

Global Leadership Training Programme in Africa

Title of Research

Wireless Mobile Network Business Modeling

- Based on Network Business Comparison between Kenya and Japan -

Name **Hideaki Konno**

Affiliation **Japan Advanced Institute of Science and Technology**

English Summary (1 page)

It was confirmed through 3 months research in Nairobi that there is a big business model difference in mobile cellular network between Japan and Kenya. Specifically, there are several functional limitations and conditions, which are caused by the mobile phone and cellular network hardware (e.g. uplink and downlink speed, power consumption, capacity). Main reason is that the current cellular network platform in Kenya is 2 generation older technology (i.e. 2G/3G) compared to the Japanese current 3.9G network infrastructure. This network environment has impacts on the technical limitation, user controllability, and service capability for voice call and data communication experiences. It might accelerate operator revenue search ration and network commoditization. In Kenya, there is a service innovation company called Safaricom which has over 60% shares in Kenya. It is trying to maximize ARPU (Average Revenue Per User) by Value Added Services Creation, which is designed using Cellular Network Basis. This value added service maximizes not only service revenue but also data communication revenue. This challenge succeeded to establish service business model rather than hardware capability business model. M-PESA is the most successful mobile financial service in the world. Especially, this service is focusing on low-income layer people in Kenya who are making money average 1USD salary per day and this mobile money service brings market advantage to operators. At the same time, this service reduces risks of plunder and robbery and helps people to get an opportunity to escape from poverty. I tried to make it clear how the service model is designed, developed and accelerated to be marketable based on the several interviews conducted with various institutions (e.g. Kenya government/Operator/Service Provider/Global Survey Company GSMA). Especially, an interview opportunity with Safaricom CTO (Chief Technology Officer) was very important as a source of key information. I succeeded to research on the necessary process and factors to overcome the difficulty of transforming the current commoditized hardware network business model to the service business model.

Japanese Summary (1 page)

スマートフォンやタブレット端末といった高機能端末の急速な普及と同時に、世界の通信オペレーターは、通信ネットワーク機器への膨大な投資・維持コスト及びその効率的なマネジメントにより、いかに競争優位性を高められるかが求められている。

今回の 3 ヶ月間のナイロビにおける研究活動で、日本とケニアの携帯通信ネットワーク事業の比較を通じ、新しい競争優位の源泉となりうる携帯通信ネットワークのビジネスモデルの存在を明確にすると同時に、その設計要素と市場拡大の要素を見極める事が出来た。

具体的には、ケニアの通信ネットワークは 2G/3G といった日本で主流となっている 3.9G の 2 世代前の通信ネットワーク技術が基盤となっている。これらの通信技術基盤の違いは、堅牢生というネットワークに必須の要因を低下させるだけでなく、それを補う拡張性が限定的である事が故に、電力消費やハードウェアのさらなる増強といった投資コストの増大を生む点にある。それと同時に、携帯電話端末ユーザーの通話品質悪化や、データ通信速度の低下といったユーザーエクスペリエンスに対する満足度も低下させる。これらの不安定要素は、通信オペレーターの収入の源泉である加入者獲得に危機的状況を与え、収入制限や通信ネットワークのコモディティ化と言った、負の連鎖を引き起こしかねない状況をもたらしている。

このような不安定要素が存在する中、ケニアで 60%以上の市場シェアを持つオペレーターのサファリコムは、ユーザーの通信時間及び通信回数からなる ARPU (加入者一人当たりの月額料金) を最大化させ、収入と顧客満足度を高める付加価値サービスを実施している。これらのサービスをオペレーター自らが開発し市場展開する事で、サービスという新しい収益を得るだけでなく、サービスを使用する事で得られるデータ通信の収益も最大化するという、サービスビジネスモデルへの変換に成功している事がわかった。

この代表的付加価値サービスが、モバイルファイナンスサービスである M-PESA だ。この M-PESA サービスは、主に平均収入 1 日約 1 ドルといった低所得者層向けに開発されたサービスであり、携帯電話を通じ安全かつ効率よく家族や親族、友人といった比較的身近な他者と送金や金銭の貸借を可能とする物だ。このサービスは、オペレーター自らが開発・提供するモバイルファイナンスサービスとして、世界で初めて成功した付加価値サービスだ。この送金サービスは、オペレーターにとって市場優位性向上させるだけでなく、低所得者層の直面する資産略奪や強盗といったリスク軽減に高い貢献をしている事が分かっている。また、ケニアの約 70%の人口が本サービスを利用するといったスケールメリットを活かし、他の銀行や郵便局といった金融機関と比較し、サービス提供コストの抑制も実現した。これらの低コスト化が、ユーザーの資産運用や新しいビジネスの創造にも貢献する事で、貧困から抜け出す機会をも生む事に成功している。

本研究は、ケニア政府機関(CCK)、通信オペレーター、通信ネットワーク機器ベンダー、サービスプロバイダー、グローバル調査機関である GSMA 等へのインタビュー調査を通じ、本付加価値サービスのビジネスモデルがいかにデザイン・開発され、市場展開を加速化させる要素となり得

たかに着目をしている。更には、ケニアで最大かつ M-PESA サービスを展開するオペレーターである、サファリコム の CTO へのインタビューにも成功した事で、公表されていない情報も得る事が出来た。これらの現地研究活動は、今後日本の通信オペレーターが直面すると考えられている、通信ネットワークのコモディティ化をいかに克服していくかという面で貢献をするものと考えられ、その為の、サービスビジネスモデルへの転換に必要なプロセスと要素を明確化にすることができた。

Main Text

1. Introduction

Smartphone and tablet device market are expanding rapidly. At the same time, global communication operators are suffering from the huge investment cost and complicated management of network equipments and maintenance. Each operator is trying to find out a new competitive advantage and value services under the commoditized market environment. This research makes clear the modeling of new competitive business model in the network area based on the comparison between Japanese and Kenyan operators. At the same time, the research detects the market value of this value added services modeling based on the analysis of M-PESA service which is provided by the Kenyan major operator.

