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Exporting construction services to West Africa: a study of Nigerian firms' resources and capabilities

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Introduction: The Nigerian construction industry has experienced significant growth in recent years, driven by government investments in infrastructures and a surge in private sector activities. This led to the emergence of construction organizations with enhanced capabilities, positioning them for expansion beyond the domestic market, hence this study. This paper examines the resources and capabilities of construction organizations in Nigeria to export their services across borders into West African countries with a view to minimizing economic loss in the region.

Method: With a quantitative research approach, a well-structured questionnaire was employed to collect data from 103 construction organizations including eight architectural, 47 engineering, nine estate surveying and valuation, 22 quantity surveying; and 17 contracting firms located in Lagos and Abuja. Data reported in this paper were analyzed using mean score, analysis of variance and factor analysis.

Results: The results revealed that the top ranked resources and capabilities ranked as significant requirement for exporting services into West African markets is business reputation and trust ($M = 4.04$). This is followed by human capital ($M = 3.94$), organizational and operational structure ($M = 3.94$) and information about a market ($M = 3.87$).

Discussion/Conclusion: The study concludes that reputation, trust, personnel, organization structure and market information are essential requirements for construction organizations to export services into the West African markets.

KEYWORDS

resources, capabilities, construction organizations, export services, West African markets

Introduction

Construction market in Africa is one of the target destinations for most large global corporations. One of the reasons for this is the availability of opportunities for investment in basic infrastructures such as road, energy, water including availability of cheap labour (Khanna et al., 2015). In 2025, construction market in Africa is estimated at USD 61.09 billion with expected value of USD 77.35 billion by 2030. This value is projected at

4.83% compound annual growth rate (CAGR) within a period of 2025–2030 (Research and Market, 2025). In addition, there are currently over 570 construction projects in Africa that are worth USD 450 billion. The second largest construction sector after energy sector is transport sector, which include road, airport and rail projects and all worth more than USD 280 billion. Egypt is leading construction market in Africa with more than 300 active projects that worth USD 338 billion and this is followed by South Africa with active projects valued at USD 207 billion while Nigeria takes the third position with ongoing and upcoming projects that worth USD 200S billion (Research and Market, 2025).

Earlier studies established that more than half of the construction projects in Africa are being executed by multinational construction companies from global East and North including Middle East (Odediran and Windapo, 2017). Moreover, it is revealed that there are some construction companies from Egypt, South Africa and Equatorial Guinea are crossing borders and operate in Africa including the West African construction market (Odediran and Windapo, 2017) excluding Nigerian-owned construction companies or corporations.

Nigeria remains one of the top three economies in Africa and the biggest economy in the West Africa and it is expected to be a key player in the critical sectors of the region including construction. There is a growing need and aspiration in recent time for the Nigerian construction companies to investigate their export opportunities in order to broaden their customer base, boost sales, improve their global competitiveness and contribute to foreign direct investment in the country (Masha, 2018; Obisesan et al., 2018). This is because aside the home market, West African construction markets like Ghana and Senegal and other neighboring regions like Central and North Africa are the potential markets for construction organizations in Nigeria to explore. It is hoped that the construction organizations in Nigeria will leverage on the recent efforts of government by exhibiting their know-how, creative solutions, and competitive advantages to regional markets through exporting. Doing this will also help the organizations to diversify their sources of income and reduce the risk of changes in the local market.

Due to the situation in the global economy especially in the oil and petroleum industry, Nigeria government has made significant efforts to diversify from oil earning economy to non-oil exporting sectors with key interest in construction. Yet, construction industry in Nigeria has a poor export performance because most organizations in Nigeria rushed into exportation without making adequate effort to assess their exporting readiness and fail to prepare for foreign markets operations. This aligns with a World Bank report, which established that Nigeria's contribution to global construction export was barely 0.1% while South African and Egypt contribute 0.7% and 1.4% respectively (World Bank, 2020). Moreover, there is also a limited research effort on exporting situation in the Nigerian construction sector.

In order to comprehend the sector's preparation, capabilities, and potential for international trade, it is crucial to evaluate the export readiness and exporting status of Nigerian construction enterprises (Adegbite et al., 2018; Ejeh et al., 2018). However, for a firm to export its products or services into foreign market, such firm must be export ready and possess the resources and capabilities to export services. Export readiness is the ability of a

firm to successfully enter and compete in international markets. It entails that such a firm is fully aware of the opportunities and threats including the laws and rules in any target market. Besides that, such an aspiring firm should have the technical know-how and expertise to overcome trade restrictions and timely strength to adapt to changing needs of global clients and customers. Hence, this research study examines the resources and capabilities of construction organizations in Nigeria to export services into the West African market.

Resources and capabilities requirements for exporting

Entry into foreign market requires a significant number of resources, which could be financial and non-financial. Organizations must have sufficient capacity to absorb any financial loss that may arise from the decision to enter new market outside its home country. According to Teece et al. (1997), resources are stockpiles of information, tangible and intangible assets, human capital and other resources owned or that are under the control of any organization. Resources are mostly classified as tangible or intangible. The tangible resources are human, innovations and reputations resources while intangible resources include financial, physical, technological, and organizational resources (Barney, 1991; Ngo and O'Cass, 2009). According to Bradley (2002), every international firm must have capital, technology and human resources while Open to Export (2022) also established that the essential resources for export-ready firms are time, information and communications technology (ICT), skilled workers, expert legal advice, and a travel budget. In the opinion of Grant (1991), resources that any firm that is ready to export must have include capital equipment, individual employee abilities, and patents/brands.

