

**PRIVATE SECTOR SOCIAL FRANCHISING AND ITS EFFECTS ON
CONTRACEPTIVE UTILIZATION**

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DECLARATION

This research project is my original work and to the best of my knowledge has not been presented in any institution for the purposes of examination.

Signed.....Date

PIUS MUTUA

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This research project has been submitted with my approval as the University Supervisor.

Signed..... Date.....

DR. URBANUS KIOKO

DEDICATION

This research project is a dedication to my amazing supportive parents Mr. and Mrs. Mutua and my siblings for their guidance and encouragement.

ACKNOWLEDGEMENT

My profound gratitude and sincere acknowledgement to everyone who contributed to the success of this project. First, I attribute my success so far to the Almighty God and secondly, I acknowledge the efforts of my supervisor Dr. Kioko for the invaluable advice and professional guidance.

ABSTRACT

Partnerships such as social franchising have been voted as some of the best approaches to remedying the challenges faced by the public health sector. Yet, though considered an important model of healthcare delivery, contribution of these social franchisees to utilization of contraceptives has been under-researched. This study sought to identify the effects of social franchising on contraceptive utilization using data from the Government District Health Information System Version 2 (DHIS2). Data for 72 franchise and non-franchise facilities was obtained for a period of two years (2018 and 2019). Contraceptive utilization in the two categories of facilities was assessed using Multivariate analysis of variance. Contraceptives were grouped into two groups: Long Acting and Reversible Contraceptives (LARC) and Short-Term methods (STM). Franchising was found to significantly affect the uptake of LARC ($p < 0.000 < \alpha < 0.05$) while the effect on STM was not significant ($p = 0.0943 > \alpha > 0.05$). Further, with all other factors constant, franchising increased the uptake of STM by 8.735 and LARC by 14.3. Therefore, based on the results of this study, this paper recommends partnerships with more franchising organizations to accelerate attainment of SDG3 and need for frequent capacity building of the private health sector players especially on LARC. National and county governments need to ensure commodity security for the private sector and provide regular oversight as it happens with the public sector.

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LIST OF ABBREVIATIONS

LARCs	Long Acting and Reversible Contraceptives
STM	Short Term methods
CYP	Couple Year Protection
DALYs	Disability Adjusted Life Years
DFID	Department for International Development
DRH	Division of Reproductive Health
IUD	Intra-Uterine Device
KfW	Kreditanstalt für Wiederaufbau (German Development Bank)
LMIC	Low- and Middle-Income Countries
MSI	Marie Stopes International
NHSSP II	National Health Sector Strategic Plan II
SES	Social Economic Status
CPR	Contraceptive Prevalence Rate
mCPR	modern Contraceptive Prevalence Rate
BKKBN	Badan Kependudukan dan Keluarga Berencana Nasional (National Family Planning Board)
TMA	Total Market Approach
KEPH	Kenya Essential Package for Health

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

1.1.1 The Private Health Sector

The private health sector is quite heterogeneous ranging from small shops to sophisticated hospitals comprising of for-profit and not-for-profit health providers alike (Montagu & Goodman, 2016). Consequently, different health providers ranging from competent health professionals to some with no qualifications run the same private facilities. Potouillard *et al.*, (2007) points out that one of the concerns that arise with working with the private providers is that they are largely inequitable, and largely benefit those in higher social economic status who are able to pay for services in the private sector.

In many low and middle-income countries (LMIC), the private health sector plays a pivotal role in the provision of health care services (Beyeler *et al.*, 2013). The private sector is a leading provider of both preventive and curative healthcare services in LMIC (Montagu *et al.*, 2011). Improving population health without involvement of the private sector is therefore untenable option. On the other hand, the private sector providers operate under no strict regulation since they do not belong to any network and are not subjected to regular oversight or stewardship once they get the initial license to operate. Quality of care in most of these private provider outlets has been widely debated.

Kenya enjoys one of the most elaborate private health networks in sub-Saharan Africa with a number of the private sector providers receiving support from franchising organizations. Since 2000, more than six franchising have been working with the private sector, organizing it into networks including: Amua network under Marie Stopes International, Tunza network

operated by Population Services Kenya, Gold star network supported by FHI360, Family Health Options Kenya, Huduma poa clinics network supported by Kisumu Medical and Education Trust (KMET) and CFW by Sustainable Health Foundation. The areas of focus by each of the franchising organizations are different ranging from contraceptive provision, HIV/AIDs, non-communicable diseases, and general reproductive health issues (Chakraborty *et. al.*, 2016).

1.1.2 Concept of social franchising

Social franchising employs a system of contractual relationship just like in commercial franchise. The developer (usually a non-governmental organization) with a tested social concept contracts partners (franchisees) to replicate the business model using similar brand name and systems to deliver a social impact. The franchisee is expected in turn to comply with certain quality standards, pay agreed loyalty fee and report statistics/sales after an agreed period. It remains the duty of the franchisor to harmonize the network and ensure homogeneity within the network. In order to deliver a social impact, services and products are usually offered at subsidized prices to cut of the out-of-pocket payments done by the clients. According to Guresh *et al.*, (2018), most social enterprises endure the risk of collapse by almost 80-90% because of untested business models. On the contrary however, experts posit that the vice versa is true for franchising businesses with the risk of failure reducing to 20% and success rate rising to as high as 80% (Hisrich *et al.*, 2009).

According to Smith (1997), as quoted in Laukamm-Josten (1998), there exists two main types of social franchise: fractional franchises and stand-alone franchises. In stand-alone franchises, the franchisor provides equipment and infrastructure then shares the operating costs with the franchisees. In fractional social franchise, the franchisor adds a package of services to the existing business thereby creating an additional service and income inlet. According to

McBride and Ahmed (2001), the models mentioned above are appropriate in different contexts. Fractional social franchising is more effective in situations where there is a large number of existing businesses with underutilized capacity whereas stand-alone franchisees is more appropriate in situations where there are large numbers of health providers without the necessary equipment and infrastructure to offer quality services (McBride & Ahmed, 2001).

In Kenya, the Amua social franchise is one of the oldest franchises. The network is managed by international franchisor Marie stopes international (MSI), a leading provider of modern contraceptives globally. MSI experience in social franchising dates back to 2001 when it opened its first franchise in Latin America after gaining experience over decades in running fully owned clinics. Through social franchising MSI was better placed to scale the provision of contraceptives and other reproductive health services that would have otherwise been difficult because of cost involved in opening a new MSI clinic. The breadth of MSI social franchise has extended to 17 countries spread in Asia, Latin America and in Africa where the Kenyan Amua social franchise is located. Although the focus of the franchise has been on family planning, in recent times this has incorporated health services technologies on long acting and reversible contraceptives as well as short-term methods (STMs) to improve contraceptive choice (Thurston *et al.*, 2015).

