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Facilitating Importation of Solar Energy Products into Nigeria:

A Case Study of NAPS Solar Systems Oy

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Facilitating Importation of Solar Energy Products into
Nigeria:
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The primary aim of this research work is to provide a detailed description of the importation procedure as it obtains in Nigeria. Throughout this work, direct effort has been made and all attention has been focused on exposing the Finnish Small and Medium Enterprises in the renewable energy production industry to the existing opportunities in Nigeria. Although there are various renewable energy sources that are readily available in the country, this thesis has concentrated on Solar Photo-Voltaic energy, which is the most abundant of them.

This research work has been done as part of the CONNECT project. Since the project aims at co-creating new networks and partnership for Finnish renewable energy SMEs seeking to trade their products in the emerging markets, the author of this thesis has chosen to research an area of concern for the CONNECT project team, i.e. what are the requirements for a successful importation of solar energy products into Nigeria. Therefore the analyses, results and conclusion that are provided in this thesis are centered on the need for adequate exposure of the Finnish SMEs to practical knowledge of international trade with particular reference to Nigeria.

This thesis has clearly explained the practical steps to be taken in international trade, and also shown what Finnish solar energy SMEs should expect, who the major stakeholders in Nigeria are, and what preparations have been made by these stakeholders in order to encourage and ease the burden associated with importation into Nigeria. The research has also pointed out on the other hand, the risks involved in international trade and ways to reduce them. Furthermore, various means of transportation used in international trade have been discussed in detail, while suitable means of transporting solar energy products between Finland and Nigeria were highlighted.

Key words: Renewable energy, SMEs, International trade, Importation, Exportation, Solar, Photo - Voltaic, Emerging markets, Nigeria, Finland.

Table of Contents

1	Introduction	6
1.1	Background	6
1.2	Knowledge base of the research.....	6
1.3	Research problem and research question.....	7
1.4	Objectives, scope and limitation.....	8
2	Approach and methodology	8
2.1	Research approach.....	9
2.2	Research methods.....	9
2.2.1	Quantitative versus qualitative research method	10
2.2.2	Qualitative interviews.....	11
2.3	Data collection	12
2.3.1	Secondary data source	12
2.3.2	Primary data source	13
3	The case company	13
3.1	Products and service overview.....	14
3.1.1	Batteries	14
3.1.2	Charge controllers.....	15
3.1.3	Power pack	15
4	Importation stakeholders	16
4.1	Nigerian customs service	16
4.2	Standards organization of Nigeria	17
4.3	Bankers and insurers.....	17
4.3.1	International trade financing	18
4.3.2	International trade risks and insurance policies	18
4.4	Freight forwarders	19
5	Nigeria as an export/import destination.....	20
5.1	Brief introduction of Nigeria	22
5.2	Political factor	23
5.3	Economical factor	24
5.4	Social and cultural factor	24
6	Renewable energy potentials in Nigeria	25
6.1	Renewable energy demands.....	26
6.2	Suitability of Solar Photo-Voltaic (PV) energy	27
7	Importation strategy into Nigeria	29
7.1	Market entry strategies	30
7.2	Indirect exportation	31
7.3	Direct exportation	33
7.3.1	Agents	34

7.3.2	Distributors	34
7.3.3	Franchising	34
7.4	Before commencing exportation process	35
7.5	International logistics	36
7.5.1	Export documentation	36
7.5.2	Bill of lading	37
7.5.3	Commercial invoice	37
7.5.4	Pro forma invoice	38
7.5.5	Letters of credit	38
7.5.6	Packing list	38
7.5.7	International transportation modes	38
7.5.8	Maritime transportation	39
7.5.9	Air transportation	39
7.5.10	International product packaging and storage	40
7.6	Product certification	40
7.6.1	SONCAP	41
7.6.2	Procedure for SONCAP compliance	42
7.6.3	Certificate fees	43
7.7	The Importation process explained	43
7.7.1	Import procedures	45
7.7.2	Responsibilities of the importer	45
7.7.3	Responsibilities of the exporter	46
7.7.4	Responsibilities of the carriers	46
8	Results and conclusion	48
8.1	Research findings	48
8.2	Conclusion and suggestions	48
	Abbreviations	50
	References	51
	Figures	54
	Tables	55
	Appendices	56

1 Introduction

The first chapter of this thesis shall provide the reader a preamble to the subject matter. Other sections of this study shall also offer the reader further overview in respect to the subject of this thesis research. In this chapter also, there will be a brief narration of the background work done in the past, knowledge base of the research work, its identified problem questions, objectives, scope and limitation. These shall serve as a foundation for the reader to better understand the theories and other practical steps that are discussed within this work.

