

Telecom Liberalization in Ethiopia: Challenges and Opportunities for Local Engineering Firms in the Sector

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Abstract

The purpose of this study is to examine the prospect of telecom sector liberalization on local telecom engineering firms in Addis Ababa, Ethiopia. The census method was used to collect data from 33 local telecom engineering firms. Structured questionnaires were distributed and collected from general or deputy general managers of local telecommunications engineering companies who had direct information about the prospect of telecommunication liberalization in their companies. Descriptive and relative importance index (RII) analysis methods were performed to achieve the study's intended purpose. By using the relative importance index, this study found that the biggest challenges that local firms are facing due to liberalization are a lack of clarity about how foreign firms would be involved and the unavailability of legal or political control over these foreign companies; a lack of incentives by the government to build local capacity; international standards requirements by telecommunications operators; a shortage of standard tools and equipment; and the unavailability of internationally recognized training institutions in the country. The study also identified two key opportunities for local engineering companies related to the liberalization of the telecommunications sector: the improvement of occupational health and safety through the adoption of new project management skills and the readiness of the local engineering companies to adapt to and cope with the new liberalized environment. Based on the findings, the study offered important recommendations, such as the adoption of supportive laws, regulations, and policies, as well as supportive tax and tax exemption rights for regional telecommunications firms. The main proposals include covering mandatory joint ventures between foreign and domestic businesses, defining the licensing requirements for foreign businesses, ensuring management systems, and enhancing industry-standard tools and instruments.

Keywords: *Telecom liberalization, local telecom engineering firms challenge, opportunity*

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Introduction

By permitting commercial organizations to launch new telecommunications companies as long as they abide by specific government-established guidelines, rules, and regulations, telecoms liberalization serves to increase competition in the sector (ICC, 2007). One of the last telecom markets in the world to close and liberalize in May 2021, Ethiopia has acknowledged international best practices in the industry. The Ethiopian Global Partnership has received a new telecommunications license, the Ethiopian government has announced (CIPESA, 2021). The consortium led by Kenya's Safaricom PLC, which also comprises the UK's CDC Group and Japan's Sumitomo Corporation, secured the license with a \$850 million offer (91.75 billion shillings).

In light of this, this paper investigates local telecommunications engineering companies' possibilities for deregulation in the telecoms sector. Several regional telecom engineering firms were founded in Ethiopia by Ethiopians Vision, which currently owns more than 50% of the company. They hold licenses from the ECA and between two and twenty-six years of expertise in the telecom industry. By taking this into account, it is clear that the liberalization of the telecom sector will present both opportunities and challenges for local engineering firms. If the firms are prepared to seize these opportunities, they may gain from the transfer of skills, the provision of high-quality services, and the scaling up of the firms to become globally competitive. If they are not sufficiently prepared, it may result in difficulties like critical personnel turnover, business downsizing or closure, an increase in the nation's unemployment rate, etc. (Berhan, 2021).

According to this study, it is crucial to consider how local telecom engineering companies will be affected by telecom liberalization in order to identify the biggest challenges and create effective policies and strategies to address them in order to improve business performance. Additionally, it might offer advice on how to promote and coordinate the preparation of regional engineering firms, help local telecom companies seize and utilize prospects, and serve as a starting point for further research. To the best of the researcher's knowledge, no specific study has been done on the implications of telecom liberalization for Ethiopian engineering firms. The notion of telecom liberalization is not new and has been explored in the past.

Next, the study's particular objectives are to: (1) Assess the main Obstacles to Telecom Liberalization for Local Engineering Firms, (2) Identify the Major Opportunities for Telecom Liberalization for Local Engineering Firms, and (3) Assess the Readiness of Domestic Telecom Engineering Companies for Opening Up of New Telemarket. The following research questions are listed after the mentioned particular objectives. What are the primary difficulties faced by local telecom companies in Addis Ababa as a result of the liberalization of the industry? Which major opportunities do local telecom companies have in relation to telecom liberalization? (iii) How are local businesses preparing for the difficulties brought on by telecom liberalization?