In like manner, the essential resources and capabilities that SMEs, who manufacture premium and specialized food, need to participate in the exporting process include distinctive product, the nation of origin, the brand and label of the company, financial resources and government assistance, human resources, access to distribution channel (agent), production capability, efficient management, and price management (Laufs and Schwens, 2014). Likewise, Ogundele et al. (2012) identified market research, legal compliance, certifications, and technological improvements as essential resource requirements for exporting. Salama et al. (2013) established that financial resources make it easier for firms to create export-specific skills and modify procedures to adhere to international standards. In the views of Ganotakis and Love (2012), the requirements for export propensity are innovative resources and qualities of the founding team of a firm. The important resources identified by Kahiya (2013) for internationalization of Eritrean small and medium enterprises (SMEs) are market research skilled personnel, and financial capital.

Organizational, social and human resources were identified by Hitt et al. (2006) as essential resources for firms to expand into international space. Zou and Ghauri (2010) opined that strategic partnership in international markets helps businesses to acquire or build the skills required to penetrate new overseas markets. In this partnership, SMEs received early advice on how to build their marketing strategies including operational and financial resources,

which offered useful information for business planning before expanding into international market. In a study, [Criado et al. \(2005\)](#) examined how technological capabilities and resources affected the export performance of SMEs and discovered a positive correlation with sales growth. Also, [Fletcher and Harris \(2012\)](#) examined how networks, managerial abilities and leadership assist resource-constrained SMEs in overcoming obstacles to exporting. [Julian and O'Cass's \(2004\)](#) analyzed export performance of Australian wineries and established that wine business is largely dependent on human resources such as education and expertise. [Sousa et al. \(2018\)](#) study on Portuguese SMEs identified resources such as skills, networks and funding essential for successful internationalization.

According to [Teixeira and Grande \(2012\)](#), how a multinational company enters foreign markets will be determined by its both tangible and intangible assets such as technology-intensive assets, managerial expertise, knowledge-based assets, competitiveness in terms of resources, proprietary assets, and human resources. Likewise, technological, financial, human, physical, organizational, informational, and relational resources are essential for businesses that are preparing for exportation ([Bakar and Ahmad, 2010](#); [Monteiro et al., 2019](#)). In the view of [Kaleka \(2002\)](#), the four types of competitive resources that every exporter should have include financial resources, size of operation, experience in export markets, and physical assets. In a large-scale data analysed by [Westhead and Ucbasaran \(2001\)](#), there is a significant influence of social, human, and financial resources on internationalization.

[Ramon-Jeronimo et al. \(2019\)](#) opined that experience, scale of operation, physical resources, and financial resources are the competitive resources that SMEs need in order to decide whether to export. Moreover, export-oriented skills including product creation, customer relationship building, and informational skills are equally required. Likewise, [Pinho and Martins \(2010\)](#) highlighted the critical role and influence of financial, human, and technological resources on international competitiveness of Portuguese SMEs. [Leonidou et al. \(2007\)](#) also identified financial and managerial resources as predictors of small business exporting development. According to [Knight and Kim \(2009\)](#), a firm must have four essential components in order to be considered qualified in the global business sector and these include global orientation, international marketing abilities, global innovativeness, and international market orientation. [Gallego and Casillas \(2014\)](#) also affirmed the importance of social capital and networking resources in overcoming exporting obstacles.

Likewise, [Sambasivan et al. \(2009\)](#) described the understanding of international markets, institutional expertise, and social capital resources essential to overcome the liability associated with exporting. More so, exporting becomes more financially viable when the government provides subsidies, grants, or low-interest loans. In global market, the success of construction companies depends on having sufficient skilled human resources, sufficient training programs that offer knowledge required by staff members for execution of projects in international market, language competency and cultural sensitivity for efficient communication and cooperation with international stakeholders ([Zhao et al., 2016](#); [Salama et al., 2013](#)). Moreover, technological innovation and capabilities are critical for construction organizations to maintain competitiveness and enhance their organizational capability and remain competitive in the global market ([Zhao et al., 2016](#)).

Methodology

The aim of this paper is to examine the resources and capabilities requirements of construction organizations in Nigeria to export services into countries in West Africa. The professional services firms and construction companies who are the target population for the study are referred to as the construction organizations. The goal of the study was achieved with the use of a quantitative research approach using questionnaire survey to gather relevant data for the study. Data were collected from the professional service firms and contractors who are headquartered in Lagos and Abuja. The choice of Lagos and Abuja is because they are the main points of entry to and exit from Nigeria and connections to the larger world. Moreover, Lagos was the former national capital of Nigeria and remains the commercial capital while Abuja is the current federal capital. Since these cities are accessible to international space, construction organizations that are based in these locations prone to cross borders into international markets and provide their services most especially in the neighboring counties.

There are two groups in the study population, namely, contractors and professional service firms. The professional service firms comprised of 462 architectural, 180 engineering (civil/structural, mechanical and electrical), 1292 estate surveying and 203 quantity surveying firms with their head offices located in Lagos and Abuja. These were obtained from the list of registered firms with their professional institutes and associations. This gave a sample frame of 2137 professional service firms while the sampling frame of the selected construction companies include 78 registered members of the Federation of Construction Industry (FOCI) with their head offices in Lagos and Abuja. This gave a total sampling frame of 2215 construction organizations. Out of the total sampling frame, purposive sampling method was employed to determine the sample size for the study. The choice of the technique is to determine the opinions and experiences of a substantial share of participants who offered understanding regarding the export of construction-related activities. A sample size of 30% of the sampling frame was purposively employed giving a total of 665 respondents. The was based on previous studies on international construction markets ([Barney, 1991](#)).

