thus did not focus exclusively on mobile payment security and revenue growth. Furthermore, the studies only focused on how a single dimensions of mobile payment security affects revenue growth. The studies thus left out how five dimensions namely, reduced pilferage, reduced cash handling, reduced unauthorized reversal, easier bulk payment as well as improved verifiability collectively affect revenue

growth. Therefore, the effect of mobile payment security on revenue growth with respect to the named dimensions at Kenya power Company Western region is yet to be investigated.

With respect to mobile payment cost and effect on revenue performance, a number of studies have also been conducted which had different results. For example, studies conducted by Masocha and Dzomonda (2018) and Roma and Vasi (2019) both established that mobile payment cost and revenue performance did not have significant correlation. Other researchers were however at variance such as Mwendwa (2020), Tusekelege (2016), as well as Bosire and Ntale (2018) who all established a statistically relevant positive association between mobile payment cost and revenue performance. Additionally, some studies used small sample sizes for example Masocha and Dzomba (2018) used a sample of 160 respondents while Mwendwa (2020) used 72 respondents. Such small sample sizes compromise broader generalization of findings. Further, the studies only focused on how a single dimension of mobile payment cost affect revenue growth. As such they did not focus on how five dimensions such as improved total collections, reduced cost in salaries, reduced cost in gratuity, reduced cost in employee medical bills, reduced cost in employee retirement contribution together affect revenue performance. Therefore, the influence of mobile payment cost in line with the named dimensions in Kenya power and Lighting Company is yet to be established. Several studies have been undertaken to examine the impact of mobile payment convenience on revenue performance, yielding varying outcomes. Several studies have demonstrated a notable positive association between the convenience of mobile payments and revenue performance. For example, Argawal et.al (2020), Madegwa Makokha, and Namusonge (2018), and Muchiri (2018) all conducted research that supports this correlation. On the contrary, Humbani and Wiese (2019); as well as Uwamariya, Cremer, and Loebbecke (2021) established that mobile payment convenience did not contribute to revenue performance. Further, some of the studies utilized qualitative design such as the studies conducted by Humbani and Wiese (2019) as well as Uwamariya, Cremer, and Loebbecke (2021). The problem with qualitative studies is that they are often subjective hence lead to procedural problems which may undermine the objectivity of the study generalization. Additionally, the studies only focused on individual dimensions of mobile payment convenience. The studies therefore, left out five key dimensions which are: 24-hour payment, payment before usage, excess payment, payment for third party, and payment for accidental misuse and how the dimensions affect revenue. Therefore, the impact of the convenience of mobile payments on the revenue performance of Kenya Power and Lighting Company in Western Kenya, specifically in relation to the aforementioned dimensions, has not been examined thus far.

Globally, according to Chang, Chen, and Hashimoto, (2021), mobile payment is more than \$601.3 billion and will reach \$4573.8 billion by 2023. North America and European countries have the biggest market share of mobile payment in the world because of maturity of their markets and liberal attitude about technology. In Asia which is populated by several emerging markets, countries such as China have 92% of the people including 47% of those living in rural areas use non-cash payments modalities. Mobile payment account for \$30.7 billion representing annual increase of 73.6% figures that continue to spur 5G network innovations in Asia to among other things drive mobile payment and computer-based businesses, but above all improve revenue performance in businesses of all sizes and structures. In Africa, Coffie, Zhao, and Mensah (2020) points out that East Africa is the highest in terms of mobile money usage because of innovation around financial technologies with a total of \$178 billion by the year 2020. In Kenya an economy considered to be the most mature digitally especially among the developing countries, mobile money payment is mature and transactions by 2020 reached \$810.9 million with Safaricom's M-PESA claiming 90% of the total market share. Most transactions are business related which impacts the revenue of companies in the country.

Despite being a monopoly, even with government's intervention with last mile connectivity to grow the business, Kenya Power and Lighting Company has continued to make losses with ksh.1.335 billion losses made in 2020 as compared to 903,733 million loss in 2019 with a profit before tax reducing to ksh.0.334 million from ksh.4, 968 million the previous year 2018. The year 2018 profit before tax also reduced from ksh.7, 657 million to ksh.3, 089 million. During the peak of the pandemic, there was a notable decrease in energy consumption, with an average loss of 14.8% observed in the fourth quarter of 2020 (specifically, from April to June).The Kenya power and Lighting Company, is a publicly owned corporation with limited liability. It was founded in 1922 and a century later, the organization has gone through various transformation and changes to the current position where it is the leading distributor and retailer of electricity in Kenya. The Kenyan government, through the energy Regulation Committee and the ministry for energy has given KPLC the sole mandate of distributing power to its citizens. For this reason, its importance cannot be underestimated. It is actually a

monopoly and many companies including manufacturing companies, retail companies, hospitals, schools and almost all social institutions depend on KPLC for their daily usages of electricity. KPLC uses a number of mobile money payment platforms that is convenient, easy and fast where payment is done before or when it's due to avoid unnecessary disconnection of electricity supply. For example, Pay bill: 888888 is used for postpaid meter and 888880: prepaid meter then the account number or meter number is typed respectively. New connection of electricity uses pay bill: 888899, account number: reference number. The "Okoa Stima" loan service is accessed through the selection of a service menu specifically designed for prepaid customers. Upon approval, the customer will receive a text message containing tokens that correspond to the loan amount granted. Postpaid customers will be notified via SMS that their account has been credited with monies equal to the loan repayment. The *977# USSD platform offered by Kenya Power enables users to effectively manage their bills. This facility caters to both prepaid and postpaid clients, allowing them to conveniently purchase tokens and retrieve information regarding their past three token purchases. The *977# service was implemented as a pilot program in March 2020, during which it documented an average of 13,849 user interactions for the duration of that month. As of July 2020, the monthly interactions recorded via the code amounted to 555,928. The objective was to achieve a monthly total of 1.1 million interactions by the conclusion of the fiscal year. Electricity bill payment can further be done through cooperative bank M-Banking service after registration with the bank and KPLC electricity account number. If one has an account with cooperative Bank, Post Bank or Standard Chartered Bank you can pay your electricity bill through any of these banks Automotive Teller Machines (ATM). Equitel (sim tool kit) can also be used to pay electricity bill. The impact of Kenya Power and Lighting Company in the economy of Kenya is quite significant. However, according to the company's annual report (2020), the organization made a loss of ksh.1.335 billion Kenya Shillings. Such losses emanating from a company which is a monopoly requires empirical investigations.

1.1 Statement of the Problem

Despite being a monopoly, even with government's intervention with last mile connectivity to grow the business, Kenya Power and Lighting Company has continued to make losses with ksh.1.335 billion losses made in 2020 as compared to 903,733 million loss in 2019 with a profit before tax reducing to ksh.0.334 million from ksh.4, 968 million the previous year 2018. The year 2018 profit before tax also reduced from ksh.7, 657 million to ksh.3, 089 million. During the peak of the pandemic, there was a notable decrease in energy consumption, with an average loss of 14.8% observed in the fourth quarter of 2020 (specifically, from April to June). This decline in consumption had significant financial implications, leading to a reduction in revenues amounting to around ksh.5.6 billion. The increase in outstanding receivables amounting to 3.9 billion can be attributed to two factors: the customers' inability to make timely payments for their electricity consumption and the deliberate decision of the company to refrain from disconnecting customers who have not settled their bills. This continuous trend of loss making caused a lot of distress among different stake holders in KPLC. Shareholders complained of not being paid dividends, employees worried whether their allowances would be paid, creditors complained of not being paid their pending bills promptly. KPLC losses also came with frequent black out, this resulted in complaints by manufacturers and other business owners as their businesses were negatively affected. Kenya power Western region contributed significantly to the losses incurred by the company in the same period which was attributed to the drop in revenues generated. There are other reasons why revenue could drop such as some customers opting for clean energy. However, revenue collection has been blamed for low revenue performance yet there is technology such as mobile money that can be deployed in the collection of revenue to remove revenue pilferages and improve total revenue collection on a daily, weekly, monthly, and yearly basis. Although studies have attempted to addresses concerns on revenue performance in regard to technology, such studies have not dealt with three key variables such as mobile payment security, mobile payment cost, as well as mobile payment convenience. No known study has attempted to assess the effect of mobile payment on revenue performance of Kenya power and lighting public liability company, western region. This has necessitated this study on the impact of mobile payment on revenue performance in relation to the specified factors at Kenya Power and Lighting Company in the Western Region. The present investigation addressed the existing gap in knowledge.