Review of Related Literature

The term "liberalization" has no universally accepted definition because it is interpreted differently by many academics and observers. "Liberalization is defined in terms of market access for service suppliers and focuses on developing competition, with foreign participation, beginning with an environment conducive to market entry, especially for the other World Trade Organization (WTO) members," according to the Agreement on Basic Telecommunications (ABT). Furthermore, privatization, deregulation, and restructuring are not the same as liberalization, despite the fact that the terms "liberalization" and "restructuring" are usually used synonymously (WTO, 1997).

Because liberalization is viewed as being detrimental to increasing national productivity, it receives a negative evaluation in Marxist literature. Greenwald (1989), On the other hand, the liberal literature assesses liberalization favorably and sees it as a process that strengthens and stabilizes an economic system, increases its usefulness, and generates new productive forces (Hill, 2010). In addition, modern Neo-Keynesian literature views liberalization as a process that has both constructive and unpleasant effects on economic activity.

Liberalization of Telecommunication

Historically, the telecom industry has been a natural monopoly, with a single telecom company offering a variety of goods and services. The corporation and the sector are the same in a monopolistic market structure. Sector liberalization is a trend, but because different nations have varied definitions, explanations, and objectives for it, it hasn't manifested itself consistently. Nevertheless, the 1997 Agreement on Basic Telecommunications (ABT) of the World Trade Organization (WTO) is a sign of the consolidation of this trend, with more than 40 LDCs and all

the industrialized countries making legally binding commitments to implement various degrees of liberalization in their telecommunications sector over the following ten years (WTO 1997).

Many Least Developed Countries (LDCs) are also actively pursuing sector liberalization plans outside the framework of the multilateral trading system. The importance of ubiquitous telecommunications connectivity in promoting social and economic prosperity is also being better understood by theorists and decision-makers. Due to the promotion of economic and social inequality caused by a country's lack of access to information, lack of access poses a threat to social stability (Hieronymi, 1999)

Liberalization in Developing Countries

The telecom business is referred to as the key economic pillar with the understanding that an effective and functional telecommunications infrastructure contributes more to economic growth and offers input to numerous industries. Many growing nations decided to gradually liberalize their service sectors in general and their telecoms industries in particular in light of this viewpoint. to profit on a multitude of levels from the sector's opening up to competition, global knowledge, and technical advancement. The productivity and expansion of a wide range of user sectors can be considerably enhanced by improved telecom services. The majority of service sector reforms in Africa perform very unevenly over the period of service liberalization. Only the telecommunications sector's changes were successful, particularly in light of the expanding mobile and telephony markets.

African telecom companies generated over \$10 billion in revenue and profit in 2003, according to an ITU estimate from 2004. Trade liberalization in the services sector is necessary given the dynamism of this business. The General Agreement on Trade in Services (GATS) was subsequently signed in 1994 as a result. We should also keep in mind that the intensifying competition among service providers in wealthy countries raised demand (or potential profit margins) in emerging countries. This directed the consolidation of the liberalization in the services sector through international trade talks in Uruguay.

The objectives of the liberalization of the telecom sector are listed below. It aims to (I) advance the development of current services, (ii) increase the supply of new services and facilities, (iii) increase competition between the public and private sectors, (iv) attract private investment, (vi)

accelerate economic growth, (vii) reduce the external deficit of telecommunications transactions, and (v) open up new doors for the international expansion of the concerned economies (Intven and Tetrault, 2000).

With the government's decision to allow foreign companies access to the market, competition among enterprises lowered costs and improved service levels. UNCTAD, for its part, assessed how liberalizing the service sector would affect economic growth, social development, and the eradication of poverty in developing countries. Liberalizing the service industry in general and the telecommunications industry in particular will increase global welfare through higher productivity, lower costs, and a wider range of service options, as well as increased competition at the national level, if the appropriate regulations and policy framework are in place.

Similar findings were made by Yoong Hon et al. when they looked at the productivity and efficiency of the Malaysian telecom sector prior to the liberalization measure. They found that the sector's inefficiency and high costs were its defining characteristics. Furthermore, Malaysia's sole government-owned telecom provider retained its monopoly in both fixed and mobile services prior to the liberalization act. It is projected that increasing access to basic services will be essential for reducing poverty and achieving the MDGs. In their study paper from 2006, Gloria Otieno and Eric M. Aligula claim that the Kenyan government started liberalizing the telecoms industry in 1997.