Data in this paper were gathered with the use of a well-structured questionnaire as a research tool. The variables in the questionnaire were gotten through the review of extant literature on resources and capabilities requirements for exporting services and products into foreign markets ([Open to Export, 2022](#); [Monteiro et al., 2019](#); [Ramon-Jeronimo et al., 2019](#); [Zhao et al., 2016](#); [Ganotakis and Love, 2012](#)). A five Likert scale was used for the respondents to rate the variables of resources and capabilities requirements for foreign market operations. The research instrument was structured into sections. Background information about the respondents were gathered in the first section while other sections addressed the specific objectives of the study. The criteria for internal validity of the research instrument were achieved through the assessment of the questionnaire among the relevant construction stakeholders including academics, construction professionals, and policymakers. The period of data collection was between October 2024 to January 2025. The study employed physical and online methods for the distribution of questionnaire to the respondents and data collected from both sources were merged. The study employed Google form

for the online method. One hundred and three (103) response were gotten at the end of the period out of 665 copies of questionnaire distributed and this represents a response rate of 15.5%. This response rate agrees with previous studies on export of construction services in Africa (Odediran and Windapo, 2017). Data collected based on the aim of this paper were analyzed with the use of mean score, analysis of variance (ANOVA) and exploratory factor analysis.

Results and discussion of findings

Background profiles of the construction organizations

This section presents the key findings on the background information about the construction organizations who responded to the questionnaire survey. The essence is to determine the suitability of the organizations in providing the required data for study. An assessment of the background profiles of the firms who responded to the project revealed that majority have more than 10 years in the West African markets. More than 60% registered as limited liability companies, majority are engineering firms while more than 70% are either medium or large-sized firms. Most of the firms have more than 10 years of work experience in the Nigerian construction market while their experience in the West African markets ranges from 1 to 20 years. More than 25% of the firms employed more than 50 workforces while more than 50% employed between 1 and 30 workers. About 60% of the firms have revenue and assets less than 500 million while the revenue and assets of about 17% ranges from 500 million to one billion. Majority of the firms specialized in building and civil works.

Asking question on countries the firms have operated, 8.5% indicated that they had operated or are operating in Guinea followed by Guinea Bissau, Ghana, Gambia, Senegal, Mali, and Cape Verde. The rate of operation of the firms surveyed in the region is more in Benin followed by Ghana, Niger, Burkina Faso, Cote D'Ivoire, and Liberia but the frequency of operation is very low with a mean score ranging from 0.48 to 0.71 on a scale of 5.00. Further question asked the firms about the countries they want to operate in the future and 50% want to operate in Ghana and this is followed by Benin, Cote D'Ivoire, Cape Verde, Senegal, Niger, Guinea, Sierra Leone, and Liberia.

Resources and capabilities of the construction organizations

The data collected were analyzed using mean score and factor analysis. The details of the results are presented in the subsequent sections of the paper.

Analysis of resources and capabilities using mean score

This study examined the resources and capabilities requirements of construction organizations in Nigeria to export services into West African countries. Through a review of extant literature, a total of 22

variables were obtained and included in the questionnaire used to collect data for the study. The questions in the instrument were rated on five Likert-scale ranging from 1-very low to 5-very high. The results of the study on resources and capabilities requirements from the construction organizations who responded shown on Table 1 reveal that from the perspective of the architectural firms the top ranked resources and capabilities requirement for export are business reputation and trust, human capital (managerial and technical), organizational and operational structure, information about a market, size of skilled personnel and workers, global orientation/knowledge on international markets and marketing ability and potential. All were rated with a mean score of 4.75. The least ranked were home country government's institutional supports, strategic international network and partnership, cultural sensitivity, exporting budget and patents or brand labels.

Engineering firms also ranked business reputation and trust ($MS = 4.04$) as the topmost resource and capability and this is followed by capital (managerial and technical) ($MS = 3.96$), information about a market ($MS = 3.96$), organizational and operational structure ($MS = 3.94$), and information and communication technology ($MS = 3.89$). The least ranked were home country government's institutional supports, strategic international network and partnership, exporting budget, patents or brands or labels and expert legal team. From the estate surveying and valuation firms, the top ranked resource and capability were business reputation and trust, and financial capital with a mean score of 4.11, which is followed by human capital (managerial and technical) (3.89), patents or brands or labels (3.89), and exporting budget (3.89) including technology assets and technical certifications, strength of founding and management team, and global orientation/knowledge on international markets each with a mean score of 3.67. The least ranked are cultural sensitivity, language competency, strategic international network and partnership and home country government's institutional supports.

In the opinions of the quantity surveying firms, human capital (managerial and technical), organizational and operational structure, and information about a market were the top ranked resources and capabilities with each having a mean score of 4.14. These were followed by size of skilled personnel and workers ($M = 4.14$) including business reputation and trust, information and communication technology, innovations and innovation orientation and technology assets and technological certification each with a mean score of 4.09. The least ranked include home country government's institutional supports, language competency, cultural sensitivity, expert legal team and patents or brands or labels. In the views of construction companies or contractors, business reputation and trust were the top ranked resource and capability with a mean score of 4.06. This was followed by organizational and operational structure ($M = 4.00$), human capital (managerial and technical) ($M = 3.77$) including size of skilled personnel and workers and information and communication technology each with a mean score of 3.77. The resources and capabilities ranked low include physical equipment capital, home country government's supports, cultural sensitivity, financial capital and expert legal team.

TABLE 1 Resources and capabilities of the construction organizations in Nigeria to export services into the West African markets.