1.1 Background

This thesis work has identified an area of concern for the Finnish SMEs in the renewable energy industry who are interested in exporting their products to emerging markets. This area of concern is the simplification of the importation process into their desired country of destination. However this research has chosen to focus on importation processes into Nigeria, currently being the largest economy in Africa. Over the recent decades, Nigeria is has often been the key target country for investment considerations by SMEs in the developed countries.

Though there is still much to do by Finnish SMEs in terms of familiarization with the Nigerian renewable energy market, there is need for developmental work to be done in terms of research work on issues such as that of provision of up to date information on Importation processes. This work can be done by the Connect project team and motivated graduating students in the respective organizing institutions, such as Laurea Universities of Applied Sciences.

1.2 Knowledge base of the research

The subject of this thesis is provided for on the platform of the Connect project which will soon be introduced. The desire to successfully achieve the overall aim of providing a research for possibilities for creation of new kinds of networks for Finnish Small and Medium Enterprises, in the field of renewable energy production and services into the emerging markets has led to a number research work been carried out on various aspects of the project.

Therefore this thesis work will serve to improve the information base of renewable energy products exporter to Nigeria by using a combination of academic books references, relevant institutions reports, renewable energy market reports, trends, journals and importation guidelines documentations produced by the Nigerian Customs Service and other related government regulatory agencies.

The Connect project as mentioned above is an initiative formed through the strategic partnership consisting of its research partners, support organizations and Finnish renewable energy SMEs. Its research partners are members of the Federation of Universities of Applied Sciences (FUAS), Laurea University of applied sciences (SMEs), Lahti Universities of Applied Sciences and HAMK University of applied sciences. It is financed by TEKES - Finnish funding Agency for Technology and Innovation, Groove program- Growth from renewables together with FUAS members. Other partners are the national trade, internationalization and investment development organization in Finland (Finpro) and Finnish renewable energy SMEs.

The CONNECT project which started in January 2012 has a main objective of supporting growth and speeding up internationalization of Finnish renewable energy SMEs to developing countries (CONNECT 2012). It seeks to create a systematic linkage between the Finnish SMEs and their business counterparts or consumers in the emerging markets, in the area of renewable energy production and services.

A major focus of the connect project that this thesis intends to inherit and develop further is the analysis of energy and renewable energy market in target countries, with Nigeria as a reference country.

These markets exist mostly in the developing countries. Initially the project considered nine African countries and Vietnam. After initial market studies in the renewable energy sectors in these countries, the project owners further decided to focus on Nigeria, Kenya and South Africa.

These countries are clearly in the African continent, and a major reason guiding this decision was due to the fact that these countries have the largest population in their respective regions. Another reason is that these countries are their regional economic centers.

1.3 Research problem and research question

Nigeria is often the desired target destination of investments and importation in West Africa and Africa as a whole due to its social and economic indices, however its importation rules and guidelines seems to keep changing to meet global best practices. These frequent changes cause difficulties of adaptation and misunderstanding for intending exporters including Finnish SMEs in the renewable energy production and exports.

There is therefore need to offer detailed description of importation procedure, thereby making it simple and understandable in order to encourage exportation of these products into Nigeria. Hence, the research questions that this thesis work seeks to provide answers to are:

‘What is the procedure for a successful importation from Finland to Nigeria?’

‘What are the socio-economic and political factors that affect importation of renewable energy products into Nigeria?’

1.4 Objectives, scope and limitation

The Objective of this thesis work is to provide an explicit and working importation procedure description for Finnish SMEs in renewable energy production intending to export into the Nigerian market by researching importation practices currently obtainable in Nigeria with respect to local SMEs in Finland and making a case study.

Another objective of this research work is to facilitate easier and adequately informed importation of solar energy products between Finnish SMEs in Finland and their business partners in Nigeria.

This thesis research seeks to give attention to the practicalities of importation for solar energy products, especially the photo-voltaic (PV) solar panels module produced and delivered by NAPS Solar Systems Oy and resultantly an entry plan for similar Finnish SMEs specialized in solar energy production. Though there are different ways of generating renewable energies, the author of this thesis has limited the results of the work on solar energy market in the target country.

One limitation faced by the author is the limited information gathered through primary sources due to limited direct contact session with interview respondents. Another limitation is the lack of availability of technical details of the products intended for importation at the information gathering stage of this thesis work.