1.2 Objectives of the Study

1. To establish the effect of mobile payment security on revenue performance at Kenya Power and Lighting Company in western region

2. To determine the effect of mobile payment cost on revenue performance at Kenya Power and Lighting Company in western region
3. To establish the effect of mobile payment convenience on revenue performance at Kenya Power and Lighting Company in western region

1.3 Hypotheses of the Study

H₀₁. Mobile payment security has no significant effect on revenue performance at Kenya Power and Lighting Company in western region

H₀₂. Mobile payment cost has no significant effect on revenue performance at Kenya Power and Lighting Company in western region.

H₀₃. Mobile payment convenience has no significant effect on revenue performance at Kenya Power and Lighting Company in western region.

1.4 Conceptual Framework

This study will be guided by the following conceptual framework. This is presented in Figure 1.1.

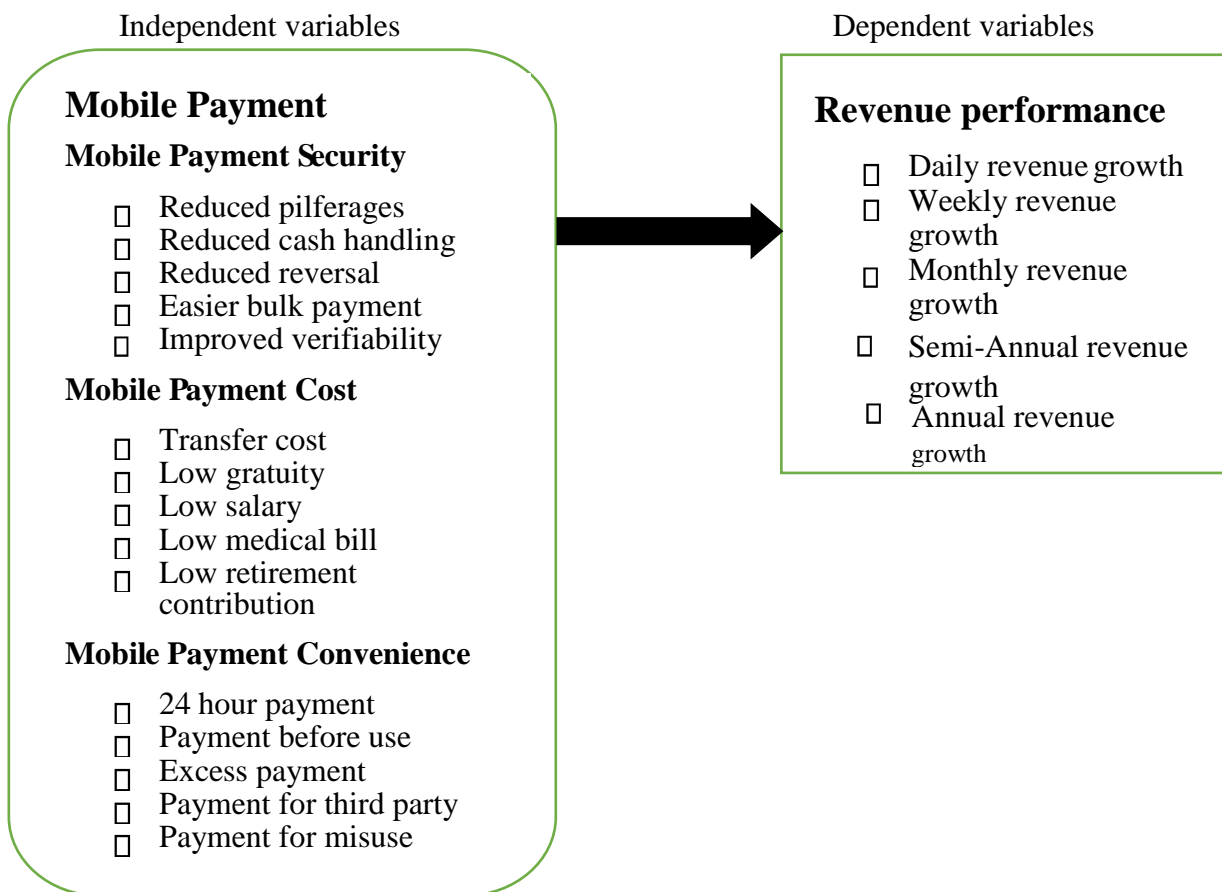


Figure 1.1: Relationship between mobile payment and revenue performance

Source: Adapted from Fred Davis (1986)

The theoretical framework depicted in Figure 1.1 illustrates the interplay of the variables under investigation. Independent variables are put in three nodes on the left side and are mobile payment security, mobile payment cost as well as mobile payment convenience. Mobile payment security ensures that there are no pilferages of revenue from the customer because of end-to-end encryptions. Mobile payment cost is taken care of by the customer and mobile payment convenience

ensures that the customers can pay at any time anywhere. The net effect of the independent variables is the revenue growth indicated by the node at the right side. Additionally, regulatory environment such as government policy as well as market forces such as demand by customers control the extent to which mobile payment led to revenue performance.

1.5 Theoretical Literature Review

This section reviews the theory underpinning the study as well as the major study concepts. The major concepts described are: the concept of mobile payment, the concept of mobile payment security, the concept of mobile payment cost, as well as the concept of mobile payment convenience.

1.5.1 Financial Intermediation Theory.

The theory of financial intermediation according to Morrison (1967) was propounded in the 1960s. The major works leading to a full fledged Financial Intermediation Theory (FIT) was put forth by Gurley and Shaw which basically combined agency theory and asymmetric theory to come up with FIT to explain and predict intermediation in the financial environment. According to Garr (2021) Financial Intermediation Theory posits that as a financial market deepens and robust information technology develops, such as the fourth industrial revolution, coupled with increased deregulation in the financial market, intermediaries play a significant role not just to reduce transaction cost, but also to deal with the issues of information asymmetry. Information asymmetry is a scenario in which one party possesses a greater amount of information compared to another party, hence enabling them to make judgments that may be disadvantageous to the party with limited or no access to such information. On the other hand, cost reduction arises out of robust information technology as a result of automation. The point at which FIT fits into the current study is the assumption of the theory. The primary premise of Financial Intermediation theory according to Garr (2021) is that intermediaries that control technology helps, not only in reducing costs, but also in making information available for both parties in financial transactions and thereby improving their financial knowledge and resources. In the current study, mobile payment security, mobile payment cost, as well as mobile payment convenience works toward ensuring that more revenue are collected by because of technology controlled by the financial intermediaries. As such those who control technology are the financial intermediaries who help in reducing costs and improving revenue performance in organizations such as Kenya Power and Lighting Company.

Financial Intermediation theory however has its limitations. According to Morrison (1967), there is a paradox in the theory. The theory claims that financial intermediaries reduce cost but in practice even the financial intermediaries diminish in the face of robust automation. In other words, there are no financial intermediaries who reduce costs. Costs are reduced, in practice, not as a result of financial intermediaries but as a result of information technology. It could be possible that costs can be reduced by third parties such as information reference bureaus which gives banks information about borrowers to mitigate information asymmetry. However, not all organization that deals with financial collection require third party information. They simply require efficient collection and technology, without intermediaries can handle that. However, financial intermediation theory informs the variable/concept of mobile payment security in this study.

1.5.2 Technology Acceptance Model

According to Taherdoost (2018), Technology Acceptance Model (TAM) was pioneered by Fred Davis in 1986 in a bid to look for ways of introducing technology in organizations. This was the case because most organizations had not embraced technology fully. The fear of technology that made many organizations to shy away from it was that it could potentially take away jobs or it could be used by those experienced in it to cause trouble not just for the organization, but also the entire economy as a whole. The model therefore posits that technology is helpful to the organization and it should be introduced on the basis that organization employees accept technology at different levels given their intelligences and age. For instance, younger people more readily accept technology and they are known as early adopters while older people take time to adopt technology and they are referred to as laggards. The organization must therefore take into consideration the level of technological acceptance so as to make technology adoption smooth. According to Rafique *et.al* (2020), the major assumption of TAM is that technology is accepted and used in an organization on the basis of its ease of use and usefulness. In the current study technology helps the organization in question (Kenya Power) to improve revenue

collection by ensuring that collections of revenue can be received regardless of distance or location. The usefulness of technology at Kenya Power and Lighting Company is therefore a forgone conclusion and the ease of use of technology has also been resolved by technology developers in the sense of developing easier to use interfaces that does not require a lot of training for an ordinary customer or employees of the company. Taherdoost (2018) however cautions that TAM has its weaknesses just like any other model designed to explain a study phenomenon. For example, the assumption that technology can be adopted within an organization because of ease of use is misplaced. Such is because as long as the technology in question can solve a problem within the organization, technology experts can be employed to manage the technological aspect of the organization whether or not it is easy to use. This is also amplified by the fact that the summonses of the current times support technology than any other time in history making technology adoption unnegotiable. However, financial intermediation theory informs the variable/concept of mobile payment cost in this study.