S/N	Resources and capabilities	Overall			ARC firms		Engr. Firms		Estate firms		QS firms		Contra. Firms		ANOVA	
		M	SD	R	M	R	M	R	M	R	M	R	M	R	F	Sig
1	Business reputation and trust	4.04	0.95919	1	3.75	1	4.04	1	4.11	1	4.09	5	4.06	1	0.206	0.935
2	Human capital (managerial and technical)	3.94	0.98842	2	3.75	1	3.96	2	3.89	3	4.14	1	3.77	3	0.424	0.791
3	Organizational and operational structure	3.94	0.92699	3	3.75	1	3.94	4	3.56	9	4.14	1	4.00	2	0.728	0.575
4	Information about a market	3.87	1.09078	4	3.75	1	3.96	2	3.56	9	4.14	1	3.53	9	1.030	0.396
5	Size of skilled personnel and workers	3.86	1.03893	5	3.75	1	3.87	6	3.56	9	4.14	4	3.71	5	0.691	0.600
6	Information and communication technology	3.85	1.06096	6	3.50	12	3.89	5	3.56	9	4.09	5	3.77	3	0.713	0.585
7	Innovations and innovation orientation	3.80	1.01324	7	3.63	11	3.77	10	3.56	9	4.09	5	3.71	5	0.684	0.604
8	Financial capital	3.78	1.16259	8	3.50	12	3.85	7	4.11	1	3.96	9	3.29	18	1.219	0.308
9	Size and capacity of production	3.77	1.02138	9	3.63	8	3.85	7	3.56	9	3.86	11	3.59	7	0.340	0.850
10	Technology assets and technological certification	3.76	1.01427	10	3.50	12	3.75	12	3.67	6	4.09	5	3.53	9	0.956	0.435
11	Strength of founding and management teams	3.73	1.07734	11	3.63	9	3.85	7	3.67	6	3.73	16	3.47	11	0.412	0.800
12	Global orientation/knowledge on international markets	3.68	1.06838	12	3.75	1	3.67	16	3.67	6	3.77	15	3.41	13	0.349	0.844
13	Marketing ability and potential	3.66	1.13374	13	3.75	1	3.72	14	3.56	9	3.73	16	3.41	13	0.283	0.888
14	Business and market experience	3.63	1.08456	14	3.63	9	3.64	17	3.56	9	3.82	11	3.41	13	0.340	0.850
15	Physical equipment capital	3.63	1.05710	15	3.50	15	3.75	12	3.44	18	3.96	9	3.06	22	2.082	0.089
16	Language competency	3.62	1.06856	16	3.50	16	3.77	10	3.11	21	3.55	20	3.59	7	0.777	0.543
17	Expert legal team	3.54	1.13567	17	3.50	17	3.60	18	3.56	9	3.64	18	3.29	18	0.262	0.902
18	Patents or brands or labels	3.54	1.10947	18	3.63	8	3.49	19	3.89	3	3.64	18	3.35	17	0.411	0.800
19	Exporting budget	3.50	1.12785	19	3.25	20	3.34	20	3.89	3	3.82	13	3.41	13	1.067	0.377
20	Cultural sensitivity	3.49	1.05593	20	3.38	19	3.68	15	2.88	22	3.55	20	3.24	20	1.422	0.232

(Continued on the following page)

TABLE 1 (Continued) Resources and capabilities of the construction organizations in Nigeria to export services into the West African markets.

S/N	Resources and capabilities	Overall			ARC firms		Engr. Firms		Estate firms		QS firms		Contra. Firms		ANOVA	
		M	SD	R	M	R	M	R	M	R	M	R	M	R	F	Sig
21	Strategic international network and partnership	3.42	1.21691	21	3.38	18	3.23	21	3.33	19	3.82	13	3.47	11	0.880	0.479
22	Home country government's institutional supports	3.23	1.27728	22	3.25	20	3.15	22	3.33	19	3.41	22	3.18	21	0.172	0.952

The overall perspectives of all the construction organizations revealed that the top ranked resource and capability business reputation and trust ($M = 4.04$), which was equally ranked as the top by architectural, engineering, estate surveying and valuation and contracting firms. This was followed by human capital (managerial and technical) (3.94), organizational and operational structure ($M = 3.94$), information about a market ($M = 3.87$), size of skilled personnel and workers ($M = 3.85$) and information and communication technology ($M = 3.85$). All these were equally ranked high across all categories of construction organizations. The least ranked by all the organizations include home country government's institutional supports, strategic international network and partnership, cultural sensitivity, exporting budget, patents or brands or labels, expert legal team, language competency and physical equipment capital. In order to test whether the opinions agree or disagree among all categories of construction organizations, analysis of variance (ANOVA) test was conducted and the results revealed that there were no significance differences on how all categories of construction organizations in Nigeria perceived the resources and capabilities requirements for export to the West Africa countries. The level of the significance was determined at 5% confidence level ($P < 0.05$). This implies that resources and capabilities requirements for export were perceived the same way by these organizations.

Analysis of resources and capabilities using factor analysis

In order to further explore the attribute of the resources and capabilities requirements for exporting services and products and to determine how they are related; an exploratory factor analysis was carried out. The essence of this analysis is to identify and describe those variables of resources and capabilities that share the same attributes and to explore them. The outcome of the analysis considered parameters such as Kaiser-Meyer-Olkin (KMO), which measures the level of adequacy of the sample of responses obtained and Bartlett's Test of Sphericity, which measures degree of freedom and level of significance. The value of KMO ranges from 0 to one and the closer to one the better while a minimum of 0.5 is advised for factor analysis to proceed (Field 2013). Also, the Bartlett's test of sphericity is expected to be significant at $P < 0.05$. The results of KMO presented on Table 2 revealed the

TABLE 2 KMO and Bartlett's test of resources and capabilities of the construction organizations in Nigeria to export services into the West African markets.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.934
Bartlett's Test of Sphericity	Approx. Chi-Square	2235.053
	Df	231
	Sig	0.000

KMO value is 0.934 and this shows that the responses given by the respondents on resources and capabilities requirements for exporting services and products by construction organizations in Nigeria to the West African markets are adequate and suitable for factor analysis. The Bartlett's test of sphericity is also significant at 0.000.

In addition to the outcome of Kaiser-Meyer-Olkin (KMO) and to determine the proportion of variance in each of the variables of resources and capabilities that is explained by the underlying (causal/primary) factors, communalities test was carried out. The test helps to understand relationships among variables, assess the fitness of the model, identify variables to retain or remove, interpret factor loading and improve the interpretation of factors. In another word, communality describes the total amount of original variables shared with all the other variables in the analysis which is useful in determining the final variables extracted was first established.