However, the limitations encountered and mentioned above in this work is not sufficient to be a hindrance in carrying out this research and to meet the expectations of the case company and the Connect project initiative.

2 Approach and methodology

The research approach used in this thesis work is the Case Study approach. This type of approach is most suitable because this thesis involves producing written procedure for the importation process for the case company.

Before continuing on the type of research approach chosen for the execution of this thesis, there is need to understand the definition of research and its approaches in to justify the rationale behind the this choice.

Research is a critical tool of business development in the world today. It has different definitions, depending on the context in which the researcher is considering it. A particular defini-

tion states that, it is “a process of enquiry and investigation done in a systematic and methodical manner which ends up in an increase of knowledge” (Brymen & Bell 2003).

2.1 Research approach

There are two primary approaches to using theories, namely deductive and inductive. A deductive approach begins with theories that are tested against new data, while the inductive approach begins with specific data out of which more general ideas or theories are generated (Hesse-Biber & Leavy 2011). Hence from for the purpose of this thesis, the author has adopted the deductive research approach.

2.2 Research methods

Methods on the other hand, can be generally defined as tools that researchers use to gather data. They are techniques for learning about social reality and thus allows for collecting data from individuals, groups and texts in any medium. Futhermore, according to Hardning (1987), a research method is a technique for gathering evidence.

It also refers to systematic, focused and orderly collection of data for the purpose of obtaining information from them to solve a a research problem. These are concerned more with how to do things than what to do or why to do it. In business management, it is normal to use techniques such as structured, semi-structured or unstructured interviews, surveys and observations (Bennett 1986; Jankowicz 1991).

One could reasonably argue that all evidence-gathering techniques fall into one of the three categories: listening to informants, observing behaviour, or examining historical traces and records. Research methods can be said to be rules and procedures or tools of proceeding to solve problems. Consequently, they can be used to perform several roles including:

Rules for communication: - Explaining how the results have been reached.

Rules of inter-subjectivity: - External readers should be able to examine and evaluate research findings (Ghauri & Gronhaug 2010).

Figure 1 shows the role of methods for arriving at solutions. However, the researcher’s choice of methods requires an understanding of the actual research problem. Consequently, researchers should have a general understanding of the various methods and the ability to effectively apply them in a given instance.

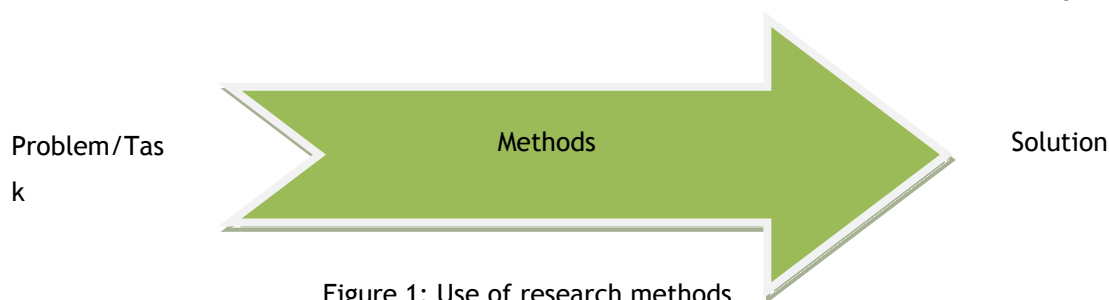


Figure 1: Use of research methods

2.2.1 Quantitative versus qualitative research method

Qualitative research is a combination of the rational, explorative and intuitive, where the skills and experience of the researcher plays a critical role in the analysis of data. It is usually based on social process and not on social structures which is frequently the focus in quantitative research (Ghauri & Gronhaug 2010, 105). The main difference between qualitative and quantitative research is not of literal quality but of procedure. In qualitative methods, findings are not arrived at by statistical methods or other procedure of quantification.

As a result, the basic distinction between quantitative and qualitative research is that quantitative researchers employ measurements and qualitative researchers do not (Bryman & Bell 2003; Layder 1993). Research problems aiming at narrating a person's experience or behaviour, or when we need to understand a topic on which little is known are examples of qualitative research.