According to Chakraborty *et al.*, (2016), the Amua social franchise recruits facilities and supports them for a period of five years before graduating them and recruiting others. Back in 2012, MSI in collaboration with other partners, under the African Health Markets for Equity (AHME) initiative mapped out private facilities within the country that were eligible for franchising. The facilities were then randomly assigned to a treatment and comparison group. Those in the treatment group were then invited to franchise while those in the comparison group were to be franchised later. Franchised facilities are offered opportunities for training especially on LARCs, Marketing, branding, and commodity security. Preference of LARC by

franchisors is based on the fact that long term methods are effective and better tolerated with minimal side effects as opposed to STM which have a higher failure rate. Franchisers however bank on the hope that there will be cross-selling between LARCs and STMs (Chakraborty *et al.*, 2016).

1.2 Problem statement

The concept of social franchising appears to be one of the rapidly growing health-care market interventions in Kenya. Social franchising is meant to ensure that people get the much sought-after services at their doorstep. Yet, though considered a game changing intervention in the private sector, information is limited on the level to which these involvements have improved utilization of services, especially contraceptives. In Pakistan, the combined effect of social franchising and vouchers was assessed by Azmat *et al.*, (2013). It emerged that there was an increase on modern contraceptive awareness by less than 6%. It was however not clear what effect social franchise models have on utilization of contraceptives without the use of vouchers.

There are already more than six franchise networks in Kenya yet studies on their contribution to contraceptive utilization are limited. A study by Chakraborty *et al.*, (2016) compared family planning usage between Tunza franchised facilities and public facilities. The study concluded that access to a franchise clinic is associated with improved consumption of Long Acting and Permanent methods (LAPM). However, it was noted that the presence of a franchise does not guarantee increase in the use of contraceptive services. Later studies by Qureshi *et al.*, (2018) looked at ways of mitigating failure in social franchising without any focus on their contribution to contraceptive utilization. This study aims at bridging this knowledge gap by evaluating the effects of private sector social franchising on contraceptive utilization.

1.3 Objectives of the study

The aim of this study is to assess the effects of private sector social franchising on contraceptive use.

1.3.1 Specific objectives

- I. To determine the effects of social franchising on use of Long-term contraceptive methods in Nairobi county
- II. To determine the effects of social franchising on use of short-term contraceptive methods in Nairobi county.
- III. To provide policy recommendation based on the findings in 1 and 2

1.4 Justification of the study

Family planning has been termed as one of the most effective approaches to reduce child and maternal mortality. According to Azmat *et al.* (2013) family planning is linked to improvement in food security, livelihoods, maternal and child outcomes. With this in mind, literature on the contribution of social franchising to contraceptive utilization is limited. The need to bridge this literature gap was a major motivation in analyzing the contribution of social franchising to contraceptive utilization.

Globally, public health systems have been faced with several challenges in terms of human resource management, governance and financial constraints thus rendering them unable to satisfy the demand for family planning services. The private sector has however been quite promising in this area, and the World Health Organization (WHO) has been emphasizing on the importance of setting up partnerships with the private sector health practitioners. Partnerships such as social franchising have been recognized as some of the best interventions to addressing challenges faced by the public health sector (WHO, 2007).

Results from this study can thus help policy makers to develop and structure PPPs for contraceptive utilization.

Organizations seeking to expand service delivery through social franchising will benefit from this study in their strategizing and operations. In light of the government push for universal health coverage, this study highlights the role of social franchising model on healthcare utilization, and this may act as a model for the government in using franchising to achieve universal health coverage. The study will provide evidence on the contribution of franchisees to contraceptive utilization and therefore will be beneficial to future researchers for their reference.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Literature both theoretical and empirical on social franchising has been reviewed in the chapter. The chapter starts by looking at several theories that explain the concept of franchising. It then looks at the empirical literature from other parts of the world and locally where social franchising has been undertaken.

2.2 Theoretical literature review

Social franchising business models has been explained by a number of theories in literature. The theories that best fit social franchising on its contribution to contraceptive utilization have been explained in this section. These include resource scarcity, agency, and social capital theory.

2.2.1 Resource scarcity theory

This theory assumes that economies of scale significantly determine the franchisors ability to thrive. The theory has been used to explain the tendency of multi-national corporations to expand through franchising. Proponents of this theory argue that social franchising is an efficient mechanism for removing financial and managerial obstacles experienced in non-franchise businesses and a way of accelerating growth. In an examination of the problem of franchisors' lack of capital and other resources, Oxenfield and Kelly (1969) found out that limited resources is one of the motivating reasons for a company turning to social franchising model for growth. In situations where a company is a new entrant, raising significant amounts

of capital for growth and development by use of old-style financial mechanisms may prove a challenge to leading firms to gravitate towards social franchising.

Franchisees are seen as a source of discounted capital in form of fees and royalties that allow the franchisor rapid expansion of the business. Various studies have supported this theory while others have been opposed to the theory and its application. Gilis and Castrogiovanni (2012) explored the theory in relation to franchising business and supported the proponents of this theory. In the study, they focused on the scarcity of human capital, knowledge, managerial expertise, and the familiarity of the local market conditions and argued that these are important drivers for adoption of franchising. Their argument corroborates with that of Combs *et al.*, (2011), who placed major emphasis on the importance of company size, age, capital availability and growth rate as the key determinants of impact when deciding on franchising model as an expansion strategy.

Previously, critics had contested the applicability of this theory in franchising arguing that franchising was not an efficient way of raising capital as compared to the traditional capital models (Rubin (1978). Combs *et al.*, (2011) however maintained that besides capital and management skills for satellite locations that are achieved in franchising, there is an additional advantage of preservation of control over the company processes. He further argued that resources availed through franchisees' is an important aspect in franchising, and noting that these franchisees continue with their operations even when the resources scarcity is eliminated, there should be other important aspects of implementation of franchising. Additional literature provided that majority of the franchise systems have a twin model that they use to manage their own establishments and their franchised facilities.

2.2.2 Agency theory

According to Ross (1973), contractual relationship involving principal and agent lies at the core of the agency theory. In social franchising, the franchisor (principal), delegates a number of roles to the agent (franchisee). There are two assumptions dominant in this theory. Firstly, external factors may arise since the agent's behavior affects both its success and that of the principal. Secondly, there is information asymmetry between the principal and the agent, which may lead to loss of control over the behaviors and intention of the agent. Given the self-centered nature of agents, they are more likely to engage in inappropriate opportunistic behavior. A situation amplified by impossibility to effectively monitor the agent behaviour (Carney & Gedajlovic, 1991).