The government then embarked on reforms that included progressive liberalization and privatization, with the goal of making the telecom sector vibrant in the regions. According to the study's conclusions, Kenya's telecom sector has grown significantly, particularly the mobile telecoms sector, as a result of deregulation. Furthermore, the study found that access to services has improved in both urban and rural areas. In light of this, the argument for universal access that most governments put forth to maintain their monopoly in the sector is no longer valid. The advent of mobile technology and Internet services has also had an impact on information access and employment creation, both directly and indirectly.

Gloria Otieno and Eric M. Aligula (2006) demonstrated that in Kenya, liberalizing telecom will result in more jobs and a decrease in poverty if correctly implemented and supported by an enabling policy framework. Nigeria is one of the other African nations where the liberalization of the telecommunications industry has resulted in improved service delivery and lower telecom

costs, which in turn have lowered production costs, increased business competitiveness, and improved public welfare. In a 2011 study on liberalization of communications in Nigeria as an argument for a democratic paradigm, Essienubong and Nsikak (2017) discovered that the Nigerian telecom sector leaped to trajectory growth and dynamism after the liberalization measures. The study notes that there is still concern about justice and equity in how growth and development are distributed. The authors use a customized database of Ukrainian businesses from 2001 to 2007 as a source of exogenous variation to analyze the impact of services liberalization on manufacturing businesses' total factor productivity (TFP). According to their research, a standard deviation increase in services liberalization is correlated with a 9% increase in TFP. Even more of an impact results from allowing the liberalization of services to dynamically alter TFP through the investment channel. Various estimation methods and data sub-samples little affect the outcome.

According to Shepotylo, O. and V. Vakhitov (2015), one of the key potential benefits of providing a license to a foreign telecom provider is the possibility to decrease domestic market dominance. When foreign companies enter the domestic telecom market in limited numbers, profits may be transferred abroad and may result in the formation of an international cartel if the domestic telecom sector is not sufficiently regulated, according to Denise Eby Konan and Ari Van Assche (2004), who studied the effects of telecom liberalization in Tunisia. The liberalization of the telecom industry has led to a concentration in the opening of monopolistic markets to competitive facility and service supply. The Cameroon administration held a monopoly on the telecom industry prior to the liberalization of service, which brings in competition and makes room for the entry of two foreign providers. Competition is a term used to describe a battle between at least two forces where the winner often holds a bigger market share. Competition, however, also encourages advancements that can motivate providers to enhance their offerings. The services that are provided will now depend on the capacity that each operator can offer to his customers.

The association agreement, which went into effect in March 2000, serves as the legal foundation for relations between the EU and Morocco. Under this agreement, an industrial free-trade zone will be gradually established by 2012, and agricultural commerce will gradually liberalize. The deal between Morocco and the EU also mandates the start of negotiations for a free trade area in services. The inked agreement has measures for establishment freedom, capital mobility, and competition rules even though there are no legally binding obligations in the area of services. The

"Neighboring Strategy" calls for Morocco to further bolster its links to Europe, and this is what is projected to happen.

As part of its commitment as a WTO member to gradually liberalize its communications services, Morocco has negotiated a Free Trade Agreement (FTA) with the US that covers telecommunication services. According to Achy and Lahcen (2005), the cost and quality of telecommunications services have a direct impact on business expenses as well as a company's ability to network and compete in both domestic and international markets. Third, the development of the telecommunications services sector would generate additional investment opportunities for the domestic private sector and help attract more FDI and portfolio investment.

Method of the study

Research Approach and Design

The goal of this study is to examine the possibility of telecom liberalization for regional telecom engineering firms in Addis Abeba. To achieve this goal and analyze the research's findings thoroughly, a descriptive research design and a qualitative research approach are used. Similar to this, the Relative Importance Index (RII) is employed to examine and rate the relative importance of the possibilities and problems faced by regional engineering firms as a result of telecom liberalization. Analysis of the potential and difficulties faced by regional engineering enterprises as a result of telecom liberalization is part of the research methodology. At the same time, it concentrated on how prepared the regional engineering businesses were to seize the chances and face the difficulties.

Data Type, Source, and Method of Collection

The basic data for this study was gathered through an open-ended and closed-ended structural questionnaire that was created to investigate the potential impact of telecom liberalization on regional engineering firms in Addis Ababa, Ethiopia. Primary data sources and cross-sectional data types were obtained through questionnaires from regional telecom engineering companies located in A.A. for this study.