1.5.3 Resource-Based View

The resource-based theory or view (RBV) has been used to provide an innovative approach to the development and implementation of networking strategies for different enterprises. Resource-based theory, as proposed by Barney (1991) and Wernerfelt (1984), asserts that when an organization possesses strategic resources, it is presented with a valuable prospect to cultivate competitive advantages in relation to its competitors. These competitive advantages, in turn, can contribute to the organization's ability to generate substantial profits. Barney argues that resources must meet certain conditions in order to provide a competitive advantage over their rivals. The resources need to be valuable to the firm and should also be non-substitutable. Non-substitutability is when your rivals cannot substitute the asset by another alternative resource to achieve the same or greater results. This golden opportunity over their rivals is important because it can help them enjoy strong benefits. Barney (1991) study on Firm Resources and Sustained Competitive advantage is considered as an essential work in the rise of Resource-based theory. He argues that an organization can only be considered to have a competitive advantage over its rivals when they have a strategic resource that is not implemented by any current or potential competitors. Enthusiasts of this theory posits that firms need to analyze their internal environment to identify strategic resources rather than looking at a competitive environment for it. Internal resources are therefore considered important according to this theory because it can help an organization achieve a higher revenue performance by outperforming their competitors and doing things differently. The key terms in this model include tangible resources, intangible resources and capabilities that allows you to have a competitive advantage over your competitors. Tangible resources are assets and physical things like financial and human resources. An organization can decide to bring these assets to the market so that they give you a little advantage because rivals can soon acquire the identical assets. Intangible resources on the other hand are all those assets with no physical presence. Example of intangible assets are brand reputation, trademark and intellectual property all of which require time to build. These resources will stay with the organization and in most cases are the core drivers of having a sustainable competitive advantage.

The Resource-Based View (RBV) theory posits two fundamental assumptions: firstly, that the resources possessed by an organization should exhibit heterogeneity, and secondly, that these resources should also demonstrate immobility. The term "heterogeneous" pertains to the diversity in talents and skills among different organizations. The assertion posits that in the event that all organizations had identical quantities and types of resources, the absence of diverse strategies among these companies will impede the attainment of competitive advantage. The term "immobile" refers to the inability of resources to transfer across organizations. Consequently, corporations are unable to replicate comparable techniques employed by their competitors and apply them within the market. In addition to possessing internal resources that exhibit heterogeneity and immobility, the elements and attributes inside these resources can be classified according to the VRIO framework, which assesses their value, rarity, imitability, and organization. However, this theory lacks validity when a revolutionary novel technology emerges in the market. In such cases, organisations must not solely rely on their own resources, but rather integrate the new technology to attain a competitive edge. The VRIO (Valuable, Reliable, Imitable, Organisation) paradigm has faced criticism due to its inability to appropriately evaluate every product within an organisation. Additionally, the term "resource" used in this framework is imprecise and lacks clarity regarding the specific aspect of the resource being referred to. However, resource-based theory informs the variable/concept of mobile payment convenience in this study.

1.5.4 Mobile Payment

Mobile payment according to de Luna, Liebana-Cabanillas, Sanchez-Fernandez, and MunozLeiva (2019) refers to use of a mobile device to make transaction from one party having the mobile device to another party for business reason or for non-business reasons. According to Miao and Jayakar (2016) mobile payment is simply a way of making financial transaction with little or no travelling needs and hence make the process of financial transaction from one party to another easier and efficient. Mobile payments according to de Luna *et.al* (2019) can be made with or without internet requirements. For devices that use global system for mobile communication (GSM) and hence does not rely on internet, there are technologies that make transaction possible without internet. Such devices use codes and algorithms that are end to end encrypted and transactions can be safe and secure and hence contribute to remote or mobile payment with little or no traveling required. On the other hand, there are also devices that use internet which is a vast network that combines computers including mobile devices all over the world. According to Singh and Sinha (2020), such devices that use internet have applications that can be downloaded to make payments easier anywhere in the world. Such applications, algorithms and payment modalities within a mobile device are end to end encrypted which make them safe and contribute significantly to effectiveness and efficiency in payments (de Luna *et.al*, 2019).

1.5.5 Mobile Payment Security

The mobile payment security according to Kang (2018) refers to extent to which mobile payment guarantee secure transactions so that parties in the transaction do not incur losses as a result of mobile payment. This therefore ensures that mobile payments are secure and can be used at any time of the day anywhere. As Bojjagani and Sastry (2019) postulates, mobile security is an end to end encryption provided by telephone companies that provide security in terms of transaction and therefore ensures that mobile payment can be relied upon either in business transactions as well as in non-business transactions. Kang (2018) further points out that end to end encryption is a situation where only the parties in the mobile transactions can read the messages and thereby reduce significantly instances of mobile hacking or any other instances of the transaction being compromised in any way whatsoever. Mobile payment security as Bojjagani and Sastry (2019) further postulates, provides an end to end encryption which reduced pilferages of resources being transacted, reduce cash handling as well as unauthorized reversal. Such security mitigation measures not only ensure that the payment is secure, but also give confidence to transacting parties, allowing for continued utilization of mobile payment services in the face of robust technological proliferation in the global economy. The secure mobile payment narrative is confirmed by Fan, Shao, Li, and Huang (2018) who points out that mobile security ensures that there is easier bulk payment and improved verifiability. As such, it further boosts the confidence of the paying party in the sense that the information cannot disappear which makes mobile payment security one of the single most salient feature that drives mobile payments anywhere in the world.

1.5.6 Mobile Payment Cost

Mobile payment cost according to Li, Wang, and Huang (2020), is the cost related to mobile transaction which can be high or low but affect the transaction overall cost for the customer or the person providing goods or services. Such costs are incurred to enable the mobile company providing the service of mobile transaction to make profits and to maintain the infrastructure. According to Fan, Zhang, Rai, and Du (2021), mobile payment cost include all the related costs incurred by the parties transacting on the mobile device and can be cost related to the company providing the mobile services or could be the costs of acquiring the mobile or other resources such as internet or short message transaction service. Although such costs are usually low, the party making the incurring the cost can feel the pinch if the transaction is frequent or involves large sums of money. According to Masocha and Dzomonda (2018), the mobile payment cost if paid by the individual who is making the payment, reduces the overall cost for the recipient and thereby improve the total collection of money by the party receiving the payment. Such seemingly simple costs in transaction improves total collection significantly especially where the volume of collection is high. In concurrence, Fan *et.al* (2021) points out that mobile cost not only reduce the cost of transaction but also the cost associated with formal employment. Employment costs include salaries, gratuity, medical bills, and retirement contribution among other costs. Given that mobile transaction is automated and does not require human interface, the cost of employing head counts reduces significantly and as such revenue is boosted because the expenditure becomes less and the collection becomes more as a result of efficiency of automation.

1.5.7 Mobile Payment Convenience

Mobile payment convenience according to Boden, Maier, and Walken (2020), is the easiness with which mobile payment transaction is made between two parties in business or even nonbusiness reasons. Such low difficult environment encourages the parties in the transaction to make payments unhindered and contributes to the adoption of mobile technology payment. On the other hand, mobile payment convenience according to Liu, Luo, and Zhang (2020), is a transaction that simplifies work or saves time and thereby makes transaction to be done by anyone at any time anywhere. The reduced travelling as well as easy technology interface all counts toward convenience not just to the paying party but also to the party receiving payment as a result of automation. According to Liu *et.al* (2020), convenience of mobile payment not only ensures that business transactions are smooth, it also ensures that business entities continue to generate revenue at all time day and night because of the use of technology. Boden *et.al* (2020) concurs that mobile payment convenience provides 24-hour payment modalities, payment before usage as well as payment for third parties which contribute to revenue generation by business enterprises. Further, Humbani and Wiese (2019) agrees that mobile payment convenience ensures that even if a customer misuses their resources accidentally, they can still make payment and have replacement which ensures that businesses make more revenue around the clock.