Under franchise arrangements, the franchisees accept the undivided residual risk linked to their individual outlets and therefore the costs, benefits and the activities that may affect the value of their particular outlets are shouldered by the franchisees. This therefore means that the moral hazard associated with free riding or withholding effort is less likely to be experienced from the franchisees than from the hired managers (Garg and Rasheed 2003). In nutshell being the residual claimants to the net proceeds from their businesses, the franchisees are less likely to withhold effort. This therefore means that franchisees are self-directed and thus the need for constant stewardship is reduced. However, the franchisor still maintains the sole responsibility of some decisions such as selection criteria, site location, monitoring the product quality and decision to terminate the franchisee contracts (Shane, 1996).

Other scholars like Gilis and Castrogiovanni (2012) however argue that the theory predominantly focus on identifying the effectiveness of managers and employees in semi-autonomous franchise locations. Contracts are the main control mechanism used to direct

actions in a way favorable to the principal, which is problematic because it is impossible for the principal to specify all future circumstances.

It suffices to say therefore that agency theory assumptions provide a balanced explanation of social franchising business model. Providing some symmetry between the merits and demerits of franchise business operations in their different location, which in a bigger way determines which direction the company (franchisor) will progress. Administrative efficiency in franchising is achieved due to costs of regulation benefits that accrue to the owner. Garg and Rasheed (2003) postulate that franchising business is beneficial to the degree that the cost control amount is not consequential. Therefore, the theory is grounded on cost comparison for a company with its own branches (local knowledge, additional staff and distance) against the dangers associated with franchising such as freeride, insufficient investment and contract negotiations.

2.2.3 Social Capital Theory

Nahapiet and Goshal (1998) notes that ‘social capital is the sum total of resources (both actual and potential) emanating from individual or social unit relationships system. Social capital can be viewed through two perspectives: Micro and macro-level. In micro-level, the emphasis shifts from groups to individuals. This approach views individuals as a component of a network of relations, hence called external perspective. At a macro level, social capital is looked at as collective goods and assets actualized by a group of people. With this perspective, the relationships within the social systems are the key focus of analysis hence the name internal perspective.

While these two perspectives have been extensively used to classify social capital, Adler and Kwon (2002) takes a closer look at the two dimensions bundling characteristics of social capital, the relational and structural dimensions. These two dimensions are closely related and

provide a rich theoretical framework for understanding social franchising. The former relates to quality existing in individual/system social relationship while the latter relates to structural dimension refers to the network of relations existing in a social system. These two aspects are more concerned with resources that flow from these relationships in forms of norms, trust and identity. Burt (1992) looks at norm as an allocation of rights under which others hold control over a certain action other than the ones who might take the action. One of the norms frequently stressed in franchising is the place of indebtedness due to expectations of reciprocity by involved parties (Schechler, 2002).

It is therefore evident that important aspects of this theory are access to other members' resources within the social system and how these social networks are structured. Burt (1992) agrees with Coleman (1990) who emphasizes the value of structural gaps within the networks as it acts as a driver for social units to gain access to more resources than those available within individuals in their social surrounding.

2.3 Empirical literature review

Effective involvement of the private health sector has been identified as one of the best ways to expand access and utilization of essential health services (Thurston *et al.* 2015). Social franchising has been at the forefront of approaches used to accelerate delivery of services in the private health sector, with the existing franchise networks currently standing at 64 networks distributed in 35 countries. Evidence base for social franchising in literature has focused on the achievement of franchising goals of quality, equity, health impact, market expansion and cost effectiveness (Chakraborty *et. al.*, 2016).

In examining how universal access of reproductive health services is impacted by social franchising, Ravindran & Fonn (2011) in their study compared data from 45 franchises in 27 countries and territories in Latin America, Asia and Africa. The study relied on

administrative data for franchising programs that has been compiled by University of California since 2009. The study compared service data across different franchises to understand if there was any change in utilization. It was revealed that these social franchisees had not expanded the variety of reproductive health services offered and in many occasions; the coverage was still limited to old areas. In cases of fractional franchise that formed the bulk of the programs studied (36/45), old clinics that didn't spring from the franchise were the dominant pattern.

In Indonesia, a study by Gargen *et al.*, (2016), on the influence of the private sector on the maternal and new born indicators focused predominantly on the on the Blue Circle franchise network. The National Family Planning Board (BKKBN) acting as the franchisor recruited midwives, Pharmaceutical companies, general practitioners advertising agents and corporations. The franchisor aimed at shifting urban family planning clientele from lower and middle social economic groups to make use of the private sector. This followed the realization that Contraceptive Prevalence Rate (CPR) ranged between 50% -60% in rural areas whereas in the cities it was as low as 30%-50%. The findings showed the franchise led to a 28%-36% increase workload. However, despite the successes realized, the network was faced with a number of challenges that included inability to standardize the quality of services provided, inability to widen the revenue base and difficulties in articulating a convincing value proposition for new and existing members.

Thurston *et al.*, (2015), in a case study of Blue star Pilipinas to document the challenges facing scale up of franchise networks noted that poor economies of scale, oversight, inadequate financing and weak regulatory and quality control as the major hindrances to thriving of social franchisees in Philippines. The study employed a cross-sectional survey to

collect data from facilities participating in the franchise and clients seeking services from these facilities. The franchise network was composed of largely private midwives and had a membership of over 159 franchisees as of 2010 serving on average 40-100 clients per month. Within the first two years of operation, the program was able to scale up rapidly increasing its membership and clientele served by each. The program was able to provide loans to its members for infrastructural developments and this cut down on attrition of franchisees with patients and providers reporting high satisfaction levels with the franchise and increase in the number of clients served per day.

In India, Mohanan *et al.*, (2016), examined the effect of social franchising on improvement of primary health care outcomes. Data was collected from World Health Partners (WHP) Sky program through interviews with the providers, clients, and the project managers. To study the program effect at the population level, the study used multivariate difference-in-difference models. It was revealed that despite the heavy investment into the franchise program to the tune of 23 million dollars, challenges with the recruitment of the right franchisees led to network collapse and withdrawal of the donor support. The study determined that despite the eagerness from the donor community, project management, policy makers and experts, no improvement in rates of consumption of primary health care in the management of childhood pneumonia and diarrhea could be linked to the programme.

In a quasi-experimental study targeting 36 treatment facilities, Ngo *et al.* (2010) sought to evaluate the behavioral consequences associated with a government social franchise meant to improve the operational performance of reproductive and family planning services clinic in Vietnam. The study found out that franchise affiliation was significantly linked to up to a rise in facility reported client volumes and self-reported family planning use frequency by 40% and 20% respectively. The study recommended further assessments to define the

effectiveness and limitations of franchising family planning services in Vietnam and other developing countries.