The qualitative research method is therefore suitable for studying the functions or behaviour of organisations, groups or individuals (Strauss & Corbin 1998). For the purpose of this research, the researcher has chosen to collect data through observations and interviews, which are the methods usually related to qualitative methods of research. According to (Strauss & Corbin 1990; Becker 1970; Miles & Huberman 1994), qualitative research consists of three major components namely;

- Data
- Interpretative Procedure
- Report

Data are often collected through interviews and observation, while interpretative procedure is the technique to conceptualize or analyse the data to arrive at a result or theories. Report, usually written involves producing a document in form of a thesis or project. The difference between qualitative and quantitative research methods are emphasized in Table 1.

Qualitative Methods	Quantitative Methods
<ul style="list-style-type: none"> • Process Oriented • Emphasis on understanding • Interpretation and rational approach • Observations and measurements in natural settings • Holistic perspective • Explorative orientation 	<ul style="list-style-type: none"> • Result Oriented • Emphasis on testing and verification • Logical and critical approach • Controlled measurement • Particularistic and analytical • Hypothetical-deductive

Table 1: Differences in research methods.
(Reichardt & Cook 1979)

2.2.2 Qualitative interviews

The author of this thesis has used the interview technique research method to obtain data from selected interview respondents for the sake of gaining an in-depth and personal experience on the subject matter of the thesis. Therefore there is a need to take a closer look at the definitions of an interview from a qualitative perspective. This will offer justification for the choice of research method that the researcher has adopted. The interview respondents are members of the Nigerian Customs Service, Standards Organization of Nigeria and Naps Solar Systems. In chapter four, there will be an in-depth understanding of the roles this organization plays with respect to the subject matter of this research and who the respondents were in them.

Generally, interviews involve talk organized into series of question and answers, where the interviewer introduces him or herself and then ask questions. The interviewee then responds and provides answers to the questions. In many instance however, qualitative interview may look like everyday conversation, in which there is almost no distinction between the interviewer and the interviewed. Interviews usually are face to face, but they also take place with telephone calls and email and internet related technologies. It can be conducted between two people, the interviewer and interviewee, or between an interviewer and group of interviewees or respondents. Both are frequently used in business related qualitative researches (Eriksson & Kovalainen 2008).

2.3 Data collection

The two major types of data collection sources in qualitative research methods are primary and secondary data sources. The first step in determining the appropriate source for collecting data in any research is to locate the various sources of data. Following text should be to evaluate its relevance in context with the research problem. While some research question can be answered through collection of data from secondary sources, many other useful solutions can be achieved by collecting data through the primary means. The author of this research has collected data using both types of sources. Figure 1 show the division of data collection sources.