1.5.8 Revenue Performance

Revenue Performance according to Kwok and Xie (2019) is the level at which organizational revenue increases, decreases or remain the same as a result of latent or manifest factors. In such sense, increased revenue is said to be better performance while decreased revenue is said to be poor performance. Better revenue performance denotes revenue growth while the contrary is true for poor revenue performance. According to Gebauer *et.al* (2020), revenue performance is a tool within management that is used to measure revenue and as such identifies revenue drivers or factors that contribute to revenue decline for purposes of mitigation by organization management for a given period of time usually in a period of one financial year. According to Munyao (2020) revenue performance indicator differ from organization to organization and business models of every organization as well as strategic priorities. For instance, nonprofit organizations may be laxer with revenue generation than improvement of the lives of members of the community. On the other hand, profit driven business entities are keen on more revenue collection and at all times will always find means and ways of increasing revenue collection so as to provide accountability for shareholders. As Kwok and Xier (2019) further postulates, revenue performance can be measure daily, weekly, monthly, bi-annually or annually as the case may be and differs significantly from organization to organization. Some organizations measure revenue growth annually because goods and services may be used only once in a year while other organizations such as supermarkets measure revenue on a daily basis since the goods and services sold in such establishments are used on a daily basis by customers.

2. EMPIRICAL LITERATURE REVIEW

Munyao (2020) looked at reduced pilferage and revenue performance. The research employed a quantitative methodology and had a sample size of 65 participants. The research employed primary data collection methods through the administration of questionnaires. The data from the study was subjected to analysis using both inferential and descriptive statistics. The inquiry established a significant positive correlation between reduced pilferage and performance. It concluded that technology was better for ensuring performance. The study recommended continued online receipting. Another empirical study conducted by Park, Ahn, Thavisay, and Ren (2019) aimed to determine the effect of mobile payments in organizations. The study adopted a qualitative methodology and sampled 361 respondents. The study was done in the United States of America and responses were collected using questionnaires. Data was then analyzed using structural equation modeling, through the utilisation of structural equation modelling. The study established that reduced cash handling contributed to revenue growth. The study concluded that attitudes were responsible for technology adoption. Recommendation was that technology should be enhanced in every organization. Pantelimon, Georgescu, and Posedaru (2020) conducted a study with the objective of examining the impact of mobile ecommerce on gross domestic product (GDP). The study was quantitative in approach and utilized secondary data collected between 2014 and 2019. The study data was then analyzed using regression and correlation. In the study, it was revealed that reduced unauthorized reversal and GDP growth had significant positive correlation. Conclusion was that mobile growth influences gross domestic product of a country. Adoption of mobile e-commerce platforms was recommended.

An empirical study conducted by Jung, Kwon, and Kim (2020) sought to investigate consumer motivation and mobile payment in the US. The investigation adopted an online survey design and sampled 327 respondents. The inquiry was thus qualitative and descriptive statistics was utilized to analyze data. Results showed that easier bulk payment improved revenue performance. The study concluded that consumers are motivated to accept technology in the United States of America, and recommended application of mobile payment across various organizations. On the other hand, Zhao and Bacao (2021) sought to investigate mobile payment and covi-19 pandemic in China. The study was a qualitative in approach and sampled a total of 739 smart phone users in China. Online survey questionnaires were administered to collect data. The gathered data was analyzed using structural equation modelling in which SPSS 17 AND AMOS 22 both were utilized. The study established that improved verifiability and revenue performance did not have any significant positive correlation. The study concluded that technology adoption reduces pandemic effect. The study recommended that it is necessary to use technology during pandemic outbreaks to reduce the effects of pandemic in vulnerable groups. Apart from the studies having mixed results, they also had different motivational focuses. For instance, the study by Munyao (2020) focused on electronic payment and not specifically mobile payment. The study by Pantelimon, Georgescu, and Posedaru (2020) focused on mobile ecommerce on GDP while the study by Zhao and Bacao (2021) looked at pandemic and mobile payment. The study by Park et.al (2019) looked at anxiety and social influence while the study Jung et.al (2020) focused on US economy. As such they did not focus specifically on mobile payment security on Electricity Company such as Kenya Power and Lighting Company even though the studies were fairly credible. In addition, the studies only focused on how individual dimensions of mobile payment security affect revenue performance. As such, the studies left out how five dimensions which are: reduced pilferage, reduced cash handling, reduced unauthorized reversal, easier bulk payment, as well as improved verifiability collectively contribute to revenue performance. It follows that the influence of mobile payment security on revenue at Kenya Power and Lighting Company in Western Region is yet to be investigated.

Masocha and Dzomonda (2018) examined payment for employee expenses and revenue performance focusing on SME and using 160 respondents. Self-administered questionnaires were utilized in this qualitative study to gather data. The study used structural equation modeling to analyze data. The finding revealed insignificant correlation between reduced employee retirement contribution and revenue performance. The researchers concluded that mobile money enhance performance, recommending that mobile money should be adopted by Zimbabwean organizations. The study by Masocha and Dzomba (2018) is corroborated by the study conducted Roma and Vasi (2019) who looked at mobile app diversification and performance. The study was qualitative in nature and utilized secondary from reputed global organizations. Data was analyzed using descriptive statistics. The study results showed that that reduced employee salaries did not contribute to revenue performance. According to the study's findings, organizations can benefit from diversity. The study recommended that organizations should adopt diversification in mobile application development usage and deployment. Another empirical study was conducted by Mwendwa (2020) looked at information, communication and technologies in a government revenue organization and utilized 72 respondents as a sample size. The study was quantitative in approach and collected primary data for analysis. The study data was analyzed using regression and correlation as well as mean and standard deviation. The study finding revealed that improved total collection and revenue performance had significant positive correlation. The study concluded that mobile collection enhances tax collection. The study recommended that online platform should be enhanced to mitigate down time. The study by Tusekelege (2016) focused on mobile payment and revenue collection using 180 sample size. The study adopted quantitative research approach. It utilized questionnaires to collect primary data. The inquiry utilized predictive analysis software to analyze data. The study results indicated that reduced gratuity contribution improved revenue performance. The study concluded that mobile payment improved revenue collection. The study recommended that adoption of mobile platforms should be increased. In concurrence, the study by Bosire and Ntale (2018) sampled 397 mobile payments in small and medium enterprise industry in Kenya. The research used online questionnaires with a cross-sectional survey methodology to gather data. Both descriptive and inferential statistics were utilized to collect data. The study established a significant positive correlation between reduced medical bill contribution and revenue performance. The study concluded that mobile service improve growth. The study recommended mobile money integration in small and medium enterprises. Even though the studies are credible, they utilized small sample sizes such as 72 (Mwendwa, 2020), 160 (Masocha and Dzomonda, 2018). Small sample sizes therefore make generalization in every context difficult. Besides small sample sizes, the studies also focused on a single dimension of mobile payment cost and how it affects revenue performance. As

such the studies did not address five dimensions namely: improved total collection as a result of automation, reduced employee salary as a result of automation, reduced employee gratuity as a result of automation, reduced employee medical bills as a result of automation, reduced employee retirement contribution as a result of automation and how such dimensions collectively contribute to revenue performance. Therefore, the effect of mobile payment cost in regard to the named dimensions at Kenya Power and Lighting Company is not yet established.

Argawal *et.al* (2020) sought to investigate Fintech impact on payment in a qualitative study where secondary data was used. The study was conducted in Singapore and focused on QR-code payment system. The study data was analyzed qualitatively. The study established that 24-hour payment modality and revenue performance had a significant positive correlation. The study concluded that Fintech was relevant in performance in Singapore. The Study recommended that Singapore organizations should employ mobile payment systems. Madegwa Makokha and Namusonge (2018) examined the impacts that automation has on revenue of a company by utilizing a questionnaire to collect primary data. The study then utilized inferential statistics to analyze the data and found a statistically relevant positive association between payment before use as a result of automation and revenue performance, which lent credence to the findings of Argawal *et.al* (2020). It concluded that automation contribute to effective management and recommended that all transactions should be moved to online payments. Another empirical study conducted by Muchiri (2018) sought to investigate mobile banking adoption and small and medium enterprise adoption. The study employed descriptive study design and sampled 122 respondents out of a population of 176 while primary data was gathered using questionnaires. The data was then analyzed using both descriptive and inferential statistics. The study established that payment of third party as a result of technology and revenue performance had a significant positive correlation. The study concluded that mobile banking was relevant to small and medium enterprises (SMEs). The authors proposed that that SMEs in Nairobi should adopt mobile banking. A qualitative study conducted by Humbani and Wiese (2019) sought to establish mobile payment adoption and use. The study was qualitative in approach and sampled 426 respondents in South Africa. The study then employed structural equation modeling to analyze data. The study established that excess payment as a result of automation did not contribute to revenue performance. The study concluded that adoption and continued use of mobile payment is beneficial for organizations in South Africa. The study recommended that organizations in South Africa should continue the usage of mobile payments.