Comparing the network hardware capability and environment between Japan and Kenya, Kenyan network is less stable with very low capability due to hardware limitation since Kenyan operators are using 2-generation-old platform. This hardware limitation might have an impact on the revenue limitation and user satisfaction from the market competitiveness perspective. On the other hand, Japanese operators are required to promote market commoditization due to hardware technology saturation with the latest and stable technology. To address those issues, firstly, this research analyzes the business structure between Kenyan and Japanese operators. Secondly, it makes clear how Kenyan operators are overcoming the limitation of the hardware and technology. Lastly, it proves the validation of aggregator management for the value added service business under the hardware technology saturation environment.

2. Study area

My study area is the business model differences in mobile phone network between Japan and Kenya

3. Methods and materials

Firstly, I started from the comparison of operator revenue between Japanese and Kenyan operators. I compared below points as key index;

1. Market share
2. Total Revenue
3. Break down of Voice/Data/Services.

We could understand from the comparison that while 60% of main revenue of Japanese operators consists of data, the one of Kenya operator (Safaricom) consists of voice, data and services. The difference of revenue from the service between Japanese and Kenyan operators is around 30% and this service can be defined as “Value Added Service”.

Therefore, my research questions are as follows;

- 1) Is What kind of service business creating value and revenue for the Kenya operator?
- 2) How are they generating those services to the market?
- 3) How can these kinds of value added services be generated in Japanese environment?

I carried out this research by interviews with the government, operators, service providers and Global Survey Institution in Kenya as well as market surveys and related literature review.

Interview with several institutions

Communications Commission of Kenya Movement

Safaricom	Operator	8 times
Airtel	Operator	1 time
Orange	Operator	2 times
Nokia	Network solution Provider	8 times
Kopokopo	Service Application Provider	1 time
iHUB	Service Provider	1 time
GSMA	Global Survey Institution	2 times
Others...		

4. Results

I made clear three key factors for the acceleration of value added services in Kenya. Firstly, their designed process is unique compared to the global standard design process. In order to accelerate localization, they are implementing some global marketing strategies for their designed process. At the same time, they are activating global functions by local software design and development. Normally, operators just research global marketing and refer some used cases however they do not reflect those faction and localization by design and development. Moreover, it’s also creating comparative advantage as to other operators as technical leverage.

Secondly, they have unique methods and process for value added service evaluation. They work on this process before they commercially rollout those value added services so that they can maximize and optimize market value using the result of their evaluation and pilot run in the limited area.

Lastly, I made clear factors to accelerate their value added services in the market. Usually, a service provider proposes value added service to an operator and the operator implements the value added service at their own

mobile phone retail stores while an ‘aggregator’ is connecting those value added services between service providers and operators. Since aggregator has several knowledge (e.g. market knowledge/technical knowledge from both service provider and operator perspective), they have kind of interface to connect and maximize new technology and market activation in Kenya. It is above three key factors that differentiate the design process of Kenyan operator from the one of global-standard. I believe that those factors are maximizing the value of value added services in the market.

5. Discussion

Based on the key successful factors of business in Kenya mentioned above, I think that it’s better to compare the different factors between succeeded business model and failed business model. Trying to establish some hypotheses by the comparison, I would like to compare the Mobile-PESA service (Succeeded business model) and the Minute Factory Model (Failed business model) in the near future.

6. Conclusion

I have not reached to the conclusion however I’ve finalized a half of my research on the subject such as an analysis on actual mobile phone usage/market, the government structures in mobile phone area/several value added service in Kenya, and mobile money service in particular. I will continue my research activity in Japan.

7. Reflection on the Global Leadership Training Programme in Africa

(What you learned through this programme)

I enjoyed my research activities in Kenya. I learned from this program that it is a big challenge to research in Africa specifically on my research area which is related to the company strategy. In order to overcome this situation, I also learned harmonization and respect are very important factors to move forward the research activities. Although I experienced several accidents (pickpocket) and challenges in Kenya, United Nation University and Nairobi University strongly supported my research activities.

Acknowledgement

I would like to thank all members for supporting my research activity. Because my research is related to the confidentiality of the company, it was a very big challenge to get contact window and information. I have confidence that I could never have completed my research without the support of Chairman Ouma (UNIVERSITY OF NAIROBI), Prof. Mugeni (UNIVERSITY OF NAIROBI), Dr. Mucemi (UNIVERSITY OF NAIROBI), interviewers and all my supporting team members in Kenya. Lastly, I also appreciate the opportunity of joining the Global Leadership Training Program in Africa.

References

CCK Statistics (2013), Communications of Commission of Kenya

Design Mobile Money Transfer Services (2013), GSMA

Jake Kendall (2014), Foreign Affairs Report モバイルファイナンス革命－携帯電話と経済, Ministry of Foreign

Affairs in Japan

Mobile Wireless Africa (2013), KADIUM

Safaricom Annual Report (2013), Safaricom

柴沼俊一(2013), 知られざる職種 アグリゲーター, 日経 BP