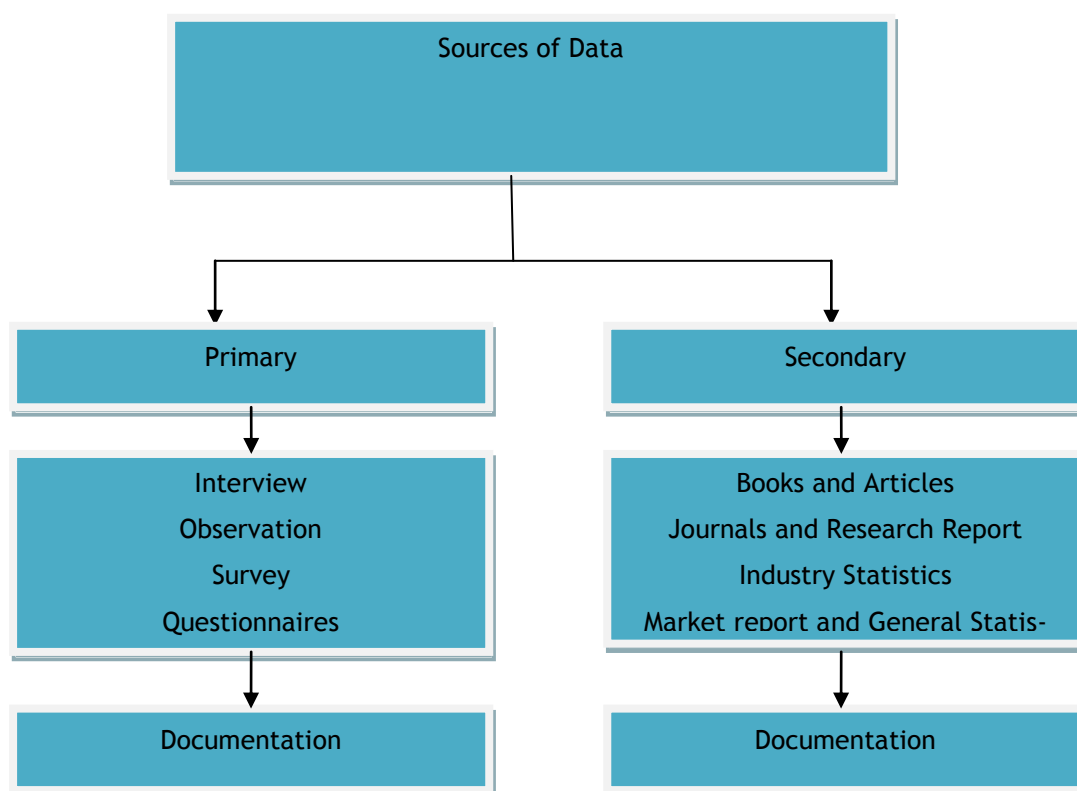


Figure 2: Data sources

2.3.1 Secondary data source

Secondary data is the facts and information obtained from sources that are not directly experiential to the researcher, they include published and unpublished academic or professional works. Secondary data can be found in written materials such as books, articles, and reports (Rabianski 2003). It can also be found in electronic form, from websites of companies and organization.

However website sources should be carefully selected to make sure that only reliable and unbiased ones are referred to, especially in an academic research such as this thesis. The author of this thesis has chosen academic books, journals, market report on renewable energy

products, companies websites as part of secondary data source used. Secondary data is considered for its accuracy and therefore widely used since it is also freely available to the public.

The advantages of using data from secondary sources are quite obvious, first of it is the huge amount of time and money saved, since most of these sources are readily available either in printed books or over the internet. In this kind of data source, the researcher not only gets help from the understanding the research problem, but to also widens the scope from which scientific conclusions can be reached. Also most of the data collected by international organization and governments are of high and reliable quality since they are collected by experts using thorough methods (Ghuri & Gronhaug 2010).

2.3.2 Primary data source

In research problems where secondary data are not available or cannot provide adequate solution to the problem in question, then we must collect data that are relevant for our needs. Such data are called primary data. What we should seek for, or ask, and collect depends upon our research problem or design. There several options available for collecting primary data. This includes observations, experiments, surveys, and interviews. It is difficult to learn about opinions and responses without asking direct and targeted questions from the people involved (Ghuri & Gronhaug 2010, 99).

Therefore if data is collected through primary means, such as surveys or telephone interview, then large information could have been gathered with relatively low cost. The first advantage of primary is that, they are collected for the specific research. Also, through primary data we could also know the reasons behind consumer behavior, management decisions or issues faced in globalization efforts (Ghuri & Gronhaug 2010, 99).

However, a disadvantage of primary source data collection is that it can take a long time, and could cost a lot to collect. It may also be difficult to get access when needed, as consumers, companies or other target respondents may not be willing to co-operate with the researcher in answering the questions they are been asked. There are reasons why target respondents may not be willing to co-operate with a researcher; they include lack of time and lack of incentive (Ghuri & Gronhaug 2010, 100). For the sake of this thesis work, the author has collected data from primary sources using the interview technique.

3 The case company

In this chapter, the author seeks to make an overall presentation of the case company, NAPS Solar Systems Oy. It outlines the products and service that the company offers to its customers which are spread in more than 140 countries on all continents.

Historically, Naps Solar Systems Oy's solar electricity company was founded in the year 2000. It was originally formed through a research into alternative energy technologies initiative by a Finnish company Neste in the early 1980s. Naps' close connection to Neste's battery division produced special expertise including R&D work for whole system design and the technologies of solar cells, control electronics, batteries and hydrogen energy storage, as well as module assembly (NAPS 2013).

3.1 Products and service overview

Naps Solar Systems Oy concentrates on high quality solar electricity solutions, both custom-designed and standard packages. "Naps System's complete off grid system solutions consist of solar modules, control units, batteries and all necessary accessories. In addition, remote communications and control, back-up generator systems, installation supervision and consultation are offered as required. Naps' complete grid-connected system solutions consist of solar modules, mounting structures and inverters, plus if required system monitoring and metering. In the case of ac backup systems, solar modules are combined with batteries, charge controllers and inverter/chargers with grid switching" (NAPS 2013).

Naps System also offers value-added features to its customers. Its intelligent systems design, system sizing program and extensive weather database assure the optimal solution for every location on earth. Naps Systems Oy has been an independent company with emphasis on custom-designed, high quality solar electricity solutions. It also develops its own system design and sizing program, since having high quality individual components is not enough for successful system design.