In a systematic review that included 15 studies with high impact factor, Nijmeijer *et al.*, (2013) sought to establish the consequences of franchising in health care. The findings showed that the results of franchising in health care are biased towards low-and middle-income countries with none focusing on high-income countries. Findings showed that franchising was principally associated with client volumes, quality and accessibility. The study concluded that franchising had the potential of improving health outcomes, however the evidence base was too frail for firm conclusions thereby affirming need for studies in different contexts.

In Ghana and Tanzania, Montagu *et al.* (2015) explored user experiences among clinical social franchisees via in-depth interviews. Their findings showed that Social franchising is considered largely beneficial because it creates some linkages with the parent organization giving it a relatively risk-free expansion trajectory while ensuring that at the same time the franchisees enjoy reduced risks by use of tested business models. Further, Montagu *et al.* (2015) outline the benefits of growing a business through social franchising as opposed to operating fully autonomous units. They point out that in social franchising there is a faster expansion route due to better coordination and availability of resources, trust, consistency, and system awareness. The study concluded that network benefits such as systematic knowledge transfer, public support, economies of scale are helpful in improving quality of work within a franchise.

In Kenya, Chakraborty *et al.* (2016) in a quasi-experimental study sought to assess whether women residing in close proximity of Tunza social franchise facilities had higher chances of utilizing family planning services in comparison to those residing near public sector facilities.

The findings showed that living near a franchise does not necessarily lead to an increased use of contraceptives especially LARCs compared to those living near public sector facilities. It was however noted that social franchising does affect the access to family planning for particular methods and age groups. While the public sector was endowed with many resources and enjoyed a number of subsidies, compared to those in the private sector, motivation levels were remarkably different, and this could explain why utilization between the two groups was more or less the same.

2.4 Summary of literature review

It is evident from the literature review that several studies on social franchising have been undertaken especially in LMIC. Most of the studies except Qureshi et al., (2018), which focused on cost effectiveness, have focused on the performance of social franchises and the ability of different programs to meet pre-set target. Ravindran & Fonn (2011); Gargen *et al.* (2016); Thurston *et al.* (2015) and Chakraborty *et al.* (2016), in looking at the performance of the franchisees in different domestic contexts vis-a-vis the performance of the franchisors have all used a case study approach, which was deemed appropriate due to the nature of the data required. It is evident that most of the franchisors are privately owned and this presents a challenge to the researchers of data availability, as limited amounts of data are publicly available. Majority of the research work has used qualitative methodologies principally due to this data shortage.

Across the different settings, the challenges faced by majority of these programs revolve around inability to scale up services, quality assurance, adherence to protocols and insufficient funding. Ravindran and Fonn (2011) in his study however noted that difficulties in recruiting franchisees, unwillingness to attend trainings and high attrition rate have also had a negative impact on the achievement of the franchising mission. In some instances, lay

health workers have been recruited into the network and failure to offer them proper support supervision and other logistical challenges threaten the achievement of the pre-set goals. Management challenges like task familiarity and improper risk assessment have also contributed to stalling of some programs making them unable to ensure universal access to healthcare services. It is therefore evident that a knowledge gaps exists within social franchising circles and as Chakraborty *et al.* (2016) affirmed, continued investment in some social franchises is not justifiable unless additional evidence on their ability to achieve a predetermined mission is forthcoming.

All the studies reviewed posit that improvement in healthcare outcomes can be occasioned by social franchising. However, it is clear that there is lack of conclusively due to weak evidence from the studies. Unlike studies in commercial franchising, all the studies reviewed have used case study approach with similar limitations shared across the studies. In commercial franchising research for instance, approaches such as content analysis, cluster analysis or Bayesian analysis have been used and hence provided different avenues for analysis and new body of knowledge (Karlijn *et al.*, 2016). It is also worth noting while the franchisors seem to be doing well in a particular area, there is no clear consensus from the different studies that franchisors will successfully replicate their success among the franchisees.

CHAPTER THREE

STUDY METHODOLOGY

3.1 Introduction

This chapter deals with the methodological aspects that was applied in this study. This includes the study area, study design, sample size and sampling procedure. The chapter also focuses on the data collection, data management, inclusion, and exclusion criteria that will be used. Lastly, it will focus on data analysis methods, ethical considerations, and limitations.

3.2 Study area

The study was conducted within Nairobi county which has 36 facilities franchised by Marie Stopes International. The choice of Nairobi County was largely because the county has attracted more franchising organizations than any other county with five out of the six franchising organizations operating within Nairobi (Chakraborty *et. al.*, 2016). Nairobi County is also the most populous county with estimated 4.4 million people and in terms of CPR, the county scores poorer (63%) compared to Kiambu county (74%) and Machakos (76%).

3.3 Study design

The study adopted a survey research design comparing routine contraceptive uptake data from 36 private facilities franchised by Marie Stopes International against data from a similar number of purposively selected facilities from a pool of non-franchised facilities within Nairobi County.

3.4 Sample size and sampling procedure

Purposive sampling was used to select 36 non-franchised facilities that were matched against a similar number of franchised facilities. The 36 comparison facilities were selected from within the same sub-county and not more than 5kms from the franchised facility. The non-franchised facilities selected were also of the same KEPHI level with the franchised facilities.

3.5 Inclusion/exclusion criteria

3.5.1 Inclusion criteria

All the facilities franchised by Marie stopes International within Nairobi County

Purposively selected facilities from a pool of non-franchised facilities

3.5.2 Exclusion criteria

Facilities franchised by any other franchising organization

Public facilities within Nairobi County

3.6 Conceptual framework

Figure (1) presents the conceptual framework used in this study. It signifies how franchise status (Franchise/non-franchise) influence the utilization of contraceptive methods.