The study Humbani and Wiese (2019) found much support in the study conducted by Uwamariya, Cremer and Loebbecke (2021) which was also qualitative in nature. It sought to compare mobile payment in both Kenya and Rwanda. Explorative study design was adopted. It also utilized qualitative means to analyze the secondary data collected for analysis. The study established that mobile payment as a result of resource misuse did not contribute to revenue performance. The study concluded that mainstreaming mobile payment was however beneficial in the long run. It was recommended that mobile payment should be accompanied by policy to integrate it in the organization systems. Even though the empirical studies reviewed are credible, they had mixed findings which makes them inconclusive on the study phenomenon. Further, some researchers such as Uwamariya, Cremer, and Loebbecke (2021) as well as Humbani and Wiese (2019) utilized qualitative approaches. The problem with qualitative approaches is that they are often subjective which may lead to procedural problems which undermines the objectivity of the study generalization. But more fundamentally, the studies only focused on how individual dimensions of mobile payment convenience affect revenue performance. The studies therefore left out how five key dimensions namely, 24-hour payment, payment before use, excess payment, payment for third party, as well as payment for misuse collectively affect revenue performance. It follows that the effect of mobile payment convenience on revenue performance at Kenya Power and Lighting Company in Western Region is not investigated.

3. RESEARCH METHODOLOGY

The study's methodology is the main topic of this section. It highlights the study area, target population, sample design, and research design. As Saunders, Lewis and Thornhill (2012) asserts, the relevance of correlation research design is that it allows the application of inferential statistics. Correlation research design became most useful determining the extent to which the study variables relate. The targeted population was management team at each station. There are six stations (counties) in the region namely Kisumu, Vihiga, Kakamega, Bungoma, Siaya and Busia with a total of 120 individuals in the management. The study utilized Taro Yamane's statistical formula (Yamane, 1973) with a confidence level of 95%

and 0.05 margin of error to determine the appropriate sample size. Primary data was gathered using questionnaires. The questionnaires were developed to capture demographic characteristics of respondents as well as the three variables that formed the objectives of the study. The questionnaire was scored thus: strongly agree 5, agree 4, Neutral 3, Disagree 2, Strongly disagree 1. Meller (2001) points out that the usefulness of questionnaires in research is that it can be used to collect a lot of data within a short period of time. Questionnaire is therefore cost effective and time saving. The researcher used piloted instruments on 10 departmental heads in Western region, Kenya power and lighting company. The sample for piloting did not form part of the research respondents. The validity of a test is determined by the degree to which it measures what is expected to be measured, as outlined in Saunders, Lewis and Thornehill (2012). To ensure that the contents of the test were accurate, a literature survey was conducted and expert judgment was used. Aila and Ombok (2015) suggest that content validity can be verified by searching for relevant literature to guarantee that the items are consistent with the study concepts. Meller (2001) states that the reliability of measurement is determined by the extent to which a specific measuring process reproduces similar results across multiple trials. To evaluate the pilot data, Cronbach's Alpha of Internal Consistency (Cronbach's AA) was applied. The data were extracted using statistical package for social sciences. For the analysis, regression and correlation were used. Model specification is as follows.

$$Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \beta_3 X_{3i} + \epsilon \dots \dots \dots Eq.1$$

Where,

β_0 –Is the constant or intercept

β_i (i=1,2,3)-Are the regression coefficients or change induced in Y by each X_i

X_1 - Independent variable mobile payment security

X_2 - Independent variable mobile payment cost

X_3 - Independent variable mobile payment convenience

Y- Dependent variable-revenue performance

ϵ - Is the error component.

4. RESEARCH FINDINGS AND DISCUSSIONS

4.1 Descriptive Statistics

This section provides descriptive statistics in line with the independent variables as well as dependent variables. This was necessary because the study intended to compare the mean outcomes of the predictors with the mean outcomes of the dependent variable.

Table 1: Descriptive statistics on Mobile Payment Security

	Descriptor	N	Minimum	Maximum	Mean	Std. Deviation
X_1	Mobile payment security reduces financial pilferage	90	2	5	4.30	.710
X_2	Mobile payment security reduces cash handling	90	2	5	4.78	.492
X_3	Mobile payment security reduces unauthorized reversal	90	1	5	4.38	.787
X_4	Mobile payment security ensures easier bulk payment	90	1	5	4.37	.854
X_5	Mobile payment security improves verifiability	90	3	5	4.60	.577
	Overall averages				4.486	0.684

Source: Research Data (2023)

Table 1 presents the respondents' outcome of the sampled Kenya Power & Lighting Company views regarding specific issues of mobile payment security and its benefits. This was conducted through engaging the respondents' views of their observation on the above 5 dimensions. Administering a 5 scale Likert questionnaire on the sampled 90 participants, scoring from 1.0 and 5.0; For the matter of reducing financial pilferage, the scores were between 2 and 5. On average, they scored 4.30, with some small differences in their views shown by a variation value of 0.710. When talking about lessening the need to handle cash, people gave a scores from 2 to 5. They liked this feature quite a lot, giving it an average score of 4.78. Their opinions were pretty close, with only a little variation of 0.492. On preventing unwanted money reversals, scores were between 1 and 5. People felt good about this, giving an average of 4.38, but had slightly different views, shown by a variation value of 0.787. For making big payments easier, scores went from 1 to 5. The average was 4.37, and the difference in opinions was a bit higher with a variation value of 0.854. Lastly, on making payments easier to check and verify, people scored between 3 and 5. They were very positive, giving an average of 4.60, and their scores were quite close with a variation of 0.577. As such, respondents generally view mobile payment security favorably, as seen by the high mean scores across all descriptors. The variations in their responses, as reflected by the standard deviations, are moderate, suggesting most respondents had somewhat similar sentiments.

Table 2: Descriptive statistics on Mobile Payment Cost

	Descriptor	N	Minimum	Maximum	Mean	Std. Deviation
X ₁	Mobile payment improves total collection since customer incur cost of transfer	90	1	5	4.17	.963
X ₂	mobile payment reduces employee gratuity cost as a result of automation	90	1	5	3.76	1.031
X ₃	Mobile payment reduces employee salary cost as a result of automation	90	1	5	3.58	1.272
X ₄	Mobile payment reduces cost of employee medical bills as a result of automation	90	1	5	3.37	1.311
X ₅	Mobile payment reduces the cost of employee retirement contribution because of automation	90	1	5	3.20	1.274
	Overall averages				3.616	1.1702

Source: Research Data (2023)

Table 2 presents the respondents' outcome of the sampled Kenya Power & Lighting Company views regarding specific issues of mobile payment cost and how it relates to revenue performance. This was conducted through engaging the respondents' views of their observation on the above 5 dimensions. Administering a 5 scale Likert questionnaire on the sampled 90 participants, scoring from 1.0 and 5.0; on respondents' views concerning how mobile payments might affect different cost areas due to automation. When asked if mobile payment helps increase total collections because customers take on the cost of transfer, the answers ranged from 1 to 5 among the 90 participants. The average opinion leaned positive with a score of 4.17. The variety in their answers was shown by a difference value (standard deviation) of 0.963. Considering whether mobile payments can help cut down gratuity costs for employees because of automation, responses were between 1 and 5. The average feeling on this was 3.76, and people's opinions varied a bit more, with a difference value of 1.031. On the topic of mobile payments possibly reducing employee salaries because of automation, the answers spread out from 1 to 5. On average, people gave a score of 3.58. Their views on this showed a bigger spread, with a variation of 1.272. Discussing if mobile payments might lower the company's medical bill costs for employees due to automation, scores ranged from 1 to 5. Respondents had average score of 3.37, with a reasonable variation in views shown by 1.311. Lastly, when talking about whether mobile payments can decrease the costs that go towards employee retirement contributions because of automation, scores were between 1 and 5. The average score was a more on the negative side with a score of 3.20, and the variety in opinions was reflected by a difference value of 1.274. In short, participants felt most positive about customers covering transfer costs with mobile payments, while they agreed about automation affecting employee costs and also retirement contributions.