The respondents are the general or deputy managers of local businesses. The structured questionnaire for this study contains five key elements. The respondent's background is covered in the first section. The second section discusses the readiness of local telecom companies for the new telecom market, the third section discusses the opportunities for these local businesses related to telecom liberalization, the fourth section discusses the challenges these local businesses faced as a result of the liberalization of the telecom sector, and the fifth and final section discusses open-ended questions regarding the difficulties, opportunities, and readiness of these local businesses as a result of the liberalization of the telecom sector.

Sampling Design and Method of Analysis

The 34 local telecom engineering firms in Addis Ababa that make up the study's target population are well-versed in the challenges and opportunities presented by the deregulation of the telecommunications industry. The census method is reasonable and appropriate given the survey's tiny overall population. A census is used to gather comprehensive, accurate, and trustworthy data on the entire population. The relative significance index (RII) and frequency value technique of analysis are utilized to evaluate the main difficulties and important possibilities connected to telecom liberalization for local engineering enterprises.

Data Analysis, Findings, and Discussions

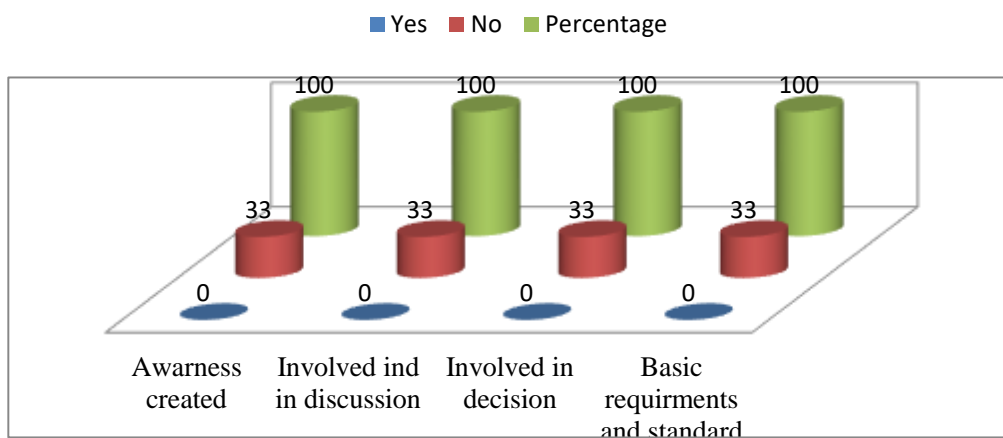
This section focuses on the research findings, discussion, and analysis of the three categories examined in light of the opportunities created for current local telecom engineering companies in the liberalization of the private telecom sector, the difficulties encountered in the liberalization of the telecom sector, and the readiness of these local companies for the market open-up. It used the Relative Importance Index Measurement and the information collected through a questionnaire from the respondents was answered by using Likert-scale (1-To a very low extent, 2- To Low extent, 3- Average 4-To a great extent and 5- To a very great extent).

Readiness of Local Telecom Company with Respect to ECA/Ethiopian Communication Authority

From the awareness point of view, this research found that no awareness was created; it was evident from the survey result above that the local telecom companies that participated in the study didn't have any say in the decision-making process of the liberalization of the telecom sector. As per the survey results, none of the companies that participated in the study were consulted by ETA or other policymakers during the policy and regulation formulation of telecom sector liberalization, and the Ethiopian Communication Authority (ECA) was not informed of the basic requirements and standards needed by the liberalized company (Safaricom).

Figure 1

Eca's Responsibility For Local Telecom Firms Concerning Telecom Liberalization



Source: Owner's questionnaire survey data, 2022

Therefore, from the above figure, we can conclude that 100% of the local companies were not made aware of the telecom liberalization intentions beforehand. This implies that the Ethiopian Communication Authority (ECA), which is responsible for regulating the telecom sector, didn't create pre-awareness regarding the telecom liberalization intentions for local telecom companies.