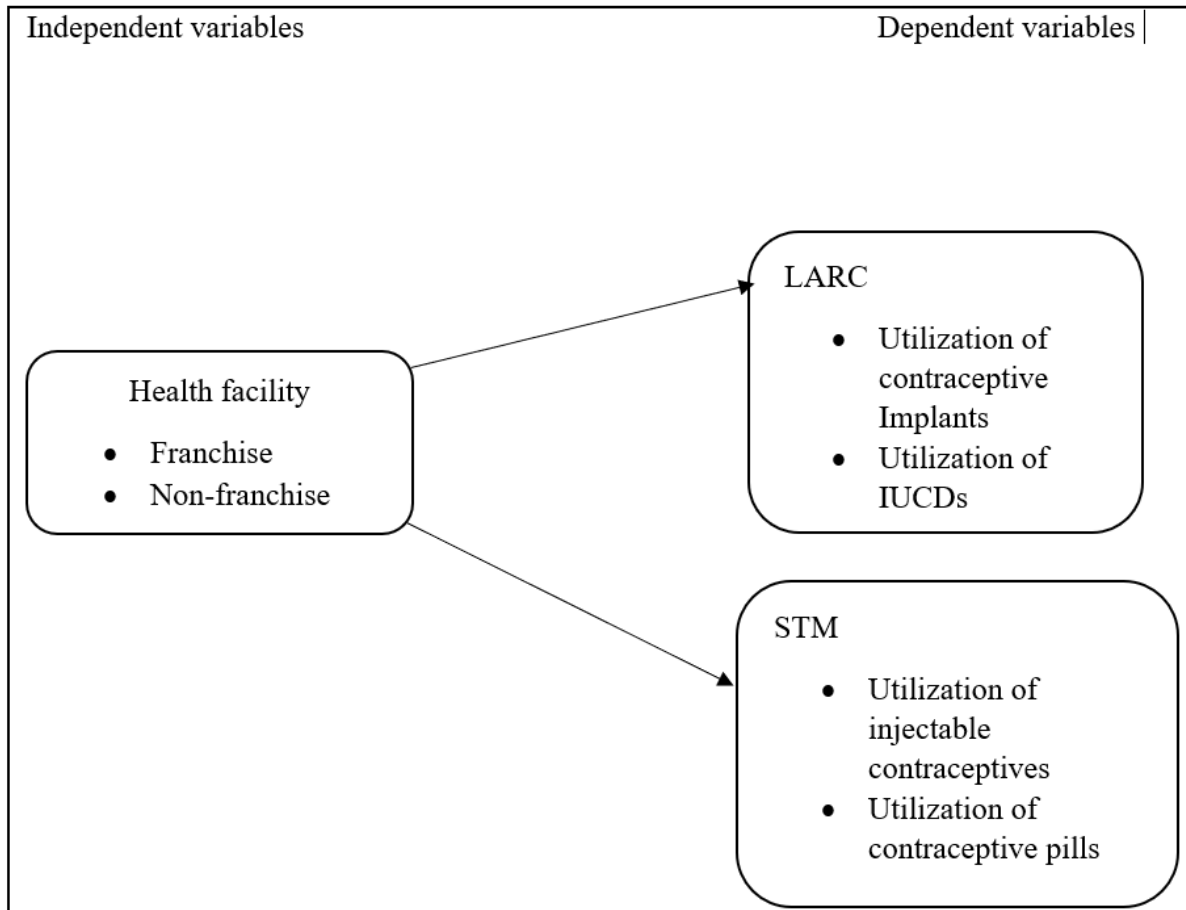


Figure 1: Conceptual framework

3.7 Data sources

Administrative Data gathered in the study was gathered from the Kenya Health Information System website (<https://hiskenya.org>) as collated from district across the country through an information management system since 2011. Facility contraceptive data for both LARCs and STMs excluding condoms was extracted for the period between January 2018 and December 2019.

3.8 Data Analysis

Cleaning and analysis of data was done using STATA. Cleaning involved checking on the completeness of the data, duplicate records, missing values, renaming, and generating new values and checking internal consistencies. DHIS2 data was exported to STATA and descriptive statistics used to analyze quantitative data. Multivariate analysis was used to assess the effects on franchising on contraceptive use. Trends in contraceptive utilization between the two groups of facilities were analyzed for both LARCs and STMs excluding condoms. Total LARC per health facility were obtained by adding both IUDs and contraceptive implants while total STMs was obtained by adding injectable contraceptives and pills.

3.9 Analytic Model

Multivariate analysis of Variance (MANOVA) was used to assess how franchising affects the utilizations of each of the two dependent variables (LARC and STMs). MANOVA simultaneously tested the effect of franchising on the two dependent variables as well as detect any covariation between the response variables. The model is expressed as:

$$Y_{ij} = \mu + \tau_i + \epsilon_{ij}$$

Where: Y_{ij} refers to the j th observation in the sample from group i (i = has 2 levels (Franchise/non-franchise) and $j = 1, \dots, 72$)

$j = (1, \dots, n_i)$ - Indexes the quantitative outcome variables (STM and LARC).

μ is the overall mean

τ_i = the non-random effect of treatment I (Franchising), where $\sum_{k=1}^k \tau_i = 0$

μ_i is the mean for the i th population (with $\mu_i = \mu + \alpha_i$)

$\varepsilon_{ij} \rightarrow$ random error terms such that $\varepsilon_{ij} \sim N(0, \sigma^2)$, independent

Table 3. 1: Variable definition and measurements

Variable name	Definition	Measurement	Expected sign
Dependent Variables			
STM	Short term methods. Contraceptive methods that last not more than three months. Includes both contraceptive injections and pills.	Continuous variable. Average contraceptive services provided per health facility.	Positive/Negative
LARC	Long Acting and Reversible Contraceptives. Contraceptives with protection exceeding a year. They include contraceptive implants and intra-uterine devices.	Continuous variable. Average services provided per health facility.	Positive
Independent Variables			
Health facility	Facility is either under franchise support or independent (Non-Franchise)	Indicator variable Franchise = 1 Non-Franchise = 0	

3.10 Ethical considerations

In this study, secondary data from DHIS2 was utilized hence there was no need for informed consent. However, permission was sought from the ministry of health to access DHIS 2 data.

3.11 Limitations

The study did not consider other factors that might affect utilization of services but majored on the franchising which was the major intervention undertaken during the period of study. That notwithstanding, the study will provide useful insights on how social franchise influence contraceptive method choice and utilization.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents an exploration of the dataset used in the analysis. Subsection 4.2 presents the measure of central tendency (mean), measure of dispersion (standard deviation) as well as the minimum and maximum values of the variables used in the analysis. Subsection 4.3 presents the pre-estimation tests while sub-section 4.4 presents the test for equality of variance by franchising. Lastly, subsection 4.5 presents the Multivariate analysis of variance.