Table 3: Descriptive statistics on Mobile Payment Convenience

	Descriptor	N	Minimum	Maximum	Mean	Std. Deviation
X ₁	24-hour payment improves collection as a result of automation	90	1	5	4.51	.797
X ₂	Payment before use improves collection as a result of automation	90	1	5	4.16	1.016
X ₃	Excess payment in advance improves collection as a result of automation	90	1	5	3.77	1.112
X ₄	Ability to pay for third party improves collection as a result of automation	90	1	5	3.90	1.102
X ₅	Payment for misuse improves collection as a result of automation.	90	1	5	3.40	1.178
	Overall Averages				3.948	1.041

Source: Researcher (2023)

Table 3 presents the respondents' outcome of the sampled Kenya Power & Lighting Company views regarding specific issues of mobile payment convenience and how it relates to revenue performance. This was conducted through engaging the respondents' views of their observation on the above 5 dimensions. Administering a 5 scale Likert questionnaire on the sampled 90 participants, scoring from 1.0 and 5.0; on 24-hour payment improves collection as a result of automation, the participants rated it between 1 and 5. The average score was a high 4.51, meaning most found it quite beneficial. Their views were fairly aligned, as shown by a small variation of 0.797. on respondents' view where customers pay before using a service due to automation, scores ranged from 1 to 5. People felt positive about this, giving an average score of 4.16. However, there was a slightly higher variation in views with a standard deviation of 1.016. In terms of making excess payments in advance because of automation, the responses were between 1 and 5. The average feeling was positive with a score of 3.77. The difference in opinions was slightly larger, shown by a 1.112 value. For the ability to make payments on behalf of a third party due to automation, the scores spread out from 1 to 5. People felt relatively positive, giving an average score of 3.90. Their opinions had a notable range, reflected by a variation of 1.102. Lastly, when discussing if making payments for misuse improved collection because of automation, the scores ranged from 1 to 5. This time, the average feeling was 3.40. The variety in views was highest here, as indicated by a difference value of 1.178. Summarizing, the participants generally feel that automation in mobile payments, especially the 24-hour payment system, brings convenience and benefits in terms of collections. The overall average score of 3.948 indicates a strong positive sentiment. The average standard deviation of 1.041 suggests that, while there's some variation in opinions, many participants have shared sentiments on these topics.

Table 4: Descriptive statistics on Revenue Performance

Descriptor	N	Minimum	Maximum	Mean	Std. Deviation
Daily revenue collection does not indicate availability of cash	90	1.0	5.0	3.144	1.3703
Weekly revenue collection does not indicate excess cash	90	1	5	3.30	1.328
Monthly revenue collection has no effect on liquidity	90	1	5	2.96	1.280
Bi-annually revenue collection indicates liquidity	90	1	5	3.62	1.056
Annual revenue collection indicates high profit.	90	1	5	3.37	1.249
Overall averages				3.2788	1.25666

Source: Research Data (2023)

Table 4 presents the respondent's outcome of the sampled Kenya Power & Lighting Company views regarding specific issues of revenue performance and how it relates to liquidity and profitability. This was conducted through engaging the respondents' views of their observation of daily revenue collection. Administering a 5 scale Likert questionnaire on the sampled 90 participants, scoring from 1.0 and 5.0; on daily revenue collection as indicator of availability of Cash to the Company. The results revealed a mean of 3.144. There was a notable range of opinions, shown by a variation of 1.3703.

Turning to weekly revenue collection, the participants gave scores from 1 to 5 to show their feeling that it doesn't reflect excess cash on hand. The average sentiment here was slightly more positive at 3.30, with their views having a difference value of 1.328. Regarding monthly revenue collection, the scores varied from 1 to 5, indicating their belief that this doesn't have a direct impact on liquidity. The average sentiment was slightly below neutral with a score of 2.96. Opinions varied by a standard deviation of 1.280. For bi-annual revenue collection, the scores spanned from 1 to 5. People felt this was more indicative of liquidity, giving an average score of 3.62. Their views on this were more aligned, reflected by a smaller variation of 1.056. Lastly, when assessing annual revenue collection, participants scored between 1 and 5 to express that it suggests higher profits. They leaned positive with an average score of 3.37 and a variation in opinions represented by a 1.249 value. To summarize, participants generally feel a bit neutral to positive about the correlation between revenue collection intervals and liquidity or profit indicators. The overall average score of 3.2788 suggests a slight leaning towards agreement. The average standard deviation of 1.25666 indicates that while there's some agreement, there's still a fair number of varied opinions on these topics.

4.2 Reliability Test:

Researches have shown that an acceptable value of Cronbach's alpha test must be equal or greater than 0.70. A Cronbach's alpha value equal to or greater than 0.70 is said to be highly consistence for the scale. In this study, the Cronbach's alpha values for all the scales are greater than 0.70; Mobile Payment Security (alpha = 0.898), Mobile Payment Cost (alpha = 0.954), Mobile Payment Convenience (alpha = 0.964), and Revenue Performance (alpha = 0.899). However, the values indicate a high level of internal consistency for our scales with the data. We can conclude that it is reliable to group together the questions for each scale in the survey.

Table 5. Reliability Statistics for the Scales

Scale	Cronbach's Alpha	No of Items
Mobile Payment Security	0.898	5
Mobile Payment Cost	0.954	5
Mobile Payment Convenience Internal Control Systems	0.964	5
Revenue Performance	0.872	5

4.3. Correlation Analysis

Correlation analysis assesses the strength and direction of relationships existing between two variables over a certain time span. It is a method of drawing a most effective line based on the information from two different variables. Its Pearson Correlation Coefficient r shows the distance each data point is from the line that is the most optimal fitting.

Table 6: Correlation Analysis

Correlations		Mobile Payment Security	Mobile Payment Cost	Mobile Payment Convenience	Revenue Performance
Mobile Payment Security	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	90			
Mobile Payment Cost	Pearson Correlation	.332*	1		
	Sig. (2-tailed)	.047			
	N	90	90		
Mobile Payment Convenience	Pearson Correlation	.267**	.496**	1	
	Sig. (2-tailed)	.000	.009		
	N	90	90	90	
Revenue Performance	Pearson Correlation	.343**	.453**	.300**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	90	90	90	90

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

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

Table 6 presents correlation results as coefficients revealing the association between each pair of the variables describing the independent and dependent factors, and their significance and levels of association. The correlation results reveal that all the associations between the variables have significant correlation coefficients; also reflecting reliability in selection of the describing parameters of the variables. Mobile Payment Security had a significant and positive association with Revenue Performance ($r = .343, p = 0.000 \leq 0.05$), Mobile Payment Cost had a positive and significant association with Revenue Performance ($r = .453, p = 0.000 \leq 0.05$), Mobile Payment Convenience had a positive and significant association with Revenue Performance ($r = .300, p = 0.000 \leq 0.05$). The results of this study are consistent with the findings of a study by Munyao (2020) looked at reduced pilferage and revenue performance. The study was quantitative in approach and sampled 65 respondents. The inquiry used primary data that was collected using questionnaires. The study data was analyzed using inferential statistics as well as descriptive statistics. The study revealed a positive association between reduced pilferage and performance. The results of this study are congruous with those of a study by Bosire and Ntale (2018) who sampled 397 mobile payments in small and medium enterprise industry in Kenya. The study employed a cross-sectional survey design and used online questionnaires to gather data. Both descriptive and inferential statistics were used to collect data. The study established a significant positive correlation between reduced medical bill contribution and revenue performance. The results of this study are also consistent with the findings of a study by Argawal et.al (2020) who sought to investigate Fintech impact on payment in a qualitative study where secondary data was used. The study was conducted in Singapore and focused on QR-code payment system. The study data was analyzed qualitatively. The study established that 24-hour payment modality and revenue performance had a significant positive correlation.

4.4 Mobile Payment and Revenue Performance of KPLC

This section provides analysis of the regression analysis of individual objectives to understand their effects on revenue performance. This will give a clear picture without confounding for any other variable how revenue performance shifts when mobile payment security, cost and convenience are employed.

4.4.1 Mobile Payment Security and Revenue Performance

Effect of mobile payment security on revenue performance at Kenya Power and Lighting Company in western region

The first objective was to establish the effect of mobile payment security on revenue performance at Kenya Power and Lighting Company in western region.

Table 7: Model Summary of mobile payment security on revenue performance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.343 ^a	.117	.107	.82602

a. Predictors: (Constant), Mobile Payment Security

Table 7 presents a summary of the outcomes of the Ordinary Least Squares (OLS) regression model. A modified R value of .343 indicates that the results were trending in the right direction (positively), based on the provided range of -1 to +1. There exist a 0.343 (34.3%) chance that the Mobile Payment Security will affect Revenue Performance at Kenya Power and Lighting Company. Mobile Payment Security accounts for 11.7%, leaving 89.0% to other factors not considered in this study. The value of R indicates how closely actual values of the dependent variable match those forecasted value of Revenue Performance at Kenya Power and Lighting Company.