3.1.1 Batteries

Rechargeable batteries come in many types, however lead-acid, nickel-cadmium, nickel-hydride, lithium-ion are the most common used. In most off grid solar power applications, lead-acid is still the most cost-effective choice unless the operating temperature is extremely high or low. Below in figure 3 is a 12 volt lead-acid dry cell also called sealed battery.



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Figure 3: Lead-acid dry cell battery.

3.1.2 Charge controllers

Charge controllers are used in off grid systems. Its main function is to prevent the solar modules overcharging the battery. Charge regulation is needed to prevent overheating, excessive water losses and reduction of battery life while also preventing the load from over-discharging the battery, which is harmful. Below is the picture of a charge controller.



Figure 4: Charge controller

3.1.3 Power pack

Power Packs are complete photovoltaic power systems, designed specifically for quick installation and ease of operation. The components are part-assembled and the connections are made with foolproof plugs. Batteries and the charge controller are integrated in a box with the connection sockets located at the front. Below is the picture of a complete power pack.



Figure 5: Complete power pack.

4 Importation stakeholders

The main objective of this chapter is to provide a general understanding of the key stakeholders in the process of international trade and exports. The author of this thesis has introduced these stakeholders and also outlined their functions and roles in the process of exportation and importation. The following sub-chapters have concentrated on each stakeholder functions. SMEs should be adequately acquainted with these organizations in order to deal effectively in international trades. A good understanding of these stakeholders and their responsibilities will reduce time spent on, and the cost of compliance and make international trade easier.

4.1 Nigerian customs service

The world over today, trade facilitation has become a fundamental role and responsibility of governments. All countries work to ensure that locally manufactured products or services are exported to other territories. In efforts to measure development indices, governments analyze their international trade through import and exports. While the developed countries utilize advanced systems of collecting trade statistics, many developing countries still rely on long existing methods of collecting their trade statistics.

According to (Reuvid & Sherlock 2011), the main goal of collecting this type of information by relevant government agencies is to set and maintain an economic plan. This is an important element of economic policy, with customs having a unique position within the hub of the international supply chain of goods and services. Nigeria Customs Service (NCS) has the mission to provide services that promote trade competitiveness wherein declarations are promptly processed.

The Nigeria Customs Service having long been a steward of the nation's international trade and border management is not only under pressure like never before, but now has an enlarged role to perform at the highest level, to facilitate legitimate trade in a global environment burdened with a litany of threats (Customs 2013).

Customs generally play a vital role in the economic life of any country. There is hardly any sector of the economy that is not directly or indirectly affected by the activities of Customs services. The functions of the Nigeria Customs Service include;

- Collection of revenue (import /excise duties & other taxes/levies) and its accountability.
- Protect businesses against illegal trade malpractices.
- Enforce import and export restriction and prohibitions.
- Collect accurate import and export data for economic statistical usage and planning.
- Generating statistics for planning and budgetary purposes (Customs 2013).

4.2 Standards organization of Nigeria

Safety standards and product quality standards are necessary to protect the consuming public, and so imported goods are required to comply with local standards (Cateora et al. 2009). Having introduced the Nigeria Customs Service, and a range of its statutory functions, another important stakeholder in the international trade activities is the standard organizations.

The Standards Organization of Nigeria (SON) was established with a commencement date of 1 January 1970, when the Organization started to function. SON's governing body is known as the Nigerian Standards Council (SON 2014).

SON membership includes;

International Organization for Standardization (ISO)

International Electrochemical Commission (IEC)

African Organization for Standardization (ARSO)

SON being member of these international bodies has been able to improve its access to global markets thereby creating a harmonized standards system together with many other countries in order to reduce the international trade barriers caused by product safety and compliance to local standards. SON also participates fully in the programs and activities of international bodies and UN agencies, in particular, UNIDO in the interest of Nigeria as they define the characteristics that products and services have to meet on export markets.

The main functions of SON include but not limited to;

- Development of standards in conjunction with other international agencies for both products manufactured in Nigeria and also products that is imported into Nigeria.
- Certification of Products to be exported or imported into Nigeria.
- Registration of products as brand names in Nigeria.
- Enforcement of compliance to standards.
- Organizing conferences and training for industries (Importers, Manufacturers, and Exporters). The trainings include ISO 9000, ISO 14000, ISO 22000, ISO/IEC 17025, ISO/IEC 15189, ISO/IEC 27000 management systems.
- Handling consumer complaints and feedbacks (SON 2014).