The average communality of the variables after extraction as shown on Table 3 was 0.68 with 0.554 and 0.812 being the least and the highest. Hence, the communality value is significant due to the conventional rule that extraction value (eigenvalues) of more than 0.5 at the initial iteration indicates significance for further analysis. All values are greater than 0.5. Having established that the data collected were suitable based on the outcomes of Kaiser-Meyer-Olkin (KMO), the Bartlett's test of sphericity and communality tests, the outcomes of the factor analysis were considered relevant and other results were considered. Likewise, the results of eigenvalues of the resources and capabilities requirements for exporting were extracted with the total initial Eigenvalues greater than 1.0 as shown on Table 4. After many rotations with the use of varimax method, principal component analysis (PCA) was employed to

TABLE 3 Communalities of resources and capabilities of the construction organizations in Nigeria to export services into the West African markets.

	Initial	Extraction
Information about a market	1	0.722
Human capital (managerial and technical)	1	0.776
Size of skilled personnel and workers	1	0.710
Innovations and innovation orientation	1	0.667
Business reputation and trust	1	0.618
Financial capital	1	0.728
Physical equipment capital	1	0.626
Technology assets and technological certification	1	0.733
Organizational and operational structure	1	0.564
Information and communication technology	1	0.699
Expert legal team	1	0.756
Exporting budget	1	0.812
Patents or brands or labels	1	0.576
Home country government's institutional supports	1	0.574
Strategic international network and partnership	1	0.749
Business and market experience	1	0.556
Size and capacity of production	1	0.767
Strength of founding and management teams	1	0.793
Global orientation/knowledge on international markets	1	0.728
Marketing ability and potential	1	0.673
Language competency	1	0.554
Cultural sensitivity	1	0.609

Extraction Method: Principal Component Analysis. Average = 0.68.

extract the key components and only two (2) components that met the criteria emerged. Each of the components has eleven (11) variables (resources and capabilities). Having considered the features and interrelationship among the variables in each of the components, the first component was named Factor 1 (Financial and Expertise Resources) while second component named Factor 2 (Physical Resources).

The total variance explained by each of the components extracted shows that the first component (factor1) accounted for 63.004% of the observed variance while the second component (factor 2) accounted 68.143% of the observed variance. This shows that 63.004% of the observed variance were shared by eleven

(11) variables (resources and capabilities) while the second eleven (11) variables also shared 63.004% of the observed variables. The results of the factor loading values of each of the variables (resources and capabilities) revealed that the values range between 0.547 and 0.841. In Factor 1 (Financial and Expertise Resources), the results show the resources and capabilities and their loading values including financial capital (0.718), expert legal team (0.729), exporting budget (0.822), patents or brands or labels (0.677), and home country government's institutional supports (0.730). Other resources and capabilities are strategic international network and partnership (0.841), business and market experience (0.547), strength of founding and management teams (0.694), global orientation/knowledge on international markets (0.620), language competency (0.570), cultural sensitivity (0.623).

For Factor 2 (Physical Resources), the loading values of the eleven variables (resources and capabilities) revealed information about a market (0.609), human capital (managerial and technical) (0.722), size of skilled personnel and workers (0.752), innovations and innovation orientation (0.709), business reputation and trust (0.669), and physical equipment capital (0.692). Others include technology assets and technological certification (0.691), organizational and operational structure (0.749), information and communication technology (0.656), size and capacity of production (0.680), and marketing ability and potential (0.713). Out of all the variables (resources and capabilities) from both the factor groups, the variables with the highest value include strategic international network and partnership, exporting budget, size of skilled personnel and workers, organizational and operational structure, expert legal team, human capital (managerial and technical), and financial capital including innovations and innovation orientation. It can therefore be inferred that these resources and capabilities are the most important resources and capabilities requirements that construction organizations in Nigeria need to export services into the West African countries. The results of factor analysis agree significantly with outcomes when average value of the responses gotten with the use of mean score to access the views and opinions of all categories of the respondents was employed. This shows the sufficiency and consistency of the types of data collected and validity of the outcome of this study.

These findings agree with some of the earlier studies, which established that the success of construction companies depends on having sufficient skilled human resources, sufficient training programs that offer knowledge required by staff members for execution of projects in international market while language competency and cultural sensitivity for efficient communication and cooperation with international stakeholders are also significant (Zhao et al., 2016). It also agrees with Monteiro et al. (2019) who claimed that technological, financial, human, physical, organizational, informational, and relational resources are essential for businesses that are preparing for exportation.

Discussion of findings

The outcome of this paper affirmed business reputation and trust, human capital (managerial and technical), organizational and operational structure, information about a market, size of

TABLE 4 Total variance explained and rotated component matrix of resources and capabilities of the construction organizations in Nigeria to export services into the West African markets.

Factors	Factor loading	Total	% Of Variance	Cumulative %
Factor 1: Financial and Expertise Resources		13.861	63.004	63.004
Financial capital	0.718			
Expert legal team	0.729			
Exporting budget	0.822			
Patents or brands or labels	0.677			
Home country government's institutional supports	0.730			
Strategic international network and partnership	0.841			
Business and market experience	0.547			
Strength of founding and management teams	0.694			
Global orientation/knowledge on international markets	0.620			
Language competency	0.570			
Cultural sensitivity	0.623			
Factor 2: Physical Resources		1.130	5.138	68.143
Information about a market	0.609			
Human capital (managerial and technical)	0.722			
Size of skilled personnel and workers	0.752			
Innovations and innovation orientation	0.709			
Business reputation and trust	0.669			
Physical equipment capital	0.692			
Technology assets and technological certification	0.691			
Organizational and operational structure	0.749			
Information and communication technology	0.656			
Size and capacity of production	0.680			
Marketing ability and potential	0.713			

Rotation: Varimax.

skilled personnel and workers, and information and communication technology as the top ranked resources and capabilities as requirements for exporting by the construction organizations. However, the results revealed that there are no significant differences on how the construction organizations perceived the resources and capabilities requirements for exporting. This shows that the opinion of the construction organizations on these resources and capabilities are the same, which confirms how important these resources and capabilities are in exporting services into the West African markets. The results agreed with the previous studies including Teece et al. (1997) who identified stockpiles of information, tangible

and intangible assets, human capital as important requirements for exporting. Likewise, Barney (1991), Ngo and O'Cass (2009) also reported on the importance of intangible resources to include financial, physical technological, and organizational resources. Bradley (2002) also claimed that every international firm must have capital, technology and human resources. Similarly, Open to Export (2022) also identified essential resources for export-ready firms to include information and communications technology (ICT), skilled workers, expert legal advice, and a travel budget.