Table 8: ANOVA of mobile payment security on revenue performance

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.012	1	8.012	11.743	.000 ^b
	Residual	60.043	88	.682		
	Total	68.055	89			

a. Dependent Variable: Revenue Performance

b. Predictors: (Constant), Mobile Payment Security

Table 8 is a presentation of the analysis of variance (ANOVA), The F-statistic and significance level. From the table, F statistics of 11.743 is above 2 and significant at 95% confidence level where (P=0.000<0.05), this implies that Mobile Payment Security has a significant effect on Revenue Performance at 95% confidence level.

Table 9: Coefficients of mobile payment security on revenue performance

Coefficients ^a		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	0.547	.801		0.683	.490
	Mobile Payment Security	.616	.179	.343	3.426	.000

a. Dependent Variable: Revenue Performance

$$RP = 0.547 + 0.616 MPS \dots\dots\dots 4.1$$

Mobile Payment Security (p=0.000<0.05) significantly affect Revenue Performance. A unit increase in Mobile Payment Security Increases Revenue Performance by 0.616 units.

The findings of this study corresponds with the results of a study by Munyai (2020) looked at reduced pilferage and revenue performance. The study was quantitative in approach and sampled 65 participants. The inquiry used primary data that was collected using questionnaires. The study data was analyzed using inferential statistics as well as descriptive statistics. The study established a significant positive correlation between reduced pilferage and performance. The findings are in line with those of a study by Park, Ahn, Thavisay, and Ren (2019) sought to establish the effect of mobile payments in organizations. The study employed qualitative research methods and sampled 361 respondents. The study was conducted in the United States of America and responses were gathered using questionnaires. Data was then analyzed using structural equation modeling. The study established that reduced cash handling contributed to revenue growth. The study concluded that attitudes were responsible for technology adoption. Recommendation was that technology should be enhanced in every organization. However, the results of the present study show inconsistency with the findings of a study by Zhao and Bacao (2021) who sought to investigate mobile payment and covi-19 pandemic in China. The study was a qualitative in approach and sampled a total of 739 smart phone users in China. Data was obtained using online survey questionnaires. The study data was analyzed using structural equation modelling in which SPSS 17 AND AMOS 22 both were utilized. The study established that improved verifiability did not have any significant effect on revenue performance.

4.4.2 Mobile Payment Cost and Revenue Performance

Effect of mobile payment cost on revenue performance at Kenya Power and Lighting Company in western region

The second objective was to determine the effect of mobile payment cost on revenue performance at Kenya Power and Lighting Company in western region.

Table 10: Model Summary mobile payment cost on revenue performance

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.453 ^a	.205	.196	.78381

a. Predictors: (Constant), Mobile Payment Cost

Table 10 presents a summary of the outcomes of the Ordinary Least Squares (OLS) regression model. A modified R value of .453 indicates that the results were trending in the right direction (positively), based on the provided range of -1 to +1. There exist a 0.453 (45.3%) chance that the Mobile Payment Cost will affect Revenue Performance at Kenya Power and Lighting Company. Mobile Payment Cost accounts for 20.5%, leaving 79.5% to other factors not considered in this study. The value of R indicates how closely actual values of the dependent variable match those forecasted value of Revenue Performance at Kenya Power and Lighting Company.

Table 11: ANOVA of mobile payment cost on revenue performance

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	13.991	1	13.991	22.773	.000 ^b
	Residual	54.064	88	.614		
	Total	68.055	89			

a. Dependent Variable: Revenue Performance
 b. Predictors: (Constant), Mobile Payment Cost

Table 11 is a presentation of the analysis of variance (ANOVA), The F-statistic and significance level. From the table, F statistics of 22.773 is above 2 and significant at 95% confidence level where (P=0.000<0.05), this implies that Mobile Payment Cost has a significant effect on Revenue Performance at 95% confidence level.

Table 12: Coefficients of mobile payment cost on revenue performance

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.743	.331		5.251	.000
	Mobile Payment Cost	-.424	.088	.453	4.772	.000

a. Dependent Variable: Revenue Performance

$$RP = 1.743 - 0.424 MPC \dots\dots\dots 4.2$$

Mobile Payment Cost ($p=0.000>0.05$) significantly affect Revenue Performance. A unit decrease in Mobile Payment Cost causes an increase in Revenue Performance by 0.424 units. The findings of this study are in line with those of a study by Bosire and Ntale (2018) who sampled 397 mobile payments in small and medium enterprise industry in Kenya. The study employed cross-sectional survey design and used online questionnaires to collect data. Both descriptive and inferential statistics were used to collect data. The study established a significant positive correlation between reduced medical bill contribution and revenue performance. The results of the present research further agree with those of a study by Tusekelege (2016) focused on mobile payment and revenue collection using 180 sample size. The study was used quantitative research methods. It utilized questionnaires to collect primary data. The study used predictive analysis software to analyze data. The study findings indicated that reduced gratuity contribution improved revenue performance. The study concluded that mobile payment improved revenue collection. The study recommended that adoption of mobile platforms should be increased. However, these results are inconsistent with the results of a study by Masocha and Dzomonda (2018) who examined payment for employee expenses and revenue performance focusing on SME and using 160 respondents. The study was qualitative in nature and used self-administered questionnaires to gather data. The study utilized structural equation modeling to analyze data. The finding revealed insignificant correlation between reduced employee retirement contribution and revenue performance.

4.4.3 Mobile Payment Convenience and Revenue Performance

Effect of mobile payment convenience on revenue performance at Kenya Power and Lighting Company in western region

The third objective was to establish the effect of mobile payment convenience on revenue performance at Kenya.

Table 13: Model Summary of Mobile Payment Convenience on Revenue Performance

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.300 ^a	.090	.079	.83877

a. Predictors: (Constant), Mobile Payment Convenience

Table 13 presents a summary of the outcomes of the Ordinary Least Squares (OLS) regression model. A modified R value of .300 indicates that the results were trending in the right direction (positively), based on the provided range of -1 to +1. There exist a 0.00 (30.0%) chance that the Mobile Payment Convenience will affect Revenue Performance at Kenya Power and Lighting Company. Mobile Payment Convenience accounts for 9.0%, leaving 91.0% to other factors not considered in this study. The value of R indicates how closely actual values of the dependent variable match those forecasted value of Revenue Performance at Kenya Power and Lighting Company.

Table 14: ANOVA of Mobile Payment Convenience on Revenue Performance

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6.143	1	6.143	8.732	.004 ^b
	Residual	61.912	88	.703		
	Total	68.055	89			

a. Dependent Variable: Revenue Performance

b. Predictors: (Constant), Mobile Payment Convenience

Table 14 is a presentation of the analysis of variance (ANOVA), The F-statistic and significance level. From the table, F statistics of 8.732 is above 2 and significant at 95% confidence level where (P=0.004<0.05), this indicates that Mobile Payment Convenience has a significant impact on Revenue Performance at 95% confidence level.

Table 15: Coefficients of mobile payment convenience on revenue performance

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.888	.478		3.948	.000
	Mobile Payment Convenience	.352	.119	.301	2.955	.004

a. Dependent Variable: Revenue Performance

$$RP = 1.888 + 0.352 MPC \dots \dots \dots 4.3$$

Mobile Payment Convenience ($p=0.000>0.05$) significantly affect Revenue Performance. A unit increase in Mobile Payment Convenience causes an increase in Revenue Performance by 0.352 units. The findings of this study are also in agreement with those of a study by Argawal et.al (2020) who sought to investigate Fintech impact on payment in a qualitative study where secondary data was used. The study was conducted in Singapore and focused on QR-code payment system. The study data was analyzed qualitatively. The study established that 24-hour payment modality and revenue performance had a significant positive correlation. However, the findings of this study do not agree with those of a study by Humbani and Wiese (2019) who sought to establish mobile payment adoption and use. The study was qualitative in approach and sampled 426 respondents in South Africa. The inquiry then adopted structural equation modeling as a data analysis technique. The study established that excess payment as a result of automation did not contribute to revenue. The findings of the present study are further inconsistent with the findings of a study by Humbani and Wiese (2019) who sought to compare mobile payment in both Kenya and Rwanda. Explorative study design was adopted. It also utilized qualitative means to analyze the secondary data collected for analysis. The study established that mobile payment as a result of resource misuse did not contribute to revenue performance.