4.2 Descriptive Statistics

Table 4. 1: Descriptive statistics

	Franchise 2018		Franchise 2019		Non-franchise 2018		Non-franchise 2019	
	STM	LARC	STM	LARC	STM	LARC	STM	LARC
Mean	48.89	19.16	56.71	22.47	44.29	7.32	43.84	5.72
Std. Dev.	26.78	12.08	28.54	15.53	38.04	10.16	30.31	5.92
Min	17.92	7.08	30.58	10.17	0.25	0.17	11.25	0
Max	131.16	53.75	142.5	70.42	145.17	51.42	114.67	21.08

Table 4.1 reveals that for franchise facilities, the average uptake of STM increased from about 49% in 2018 to 5756.7% in 2019, while for LARC, it increased from 19% to 22.5% respectively in same period. On the other hand, for Non-franchise facilities, the average uptake of STM reduced from 44.3% in 2018 to 43.8% in 2019, while, for LARC, the average uptake reduced from 7.3% in 2018 to 5.72% in 2019. This implies that social franchising improved the utilization of STM and LARC by 16% and 17.3% respectively in a two-year

period. Further, the study revealed that although the minimum and maximum values of STM uptake in the franchised facilities for the year 2018 was 17.9% and 131.2%, the degree of variability was large (at 26.8%) compared with that of LARC of the same group. This is also the case for the succeeding year with a variability degree at 28.5%. For the non-franchise facilities, the minimum and maximum values of STM were 0.25% and 145.2% for 2018 and 11.6% and 114.7% for 2019, respectively. However, the degree of variability in the non-franchise STM remains higher than that of LARC in the same group, for the two years.

In regard to growth of the uptake among the two categories, the study reveals that there was growth in the uptake of both STM (16%) and LARC (17%) among the franchised facilities between the two years under study (see Figure 2). However, for the non-franchise facilities, both STM and LARC experienced a decline of 1% and 21% respectively in the period under study. These findings show that the slight improvement shown in figure 3 was contributed to by franchised facilities as the non-franchise ones had a negative growth in 2019.

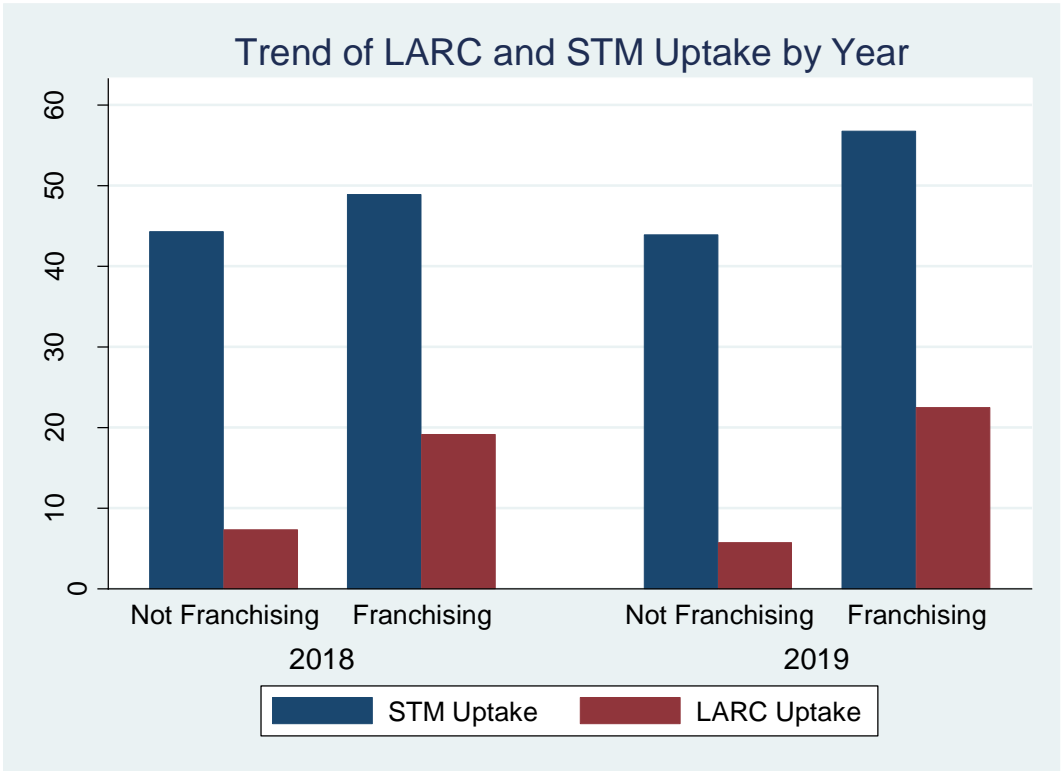


Figure 2: LARC and STM uptake by Category by Year

Generally, STMs were more practiced in both Franchise and non-franchise facilities. Franchise facilities were doing well in terms of provision of both LARC and STM. From Figure 3, the STMs were more practiced for both Franchise (52.8%) and Non-Franchise (44.1%) facilities compared to LARC [Franchising (20.8%) and Non-Franchising (6.5%)].

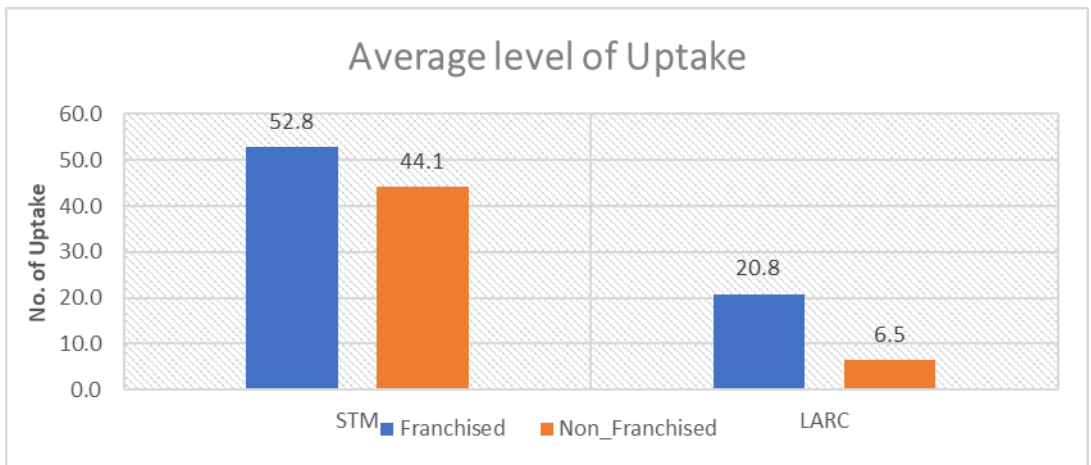


Figure 3: Average level of STM and LARC uptake

We further sought to establish the growth of STM and LARC uptake in the two-year period under study. From Figure 4, we established that although both STM and LARC had a positive growth in the two periods, STM showed a higher growth rate of 0.08% compared to 0.06% of LARC. Further reveals that on average, there was 46.6% STM uptake as compared to 13.2% LARC uptake in 2018. However, in 2019, the study shows that there was a slight improvement for both STM and LARC in which the average STM uptake stood at 50.3 while that of LARC stood at 14.1