In a similar view, the identified resources and capabilities by Grant (1991) are capital equipment and patents/brands while

in their study [Laufs and Schwens \(2014\)](#) described brand and label of the company, financial resources, government assistance, human resources, access to distribution channel (agent), production capability as important resources and capabilities for exporting. In their studies, [Ogundele et al. \(2012\)](#) identified market research, legal compliance, certifications, and technological; [Salama et al. \(2013\)](#) listed financial resources; [Ganotakis and Love \(2012\)](#) found innovative resources and qualities of a firm's founding team, while [Kahiya \(2013\)](#) described skilled personnel and financial capital as essential resource requirements for exporting. Likewise, [Hitt et al. \(2006\)](#) identified organizational and human resources while [Zou and Ghauri \(2010\)](#) emphasized the importance of strategic partnership in international markets as a medium of receiving early advice on how to build their marketing strategies, operational and financial resources. [Criado et al. \(2005\)](#) also established a positive correlation between technological capabilities, resources and sales growth and how it affects export performance of SMEs.

The study by [Sousa et al. \(2018\)](#) on Portuguese SMEs identified skills, networks and funding as an essential resources and capabilities. [Teixeira and Grande \(2012\)](#) also identified the importance of technology-intensive assets, managerial expertise, knowledge-based assets, proprietary assets, and human resources as resources and capabilities for exporting. Similarly, [Bakar and Ahmad \(2010\)](#) and [Monteiro et al. \(2019\)](#) described technological, financial, human, physical, organizational, informational, and relational resources as essential requirements for businesses preparing for exportation. [Kaleka \(2002\)](#) identified four types of competitive resources, which include financial resources, size of operation, experience in export markets, and physical assets. In a large-scale data analysed by [Westhead and Ucbasaran \(2001\)](#), there is a significant influence of social, human, and financial resources on internationalization. In a recent study, [Ramon-Jeronimo et al. \(2019\)](#) described physical and financial resources as the competitive resources while export-oriented skills include product creation, customer relationship building, and informational skills that SME's need in order to decide whether to export.

Critical role and influence of financial, human, and technological resources on international competitiveness of Portuguese SMEs were highlighted by [Pinho and Martins \(2010\)](#). In like manner, [Leonidou et al. \(2007\)](#) described financial and managerial resources as predictors of small business exporting development. [Knight and Kim \(2009\)](#) identified global orientation, international marketing abilities, global innovativeness, and international market orientation as four essential components for exporting firms. [Gallego and Casillas \(2014\)](#) also mentioned that exporting firms need social capital and networking resources in overcoming exporting obstacles. In their study, [Sambasivan et al. \(2009\)](#) described understanding of international markets, institutional expertise, and social capital resources essential to overcome the liability associated with exporting. Similarly, sufficient skilled, human resources, sufficient training programs, language competency and cultural sensitivity for efficient communication and cooperation with international stakeholders are essential for construction companies to excel in international markets ([Zhao et al., 2016](#); [Salama et al., 2013](#)). Moreover, [Zhao et al. \(2016\)](#) affirmed that technological innovation and capabilities are critical for construction organizations to maintain competitiveness and

enhance their organizational capability and remain competitive in the global market.

Conclusion and practical implications

This paper reviewed literature on resources and capabilities requirements for exporting services into the west African markets. The whole study employed a quantitative research method in data collection and analysis. The study was conducted on construction organizations in Nigeria. The organizations who responded to the study include architectural firms, engineering firms, quantity surveying firms, estate surveying and valuation firms and construction companies (contractors). Data collected through the quantitative approach were analyzed using descriptive and inferential statistical tools. Examples of descriptive statistical tools employed are frequency distributions, means scores, and standard deviation, whereas inferential statistical tools include analysis of variance (ANOVA) and factor analysis. The resources and capabilities of construction organizations in Nigeria were measured and the result revealed that their opinions on the significance of the identified resources and capabilities requirements are the same. The paper concludes that among the resources and capabilities requirements for any organization exporting into foreign markets, the most significant ones are information about the target market; human and financial capital, physical equipment, expert legal team, home government support, strategic international network and partnership, language competency and cultural sensitivity. It is obvious from the study that investment in the required resources and building the right capabilities by exporting firms would increase productivity and result in high performance within any exporting organization.

The practical implication of the findings is that for export efforts and experience to be more productive to the exporting firms, there is a need to.

- i. grow their reputation and trust with customers,
- ii. enhance organizational and operational structure for better performance and productivity,
- iii. grow human capital dimensions including managerial and technical systems in the required quantity and quality,
- iv. develop a system for the acquisition of right and relevant information about current and existing market,
- v. invest in digital technologies through the acquisition of technology assets and certifications to drive innovation within the organization,
- vi. growth financial capital base of the exporting firms by expanding the size of the production capacities, and
- vii. continue to build management team with the capabilities to turn investment around for the growth and development of the exporting organization.

Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further

inquiries can be directed to the corresponding author.

Ethics statement

For this research, ethical approval was sought and received in accordance with the local legislation and institutional requirements. Written consent to participate in this study was obtained from the participants in accordance with the national legislation and institutional requirements.