4.5 Multiple Regression Results

This section provides inferential statistics of the study. Generally, the researcher used the mean figures of the predictors and the dependent variable to run the regression and correlation matrix. The outcome was model summary table, analysis of variance table and the regression coefficient Table.

Table 16: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.501 ^a	.251	.224	.76985

- a. Predictors: (constant), mobile payment convenience, security, and cost
- b. Dependent variable: Revenue performance

Table 16 provides a summary of a regression model, focusing on the predictive power of certain mobile payment factors on revenue performance. The key metric of interest here is R Square, which is 0.251 for this model. The R² Based on mobile payment convenience, mobile payment security, and mobile payment cost, this value represents how much variance in revenue performance can be predicted. An R² value of 0.251 means that approximately 25.1% of the variability in revenue can be clarified using the model's predictors. This is quite moderate, indicating a strong fit to the data. Mobile payment convenience, security, and cost together explain (25.1%) of the changes we see in revenue performance. In conclusion, the mobile payment factors in the model are strong predictors of revenue performance, explaining 25.1% of its variability. However, further analyses and domain expertise would be needed to establish causal relationships and understand the degrees of this relationship fully.

Table 17: Analysis of Variance

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	17.085	3	5.695	9.609	.000 ^b
Residual	50.970	1	.953		
Total	68.055	4			

- a. Dependable variable: Revenue performance
- b. Predictors (constant), mobile payment convenience, security, and cost.

According to Table 17, the ANOVA results of the estimated variation is demonstrated. In the results, it is given that F (3, 1) = 9.609, p as 0.000 meaning that on the null hypothesis, the lack of fit is not significant and that the model is suitable for use. Since, p < 0.05, then it means that there was significant difference in the averages of the values.

Table 18: Regression Coefficients for all the variables

Model		Unstandardized coefficients		Standardized Coefficients	t	Sig.
		B	Std Error	Beta		
	(Constant)	0.109	0.786		0.139	.889
1	Mobile payment security	.373	.179	.169	2.086	.039
	Mobile payment cost	-0.326	.104	-1.632	-3.147	.002
	Mobile payment convenience	0.084	.127	1.096	0.665	.507

- a. Dependable variable: revenue performance

Table 18 presents the regression results for the variables under investigation. When fitted on the analysis model, the following outcome is established.

$$Y_i = +0.109 + 0.373X_{1i} - 0.326X_{2i} + 0.084X_{3i} \dots \dots \dots \text{Eq.2}$$

R² =0.251 (25.1%)

5. DISCUSSION

Mobile payment security affects revenue performance (β = 0.373, p = 0.039). This is because the p-value is significant i.e. it is less than the alpha level of 0.05. It therefore, means that mobile payment security has a considerable impact on revenue performance and hence the Null hypothesis that mobile payment security has no significant effect on revenue

performance is rejected. With the beta value of ($\beta = 0.373$), this clearly indicates that an increase in security holding all other factors constant increases revenue performance by 0.373. Practically, reduced pilferages, reduced cash handling, reduced reversal, easier bulk payment as well as improved verifiability security features when well enhanced and strengthened translate to positive revenue performance in KPLC. The company's revenue will grow by 37.3% when security features of mobile payment are fully enhanced (kindly guide on this). The study findings lend credence to the studies conducted by Munyao (2020), Park, Ahn, Thavisay, and Ren (2019), Georgescu, and Posedaru (2020) as well as Jung, Kwon, and Kim (2020) who all established that security in payment platforms enhanced performance of various organizations. However, the findings are at variance with the investigation carried out by Zhao and Bacao (2021) who established that there was no effect between mobile payment security and performance. The findings also support Technology Acceptance Theory which assumes that technology is adopted and used in the organization because of usefulness and ease of use. In this case technology enhances mobile payment services. While filling the knowledge gap, the study also creates new knowledge in the sense that it is now known that mobile payment security affects revenue performance at Kenya Power and Lighting Company.

The study also established that mobile payment cost affects revenue performance ($\beta = -0.326$, $p = 0.002$). The significant p-value which is less than 0.05 means that mobile payment cost significantly affects revenue performance. As such, the hypothetical proposition that mobile payment cost has no significant effect on revenue performance at Kenya Power and Lighting Company in western region is rejected. With the beta value of ($\beta = -0.326$), this clearly indicates that a decrease in cost holding all other factors constant increases revenue performance by 0.326. Mobile payment will result in automation which further translates to reduced transfer cost, low gratuity, low salary as only few employees will be hired, low medical bill as well as low retirement contribution. The reduction in the above will save KPLC a lot of money hence increase in revenue performance. Mobile payment cost will explain the positive variation in revenue performance by 32.6%. The study findings contradict the findings by Masocha and Dzomonda (2018) who established insignificant correlation between mobile payment cost and performance. However, the finding of the study supports the findings of other researchers such as Masocha and Dzomba (2018), Mwendwa (2020), Tusekelege (2016), and Bosire and Ntale (2018) who all established that mobile payment cost positively affected performance. The study supports Financial Intermediation Theory which assumes that technology intermediators in the financial system helps in cost reduction and therefore improve organization revenue performance. The finding therefore not only fills the knowledge gap that was, before now unknown, but also creates new knowledge by linking mobile payment cost and revenue performance in Kenya Power and Lighting Company, Western Region.

Additionally, the study established that mobile payment convenience does not significantly affect revenue performance ($\beta = 0.084$, $p = 0.507$). The p-value of 0.507 is way greater than the alpha level of significance of 0.05. Therefore, the study's Null hypothesis that mobile payment convenience has no significant effect on revenue performance at Kenya Power and Lighting Company in western region is not rejected. With the beta value of ($\beta = 0.084$), this clearly indicates that an increase in convenience holding all other factors constant increases revenue performance by 0.084. The increase is not significant. 24 hour payment, payment before usage, excess payment, payment for third party and payment for misuse are convenience factors that when fully implemented will affect revenue performance at KPLC, though not significantly as per study results. These features will explain 8.4% variation in revenue performance at KPLC. The study findings contradict the findings of other researchers such as Argawal et.al (2020), Madegwa Makokha, and Namusonge (2018) as well as Muchiri (2018) who all established that mobile payment convenience improved performance of various organizations. On the flip side, it supported some scholars such as Humbani and Wiese (2019) Uwamariya, Cremer, and Loebbecke (2021) established that there was no effect between mobile payment convenience and organizational performance. The study findings support Technology Acceptance Theory in the sense that technology is adopted in the organization because of its value and ease of use. In this case, the usefulness of technology does not manifest in the convenience it provides leading to revenue performance. Concluding that convenience is not such a strong factor that brings a significant change in revenue performance. The study therefore fills the knowledge gap that was not known and creates new knowledge that mobile payment convenience does not have a strong effect on revenue performance at Kenya Power in Western Kenya.

6. CONCLUSION

Based on the objectives of the study, it was concluded that mobile payment security has a significant effect on the revenue performance of Kenya Power and Lighting Company in the Western Region. Similarly, the study inferred that mobile payment costs also have a notable impact on revenue performance. Furthermore, the convenience offered by mobile payments was deduced to not be a significant enhancer of revenue performance. These conclusions underscore the overarching significance of mobile payment platforms in shaping the financial performance of the company in the region.

7. RECOMMENDATIONS

Given the study's revelations, it's advised that Kenya Power and Lighting Company should strengthen the security features of its mobile payment systems, as this is crucial for enhancing revenue performance. The company should also strive to keep mobile payment costs low or offer incentives for mobile payments to foster wider adoption and ultimately better revenue. Emphasizing the convenience of mobile payments, perhaps through user-friendly interfaces and prompt customer service, could further boost the company's financial health.

8. LIMITATIONS OF THE STUDY

The study, though illuminative, wasn't without its confines. Using a correlation study design implies that while relationships were established between variables, causality couldn't be definitively ascertained. It's possible that other factors, not considered in this study, might be influencing revenue performance alongside or in lieu of mobile payment factors. Furthermore, the focus was limited to the Western Region, meaning findings might not reflect the dynamics in other regions of Kenya where Kenya Power operates.

9. SUGGESTIONS FOR FURTHER STUDY

Future researchers might consider a more expansive study covering multiple regions of Kenya to gauge if the observed trends are consistent across different demographics and economic landscapes. A longitudinal study approach, tracing the company's performance over time with evolving mobile payment strategies, could offer richer insights into causality. It would also be intriguing to explore other potential variables, like customer financial literacy or evolving mobile technology trends, to see how they intertwine with mobile payment systems in affecting revenue performance.

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