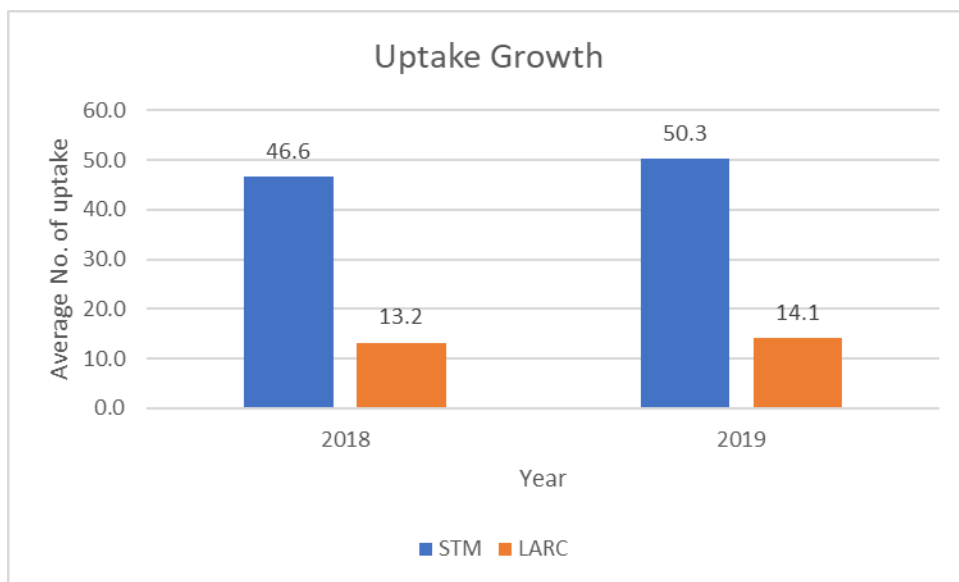


Figure 4: Uptake growth of both STM and LARC

4.3 Pre-estimation tests

4.3.1 Test of equality of covariance matrices

One of the assumptions in MANOVA is that the vector of the outcome variables follows a multivariate normal distribution and that there is homogeneity of covariance matrices across the different groups. This test assist in choosing whether to proceed with MANOVA or choose a different test. According to the test, the null hypothesis states that the observed covariance matrices of the dependent variables are equal across groups. If we fail to reject the

null hypothesis, then MANOVA will be the appropriate test for the dataset. From the results, the significance level is 0.7032, which is above 0.05, implying that there is no significant difference between the covariance matrices hence the assumption is not violated, implying that MANOVA model is appropriate (See Table 4.2).

Table 4. 2: Test of equality of covariance matrices across 2 samples

Test of equality of covariance matrices across 2 samples			
Modified LR chi2 =	3.893189		
Box F(6, 146093.9) =	0.63	Prob > F =	0.7032
Box chi2(6) =	3.80	Prob > chi2 =	0.7032

4.3.2 Test for equality of error variance

The study sought to test the assumption in MANOVA that the error of variance for each variable are the same across groups. From the results in Table 4.3, the p-value (0.9216) is large enough for us to reject the null hypothesis hence we conclude that the assumption has not been violated (p value is greater than the threshold of 0.05).

Table 4. 3: Test for equality of error variance

Variable	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Franch~g	144	.5	.0418121	.5017452	.4173503	.5826497
sd = sd(Franchising)				c = chi2 = 144.0000		
Ho: sd = 0.5				degrees of freedom = 143		
Ha: sd < 0.5		Ha: sd != 0.5		Ha: sd > 0.5		
Pr(C < c) = 0.5392		2*Pr(C > c) = 0.9216		Pr(C > c) = 0.4608		

4.4 Test for equality of variance by Health Facility

4.4.1 Equality of variance for STM by Health Facility

This study sought to determine whether there is any statistically significant difference between franchise health facilities and non-franchise health facilities in influencing the uptake of STM and LARC. In this test, the null hypothesis states that the mean for Franchise facilities and non-franchise are the same. From the regression result in Table 4.4, the P-value of 0.0943 implies that we fail to reject the null hypothesis at 5% level of significance. This means that there was no significant difference in the uptake of STM between the franchise and non-franchise facilities.

Table 4. 4: Equality of variance for STM by Health Facility

Two-sample t test with equal variances						
Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Not Fran	72	44.06481	4.024679	34.15054	36.03983	52.0898
Franchis	72	52.79977	3.271079	27.75602	46.27742	59.32211
combined	144	48.43229	2.609764	31.31716	43.27359	53.59099
diff		-8.734954	5.186328		-18.98734	1.517437
diff = mean(Not Fran) - mean(Franchis)				t =	-1.6842	
Ho: diff = 0				degrees of freedom =	142	
Ha: diff < 0		Ha: diff != 0		Ha: diff > 0		
Pr(T < t) = 0.0472		Pr(T > t) = 0.0943		Pr(T > t) = 0.9528		

4.4.2 Equality of variance for LARC by Health Facility

In testing the mean difference between franchise and non-franchise health facilities, the regression result in Table 4.5 reveals that we reject the null hypothesis (p-Value = 0.000) at 5% level of significance and conclude that franchising a facility improves the uptake of LARC.

Table 4. 5: Equality of variance for LARC test

Two-sample t test with equal variances						
Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
Not Fran	72	6.519676	.9775709	8.294964	4.570455	8.468897
Franchis	72	20.81944	1.640044	13.91623	17.54929	24.0896
combined	144	13.66956	1.123594	13.48312	11.44856	15.89056
diff		-14.29977	1.90929		-18.07407	-10.52546
diff = mean(Not Fran) - mean(Franchis)				t = -7.4896		
Ho: diff = 0				degrees of freedom = 142		
Ha: diff < 0		Ha: diff != 0		Ha: diff > 0		
Pr(T < t) = 0.0000		Pr(T > t) = 0.0000		Pr(T > t) = 1.0000		

4.5 Multivariate analysis of variance (MANOVA)

Having satisfied the assumptions above, the study sought to find out if there were any statistically significant differences in the uptake of STM and LARC between the franchise and non-franchise health facilities. One-way MANOVA was used to generate the results shown in Table 4.6 below. From the results, the different multivariate criteria (Wilk's lambda, Pillai's trace, Lawley-Hotelling trace, and Roy's largest root) led to statistically significant results ($p < 0.000 < \alpha < 0.05$). This implies that the criteria notwithstanding, the predictor was statistically significant (See Table 4.6)

Table 4. 6: Multivariate analysis of variance (MANOVA)