As a local company, being selected among the competitive firms and involving itself in the project of a liberalized telecom company, while being technically equipped with the basic tools and instruments that are required by the vendor, are mandatory. By keeping this in mind, the researcher tried to assess the readiness of local firms with respect to the basic vendor's required tools and instruments, and the researcher found that local engineering companies invested in the training of

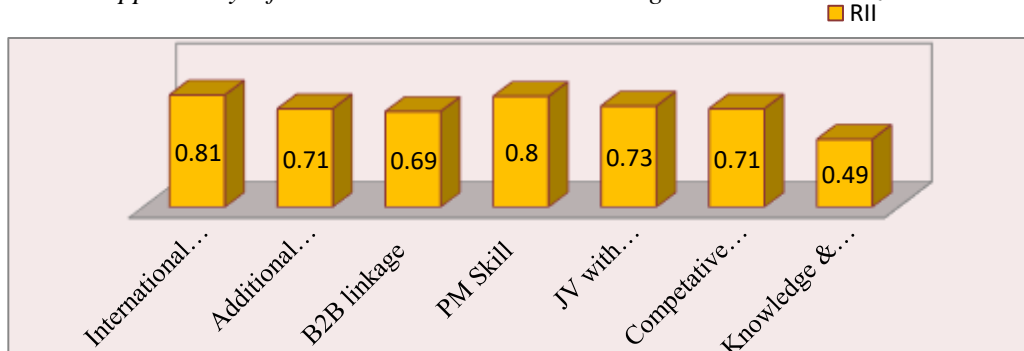
their staff to acquire the required certifications, they imported the tools and equipment needed for the implementation work, and they also modernized their management by deploying strategies like international standards such as ISO/EHS. Additionally, these local companies tried to influence and advocate for a better protective policy in the process of liberalization.

Opportunity of Local telecom engineering firms following of liberalization

According to the perception of the respondents, figure 4.2 discovered that adopting international safety, quality, and environmental standards (RII = 81%) is the most ranked opportunity available for local telecom companies in the opening up of this private telecom sector. In addition, the increasing of project management skills for those local telecom engineering companies due to the liberalization of the telecom sector is ranked second, at 80%. Similarly, the opportunity of working as a joint venture with international companies is ranked third, at 73%.

Figure 2

Opportunity Of Local Telecom Firms Following Telecom Liberalization



Source: Owner's questionnaire survey data, 2022

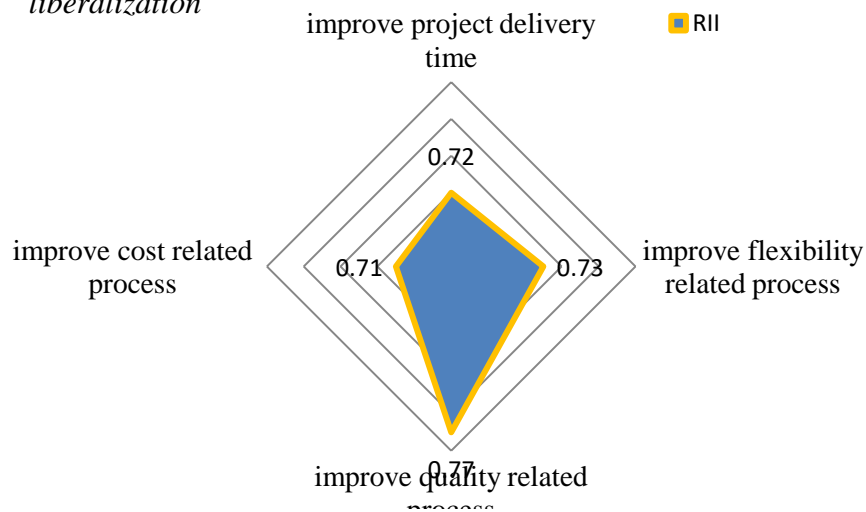
Although the respondents selected both having a better competitive advantage in the market and bringing additional revenue for their company, which ranked fourth with a 71% score, the opportunity of growing their engineering company and opening new business links ranked fifth with a 69 percent score. With a score of 49 percent, the opportunity for skill and knowledge transfer is the least selected opportunity.

RII result of local company's opportunity from Project management perspective associated with telecom liberalization

From the above figure, we have learned that improvement of quality-related processes for those local telecom companies is the highest-ranked opportunity from a project management improvement perspective (77%). On the other hand, flexibility-related processes are ranked 2nd (73%), improving project delivery time is ranked 3rd (72%), and the improvement of cost-related processes (cost efficiency) is the least opportunity (71%), available for those companies from an improvement of project management perspective following telecom liberalization.