Author contributions

SO: Conceptualization, Data curation, Formal Analysis, Funding acquisition, Investigation, Methodology, Resources, Supervision, Writing – original draft, Writing – review and editing. GO: Funding acquisition, Project administration, Writing – original draft, Writing – review and editing. FO: Formal Analysis, Writing – original draft. EB-A: Conceptualization, Methodology, Project administration, Writing – review and editing, Writing – original draft.

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References

- Abdul-Aziz, A. R. (2001). Bangladeshi migrant workers in malaysia's construction sector. *Asia Pacific Population J.* 16, 3–22. doi:10.18356/e085943a-en
- Adegbite, W., Oloyede, S. A., and Adesina, A. S. (2018). The impact of financial management practices on the performance of construction firms in Nigeria. *J. Constr. Dev. Ctries.* 23 (1), 35–53.
- Adepoju, A. S. (2019). *Assessment of export readiness of construction firms in Lagos state, Nigeria*. Nigeria: Obafemi Awolowo University.
- Aminu, I. M., and Shariff, M. (2014). Mediating role of access to finance on the relationship between strategic orientation and SMES performance in Nigeria: a proposed research framework. Available online at: <https://www.semanticscholar.org/paper/Mediating-role-of-access-to-finance-on-the-between-Aminu-Shariff/cb0625370552d4cc3ccc6b2c2392f8f5cb74650d>.
- Ayemibo, B. (2023). *The critical 15Ps of evaluating internationalisation readiness*. Intech Open. doi:10.5772/intechopen.113337
- Bakar, L. J., and Ahmad, H. (2010). Assessing the relationship between firm resources and product innovation performance: a resource-based view. *Bus. Process. Manag. J.* 16 (3), 420–435.
- Barney, J. B. (1991). Firm resources and sustained competitive advantage. *J. Manag.* 17 (1), 99–120. doi:10.1177/014920639101700108
- Bradley, F. (2002). *International marketing strategy*. 4th Ed. Essex: Pearson Education Ltd.
- Burca, S. D., Fletcher, R., and Brown, L. (2004). *International marketing: an SME perspective*. Prentice Hall.
- Criado, A., Urbano, D., Josep, R., and Vaillant, Y. (2005). The born-global phenomenon: a comparative case study research case study research. *J. Int. Entrepreneursh.* 3, 133–171. doi:10.1007/s10843-005-4202-7
- Ejeh, S. P., Oke, A. E., Ocholi, A. O., and Nwadior, E. O. (2018). Assessment of quality management practices in construction firms in Nigeria. *J. Constr. Dev. Ctries.* 23 (1), 1–22.
- Fletcher, M., and Harris, S. (2012). Knowledge acquisition for the internationalization of the smaller firm: content and sources. *Int. Bus. Rev.* 21, 631–647. doi:10.1016/j.ibusrev.2011.07.008
- Gallego, Á. M., and Casillas, J. C. (2014). Choice of markets for initial export activities: differences between early and late exporters. *Int. Bus. Rev.* 23, 1021–1033. doi:10.1016/j.ibusrev.2014.03.004
- Ganotakis, P., and Love, J. H. (2012). Export propensity, export intensity and firm performance: the role of the entrepreneurial founding team. *J. Int. Bus. Stud.* 43 (8), 693–718. doi:10.1057/jibs.2012.16
- Gerschewski, S., Rose, E. L., and Lindsay, V. J. (2015). Understanding the drivers of international performance for born global firms: an integrated perspective. *J. World Bus.* 50 (3), 558. doi:10.1016/j.jwb.2014.09.001
- Grant, R. M. (1991). The resource-based theory of competitive advantage: implications for strategy formulation. *Calif. Manag. Rev.* 33, 114–135. doi:10.2307/41166664
- Hitt, M. A., Tihanyi, L., Miller, T. L., and Connelly, B. L. (2006). International diversification: antecedents, outcomes, and moderators. *J. Manag.* 32, 831–867. doi:10.1177/0149206306293575