		Number of obs =		144			
		W = Wilks' lambda		L = Lawley-Hotelling trace			
		P = Pillai's trace		R = Roy's largest root			
Source	Statistic	df	F(df1,	df2) =	F	Prob>F	
Health Facility	W	0.7027	1	2.0	141.0	29.83	0.0000 e
	P	0.2973		2.0	141.0	29.83	0.0000 e
	L	0.4231		2.0	141.0	29.83	0.0000 e
	R	0.4231		2.0	141.0	29.83	0.0000 e
Residual		142					
Total		143					

e = exact, a = approximate, u = upper bound on F

4.6 Multivariate Regression model

Table 4. 7: Multivariate regression results

	STM	LARC
Health facility	8.735 (5.186)	14.30*** (1.909)
Constant	44.06*** (3.667)	6.520*** (1.350)
Observations	144	144
Adjusted R^2	0.020	0.283
F	2.837	56.094
P Value	0.094	0.000

Standard errors in parentheses * ($p < 0.05$, ** $p < 0.01$, *** $p < 0.001$)

From the regression result Table 4.7, the overall model fit for both STM and LARC shows that at 95% confidence interval, LARC uptake was significantly dependent on whether the

facility was a franchise or not ($p < 0.000 < \alpha < 0.05$) while STM uptake was not significantly dependent on the category of the facility ($p > 0.094 > \alpha > 0.05$). Further an R^2 of 0.020 reveals that franchising explains approximately 2% variation in STM uptake. Equally, an R^2 of 0.283 implies that franchising explains about 28% of the variation in the LARC. The results further reveal that with all other factors held constant, franchising increased the uptake of STM and LARC by 8.7 and 14.3 respectively.

4.7 Discussion of findings

While STMs were more practiced in Nairobi among both franchise and non-franchise health facilities, (franchise 52.8% and non-franchise 44.1%) compared to LARC (franchise 20.8% and non-franchise (6.5%), LARC uptake was influenced by the category of the health facility. Additionally, STM uptake was not influenced by the category of the health facility. For the two years under study, the results reveal that franchising a health facility was positively associated with increased LARC uptake ($p < 0.000 < \alpha < 0.05$). On the flip side, franchising had no significant effect on the uptake of STMs ($p > 0.0943 > \alpha > 0.05$). These findings corroborate with earlier findings by Azmat *et al.*, (2013), who using a quasi-experimental design revealed that franchising increased awareness and utilization of long-term contraceptive methods by 5% and 28.5% respectively.

Different multivariate criteria (Wilk's lambda, Pillai's trace, Lawley-Hotelling trace, and Roy's largest root) produced statistically significant results for LARC ($p < 0.000 < \alpha < 0.05$), further affirming the argument that franchising was positively associated with LARC uptake. Bellows *et al.*, (2017), had similar findings after analyzing service trends to estimate the contribution of a social franchise program to increasing contraceptive prevalence in Uganda. They revealed that franchising can leverage existing private health set-up to substantially expand contraceptive access and choice.

In estimation of effect size, the study further revealed that franchising explains approximately 28% in the variation of LARC and only 2% in the variation of STM. Chakraborty *et al.*, (2016), had similar findings on LARC while at the same time noting that there was no significant impact in the uptake of STMs.

Within the period of study (2018-2019), performance of non-franchise facilities decreased while that of franchise facilities increased for both STMs and LARC. Azmat *et al.*, (2013), argued that franchise facilities had significantly improved LARC uptake in rural Pakistan due to support activities such as marketing, commodity security and provision of waivers for those unable to pay.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter summarizes the study findings in relation to the study objectives, available literature, and the key variables of the study. It then draws conclusions based on the identified relationship between uptake of STM and LARC and franchising from which policy recommendations are made. Suggestion on areas of further study are given as a way of filling the gaps identified during this study.

5.2 Summary

The study has reviewed key theoretical and empirical literature relating to private sector social franchising and the effects it has on contraceptive utilization. Specifically, the study aimed at looking at the effects of private sector social franchising on contraceptive utilization in Nairobi County, in Kenya. Key focus was on determining the effects of social franchising on two folds: use of Long-Acting and Reversible Contraceptives (LARC) and use of short-term contraceptive methods (STM) in Nairobi County. To achieve these objectives, the study utilized data from the Kenya Health Information System website available freely on <https://hiskenya.org>. This data contains facility contraceptive data for both LARCs and STMs and our study scope was in the period 2018-2019 in Nairobi County.

The study used MANOVA to assess if there was any significant difference in the uptake of both STM and LARC between franchised and non-franchised facilities. The findings reveal a strong significance in the uptake of LARC but no significant difference in the uptake of STMs. This scenario is explained by the fact that provision of LARC requires specialized skills that are imparted by the franchisor through regular training and mentorship however

non-franchise facilities do not have opportunities for mentorship. STMs do not require specialized skills or mentorship and can be provided over the counter hence the category of the health facility did not influence its uptake.

The MANOVA results reveal that, franchising was attributed to 28% performance on LARC and only 2% performance on STM. STMs require no specialized skills and hence non-franchise facilities not receiving regular stewardship can still provide them at almost the same level as those in the franchise program. However, LARCs are known to effectively contribute to CPR hence the emphasis on their provision. The results point to franchisors efforts to improve CPR by capacity building clinical staff to improve counselling and client choice. These efforts are in line with the government's FP2020 commitments. Franchising is thus depicted as an effective way of achieving sustainable development goals among other government commitments since with all other factors held constant franchising increased uptake of LARC by 14.3.

5.3 Conclusion

The study establishes that the provision of LARC was significantly high among the franchised facilities compared the non- franchised ones. LARCs are associated with higher level skills and cannot be provided over the counter as it is the case with most STMs. Facilities not participating in franchise lack the opportunities for coordination and systematic knowledge transfer and this could explain their tendency to provide more of STMs than LARCs. On the other hand, most STMs require no specialized skills and could be offered at any facility including pharmacies. Franchising is therefore found to be an effective way of promoting uptake of LARC which significantly contributes to mCPR and lowering Total Fertility Rate (TFR).

5.4 Policy Recommendation

- In line with the sustainable development goals, there is need for the government to collaborate with more franchising organizations to ensure universal access to contraceptives as envisioned in SDG 3 target 7.
- There is need to invest in continuous capacity building of private sector health providers to improve the provision of LARCs which are considered more effective.
- There is need to ensure commodity security for LARC through partnerships such as franchising since the availability bolsters client choice.
- National and county governments need to strengthen their oversight capacity to provide regular stewardship in areas where are no franchise organizations since this study uncovers the immense potential present in the private sector.

5.5 Further Research

Having generated the above findings, it is clear that the private sector is such an important player in the delivery of contraceptives. Cognizant of the fact that private sector health services are not free, further operational research is necessary to understand how utilization of contraceptives can be guided by demand and not ability to pay. Additionally, as provided above, franchising provides the best service delivery ecosystem within the urban and peri-urban poor population where government investment is largely inadequate. Cost effectiveness of this intervention needs to be assessed with a view of applying it within the context of the entire healthcare system.

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