Figure 3

Opportunity of local firms from PM perspective following telecom liberalization



Source: own questionnaire survey data, 2022

From the open-ended questions, the respondents' replied that there are additional opportunities such as technology advancement, service upgrade, including the enhancement of quality service delivery and improvement to the national network quality and infrastructures, career development, and a chance to learn from international companies as key opportunities created. The surveyed companies stated that even though there is a huge opportunity in opening up the telecom market, local companies are not benefiting as expected. The weak regulatory framework with respect to licensing and local business protection, the lack of project financing, the lack of government incentives for the sector, the unavailability of required tools and instruments in the local market, and the lack of sector-specific training and certification centers are some of the challenges mentioned to materialize the opportunities.

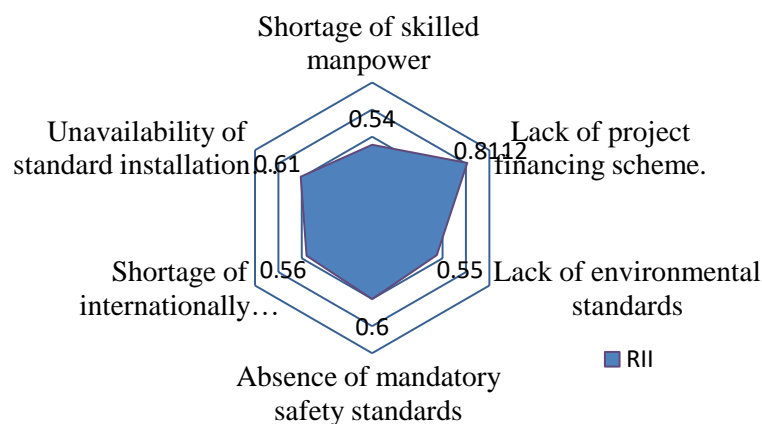
In addition to the above points, the firms mentioned that international service providers who have prior business engagements with the telecom vendor in other countries are being given better opportunities without fulfilling the legal requirement of local business protection. Some firms went so far as to claim that these international companies are operating illegally because foreign companies are not permitted to engage in telecom installation work without the local ownership of citizens.

Analysis of challenges associated with telecom Liberalization for Local Telecom firms

From this part, the researcher assessed six identified challenges that these local companies confronted as a result of telecom liberalization which is also ranked based on Relative Importance Index (RII).

Figure 4

Analysis of Challenges Associated with Telecom Liberalization for Local Telecom Firms



Source: Own survey, 2022

With reference to the above figure, the local telecom engineering companies ranked the lack of a project financial scheme at the top as the major challenge faced as a result of telecom liberalization, with a relative importance index of 81%, followed by the unavailability or shortage of standard installation tools and test instruments, which was ranked in the #2 position with a relative importance index of 61%. The absence of mandatory safety standards, which was ranked third (3rd) position with a RII of 60%, the unavailability or shortage of internationally accepted training

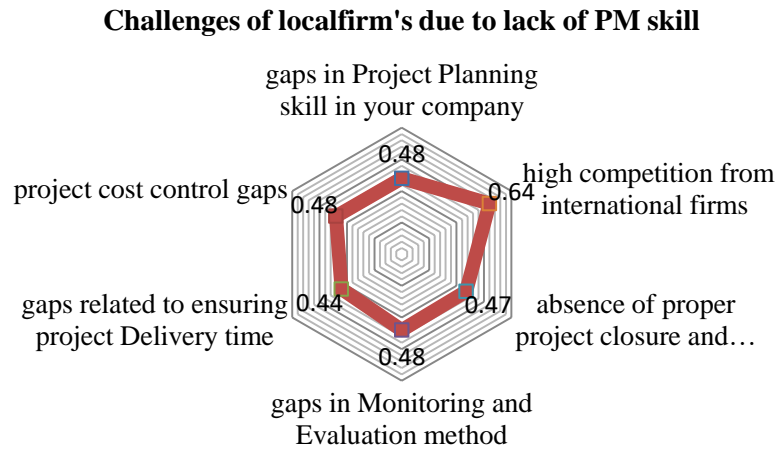
institutions, which was ranked fourth (4th) position with a RII of 56%, the lack of environmental standards, which was ranked fifth (5th) position with a relative importance index of 55%, and the shortage of skilled manpower were the least ranked challenges encountered due to telecom liberalization, with a RII of 54%.