4.3 Bankers and insurers

Banks are another stakeholder in the exportation process. They offer financing and methods of payments for international trades and export or imports. Financing and payments of inter-

national trade are issues relating directly with export prices, therefore export pricing are not to be made in separation from how the payments is to be made.

4.3.1 International trade financing

The already developed financial procedure are mostly complicated, however they provide the exporting SMEs with services needed to control payment for their international trades. Usually banks provide trade finance for the aim of making gains, but the services they offer are largely helpful to the SMEs. Their services include facilitating international payments through instruments such as letters of credit and also provision of financial advice through management of international bank money transfers.

Though exporters still make manual applications for letter of credit and various financial documents, most banks now carry out their transactions online through web based application forms and files. Also the language barrier, format differences and meaning of terms formerly resulted in the slow down and sometimes causing confusion in the process of obtaining letters of credit and other financial document.

The introduction of Society for Worldwide Inter-bank Transfers (SWIFT) has changed the procedure to a harmonized and faster process of inter-bank transfers around the world thereby causing over 90 percent of inter-bank transfers of monies (Albaum & Duerr 2008, 511). SWIFT is also used for inquiries and commercial payments including Nigeria.

4.3.2 International trade risks and insurance policies

The SMEs' choice of trading internationally especially with certain markets or customers should be guided by risk estimates and calculations. Risks involved in the international trades include method of payment and credit terms for the products to be exported. It is therefore necessary that exporters have a basic understanding of the underlying principles of risk analysis and corresponding insurance coverage.

As explained in (Reuvid & Sherlock 2011, 171), the credit risks in international trade is now considered to be worse than ever before, not only for developing countries but also for the developed countries since financial crisis of 2009. This crisis have had its recessionary effect on the global trade and export, and so credit risk management is essential to all SMEs intending to export. It should be considered at the start of the export process rather than at the end when payment is due, but products have been dispatched.

Information sources are available to help decide objectively after estimating a country's risk or payment method. Agencies such as Standards & Poors and Moody's periodically rate countries and financial institutions including banks in order to produce a medium term or long term grades. They recommend minimum payment methods for each grade in the scale.

Another type of risk associated with international trade is the physical risk. This type of risk involves damage caused to the products handling during shipment include poor packing, loss owing to accidental diversion of products or even intentional theft. This type of risk are often greater when large consignment of goods are been exported. As shown by (Reuvid & Sherlock 2011, 281), typical analysis of the physical risk to products in international trade would be;

Poor handling and stowage: 44%

Physical damage on conveyance: 33%

Theft and pilferage: 22%

A very commonly overlooked type of risk involved in international trade would also be the monetary exchange rates risk. Though the exported products are delivered in good condition, the exporter may still encounter some financial losses due to his unwitting knowledge of international exchange rates fluctuations in trading currencies. Usually there is no insurance coverage for this type of risk but adequate knowledge of exchange rates operations could be applied to minimize financial losses due to this risk type.

Though exporters could decide not to insure their goods against loss or damage during shipment and take this risk, it however has a wide range of its consequences. There are two types of insurance policies which the exporter could choose from. The specific policy also called the voyage policy because it covers only a specific shipment. In this type of policy, exporters request the insurance company to make an insurance policy for a particular consignment.

The other type of insurance policy is the open policy. This is formerly common for most exporters in international trade to use a broker to obtain insurance policy. It covers many shipments at once hence the insured is often required to make a payment of an averaged premium in advance. The most commonly used insurance policy however today is the 'Permanently open policy' because it allows any number of shipment over a period of time and it is also renewable (Reuvid & Sherlock 2011, 284-289).

4.4 Freight forwarders

The freight forwarders are critical actors in the international trades for a long period of time, the choice of freight forwarder will affect the timely and safe delivery of the exported products, as such most renewable energy products have a shelf lives time and so the quality of delivery and handling goes way to affect the lives of such systems.

Exporters are not just faced with decisions of mode of transportation to use in carrying their products, but also with decisions in choice of unitized systems within the various mode of transport. The need for the professional services of the freight forwarders comes in here so as to offer their expertise in ensuring prompt and safe delivery these products.

Most exporters use freight forwarders since they clearly play an important role in countries' international trading activities. As shown in figure below their basic function is to serve as intermediaries between actual exporters and the carriers or shipping companies.