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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- Hollender, L., Zapkau, F., and Schwens, C. (2017). SME foreign market entry mode choice and foreign venture performance: the moderating effect of international experience and product adaptation. *Int. Bus. Rev.* 26 (2), 250–263. doi:10.1016/j.ibusrev.2016.07.003
- Julian, C. C., and O'Cass, A. (2004). The antecedents of export marketing performance: an Australian perspective. *J. Asia Pac. Mark. Special Issue Export Mark. Asia Pac. Region* 3 (2), 99–113.
- Kahiya, E. (2013). Export barriers and path to internationalization: a comparison of conventional enterprises and international new ventures. *J. Int. Entrepreneursh.* 11, 3–29. doi:10.1007/s10843-013-0102-4
- Kaleka, A. (2002). Resources and capabilities driving competitive advantage in export markets: guidelines for industrial exporters. *Ind. Mark. Manag.* 31 (3), 273–283. doi:10.1016/s0019-8501(00)00148-6
- Khanna, T., Palepu, K. G., and Sinha, J. (2015). “Strategies that fit emerging markets,” in *International business strategy* (PubMed), 615–631.
- Knight, G. A., and Kim, D. (2009). International business competence and the contemporary firm. *J. Int. Bus. Stud.* 40 (9), 255–273. doi:10.1057/palgrave.jibs.8400397
- Laufs, K., and Schwens, C. (2014). Foreign market entry mode choice of small and medium-sized enterprises: a systematic review and future research agenda. *Int. Bus. Rev.* 23 (6), 1109–1126. doi:10.1016/j.ibusrev.2014.03.006
- Leonidou, L. C., Katsikeas, C. S., and Samiee, S. (2002). Marketing strategy determinants of export performance: a meta-analysis. *J. Bus. Res.* 55 (1), 51–67. doi:10.1016/s0148-2963(00)00133-8
- Leonidou, L. C., Katsikeas, C. S., Paliawadana, D., and Spyropoulou, S. (2007). An analytical review of the factors stimulating smaller firms to export: implications for policy-makers. *Int. Mark. Rev.* 24 (6), 735–770. doi:10.1108/02651330710832685
- Li, N., and Dimitratos, P. (2013). “How exportable are you? A review of export readiness literature,” in *Smith business school*. University of Glasgow.
- Lin, F. J., and Ho, C. W. (2018). The knowledge of entry mode decision for small and medium enterprises. *J. Innovation and Knowl.* 4, 32–37. doi:10.1016/j.jik.2018.02.001
- Love, J. H., Roper, S., and Du, J. (2009). Innovation, ownership and profitability. *Int. J. Industrial Organ.* 27 (3), 424–434. doi:10.1016/j.ijindorg.2008.11.001
- Masha, M. J. (2018). An evaluation of strategies for entering emerging markets: a case study of Nigerian construction firms. *J. Manag. Eng.* 34 (1), 04017043.
- Monteiro, A. P., Soares, A. M., and Rua, O. L. (2019). Linking intangible resources and entrepreneurial orientation to export performance: the mediating effect of dynamic capabilities. *J. Innovation Knowl.* 4 (3), 179–187. doi:10.1016/j.jik.2019.04.001
- Ngo, L. V., and O'Cass, A. (2009). Creating value offerings via operant resource-based capabilities. *Ind. Mark. Manag.* 38 (1), 45–59. doi:10.1016/j.indmarman.2007.11.002
- Obisesan, A. J., Adeleke, A. Q., and Abiola, A. F. (2018). Assessment of transportation infrastructure facilities and construction projects delivery in Nigeria. *J. Constr. Dev. Ctries.* 23 (1), 23–34.
- Odediran, S. J., and Windapo, A. O. (2017). Mitigating risks in African construction markets through the interactive behavior of resources and capabilities in multinational construction companies and entry decisions. *J. Manag. Eng.* 33 (2), 04016040. doi:10.1061/(asce)me.1943-5479.0000485
- Ogundele, O. J. K., Idris, A. A., and Ahmed-Ogundipe, K. A. (2012). Entrepreneurial succession problems in Nigeria's family businesses: a threat to sustainability. *Eur. Sci. J.* 8 (7), 208–227.
- Open to Export (2022). What resources do I need to commit: am I ready to export? Available online at: <https://opentoexport.com/article/what-resources-do-i-need-to-commit/> (Accessed February 24, 2024).
- Pinho, J. C., and Martins, L. (2010). Exporting barriers: insights from Portuguese small- and medium-sized exporters and non-exporters. *J. Int. Entrepreneursh.* 8, 254–272. doi:10.1007/s10843-010-0046-x
- Ramon-Jeronimo, J. M., Florez-Lopez, R., and Araujo-Pinzon, P. (2019). Resource-based view and SMEs performance exporting through foreign intermediaries: the mediating effect of management controls. *Sustainability* 11 (12), 3241.
- Research and Market (2025). Africa construction - market share analysis, industry trends and statistics. *Growth Forecasts*. Available online at: <https://www.researchandmarkets.com/report/africa-construction-market>.
- Rosnan, H., Saihani, S. B., Yusoff, N., and Daud, N. M. (2016). Export readiness among Small- and medium-sized enterprises in Malaysia. in *Proceedings of the 1st AAGBS International Conference on Business Management 2014 (AiCoBM 2014)*. Editors J. Pyeman, W. Wan Rashid, and A. Hanif (SyedAiCoBM 2014). 57–64.
- Salama, M., Al-Jibouri, S., and Yazdani, S. (2013). A strategic model for joint venture success in the construction industry. *Int. J. Proj. Manag.* 31 (1), 61–70.
- Sambasivan, M., Abdul Rahman, A., and Abdul Hamid, A. B. (2009). The relationship between international operations and performance: a study of Malaysian construction companies. *Int. J. Proj. Manag.* 27 (5), 450–458.
- Sousa, P., Tereso, A., Alves, A., and Gomes, L. D. (2018). Implementation of project management and lean production practices in a SME Portuguese innovation company. *Procedia Comput. Sci.* 138, 867–874. doi:10.1016/j.procs.2018.10.113
- Teece, D. J., Pisano, G., and Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Manag. J.* 18, 509–533. doi:10.1002/(sici)1097-0266(199708)18:7<509::aid-smj882>3.0.co;2-z
- Teixeira, A. C., and Grande, M. (2012). Entry mode choices of multinational companies (MNCs) and host countries' corruption: a review. *Afr. J. Bus. Manag.* 6 (27), 7942–7958. doi:10.5897/ajbm11.3011
- USAID (2009). African global competitiveness initiative-best practices in determining export readiness. Available online at: https://static1.squarespace.com/static/506f165ae4b072c9aeb650ec/t/51714f5ae4b0455d72977658/1366380378081/Determining_Export_Readiness_Best_Practices_AGCL.pdf (Accessed September 24, 2020).
- Van, E. S. (2003). The measurement of export readiness of companies in South Africa potchefstroom university for Christian higher education.
- Westhead, P., and Ucbasaran, D. (2001). The internationalization of new and small firms: a resource-based view. *J. Bus. Ventur.* 16, 333–358.
- World Bank (2020). World development indicators 2020. Available online at: <https://databank.worldbank.org/reports.aspx?source=world-development-indicators>.
- Zhao, X., Wang, X., Wang, S. Q., and Xue, X. (2016). The effects of internationalization on the innovation capability of construction enterprises: evidence from China. *Sustainability* 8 (9), 840.
- Zou, H., and Ghauri, P. N. (2010). Internationalizing by learning: the case of Chinese high-tech new ventures. *Int. Mark. Rev.* 27, 223–244. doi:10.1108/02651331011037539