Challenge Related to Lack of Well-developed Project Management Knowledge and Skill

In this section, the researcher examined six identified challenges that occurred due to a lack of well-developed project management skills that these local companies confronted as a result of telecom liberalization, which is also ranked based on the Relative Importance Index.

Figure 5

Challenge Related to Lack of Well-Developed Project Management Knowledge and Skill



Source: Own questionnaire survey data, 2022

The result, as presented in the above figure, is that the challenge related to the lack of well-developed project management knowledge of the local telecom engineering companies that were associated with telecom liberalization was ranked as follows: High competition from international contractors and service providers was ranked first (1st) position with RII of 64%, which depicts how these local telecom companies are highly challenged by this variable and therefore cannot be glossed over, whereas gaps in project planning, project cost control, and project monitoring and evaluation methods were ranked second (2nd) position with RII of 48%, the absence of proper project closure and handover was ranked third (3rd) position with RII of 47%, and lastly, gaps related to ensuring project delivery time were ranked fourth (4th) position with RII of 44%, which was the least priority and therefore needed less attention compared to the remaining points.

There are indications from the findings that the majority of the respondents encountered challenges due to unclear working policies or being forced to enter into joint ventures with international companies despite not being competent internationally or in the project. As per the respondents' response, there is no support by the government or Ethiopian Communication Authority to have better privileges and build local capacity. Another challenge brought by government policy was the lack of regulatory and policy control over the international companies. Due to this, the liberalized company (Safaricom) highly considers those international firms, and ECA is responsible for controlling them based on the agreement they have. Financial barriers, technical skill, and experience gaps b/w local and international also create bias on the contractor side; the local companies also raised the lack of support by government policy to get duty-free access for the tools to import from abroad and international training that has been required by the vendor to be given at a fair price and to local standards since there is a shortage of foreign currency and this leads to unfair competition with strong foreign companies. The unavailability of standard tools and testing instruments in the local market and the high taxation of telecom installation and testing equipment are also mentioned by the firms as big challenges. The firms raised the issue that there is no appropriate law for protecting local firms or that the law is not properly applied.

Conclusion and Recommendation

According to the findings, the situation leaves the local company with a high computation in the absence of a protective policy for the local engineering companies, and the Ethiopian Communication Authority (ECA) didn't involve the local companies in the discussion and decision process of the telecom liberalization, leaving the local companies without the necessary information and awareness to prepare for the challenges. In addition to the above-mentioned key challenges, financial barriers due to a lack of hard currency, the high tax levied on the importation of telecom tools and test equipment needed by the engineering companies, and the unavailability of certified personnel as per telecom operators' standards are stated as major challenges faced by local telecom firms. This in turn leaves the local telecom firms in a disadvantageous position, which may eventually force them to leave the market and the computation to international engineering firms. We can infer from the aforementioned points that the liberalization of the telecom industry presented the local engineering companies with a number of difficulties and few opportunities.

Despite the fragmented efforts of the local companies, there was no adequate readiness or preparation by the local companies for the new environment. The lack of readiness is primarily due to the policymaker/regulating body's (ECA) lack of support for the local engineering firm. Therefore, the challenges related to liberalization outweigh the opportunities. Therefore, the following are the key recommendations: (1) Protective law and policy for the local engineering company are important to ensure the companies, (2) sustain in the liberalized environment and gradually develop the necessary skill and technical capacity to be competitive. (3) Favorable taxing and duty-free privileges for local engineering companies to import standard tools and testing instruments for a competitive engagement. (4) Regulatory provisions on the prioritization of local engineering companies for the telecom market share. (5) Regulating the mandatory joint venturing of international companies with the local companies. (6) Clarifying licensing procedures for international firms and ensuring there is a controlling mechanism for the engagement of international firms without a license. (7) Regulate and support the provision of standardized training in the local training institutions with affordable fees. (8) Invest in skill development and improvement of standard tools and instruments. As the new liberalized environment requires a high level of skill and technological advancements, the local engineering companies need to invest more in their staff's technical capacity and advancement of technologies. (9) As the tasks in the sector are prone to risk improvement of standard Personal Protective Equipment (PPE) for personnel and equipment safety is mandatory hence local firms need to improve.

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