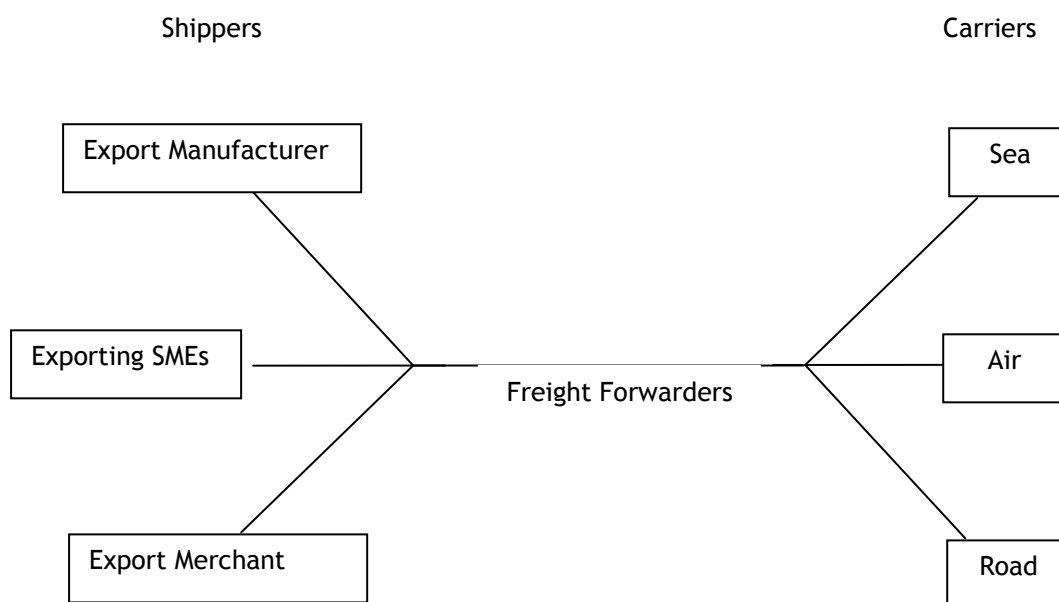


Figure 6: Freight forwarders as intermediaries

A major service of the freight forwarders is to provide professional advice. Typical forwarders have the complete knowledge of the complex procedures involved in international trade. This service is needful for exporters in order to save time and avoid unnecessary pressure resulting from ignorance of compliance standards both legally and financially.

Another service offered by freight forwarding companies is the handling of international trading documents. Actually many exporter or importers produce nothing but an invoice and then leave the other documentations for the forwarding companies to process. These documentations are discussed in details in chapter seven of this thesis.

5 Nigeria as an export/import destination

Generally defined, “an emerging economy is a country making all effort to change and improve its economy with the goal of raising its performance to that of the world’s economically advanced nations” (Czinkota et al. 2009, 191). Nigeria being an emerging economy, is the regional international trade and commercial center of West Africa due to its strategic position as the economic hub of West and Central Africa, This therefore allows for access to large markets. It is a leading country within the West African region and arguable in the African continent.

Nigeria's economy surpassed South Africa's as the largest on the continent after the West African nation rebased its gross domestic product data for the first time in twenty years thereby having \$488 billion as its current GDP for the year 2013 (Bloomberg 2014). Nigeria has a huge natural and human resources, and with a population of about 170 Million, It has the potential to sustain the African continent for economy growth.

Nigeria's major foreign trade revolve around its role as a key supplier of oil and natural gas to its trading partners around the world, even as the country seeks to diversify its exports, harmonize tariffs in line with a potential customs union sought by the Economic Community of West African States (ECOWAS), and encourage inflows of foreign portfolio and direct investment. In October 2005, Nigeria implemented the ECOWAS common external tariff, which reduced the number of tariff bands. Prior to this revision, tariffs constituted Nigeria's second largest source of revenue after oil exports.

According to the (NBS 2013), the value of Nigeria's imports stood at N1, 598.2 billion in the second quarter of 2013. In the second quarter of 2013, the value of imports increased by 13.5% year-on-year. For the first half of the year, the total value of imports, stood at N325.0billion. This is a 6.0% increase from N3, 060.7 billion recorded in the corresponding part of year 2012. A summary of Nigeria's imports by region showed that Asia ranked highest with N672.8billion or 42.1% of total imports, Europe recorded N584.6billion or 36.6%, followed by The Americas at N211.5billion or 13.2%, while Africa stood at N119.4billion or 7.5%. Out of the total imports from Africa, ECOWAS countries contributed N59.7billion or 50%. The figure below shows a chart of Nigeria's third quarter import and export summary.

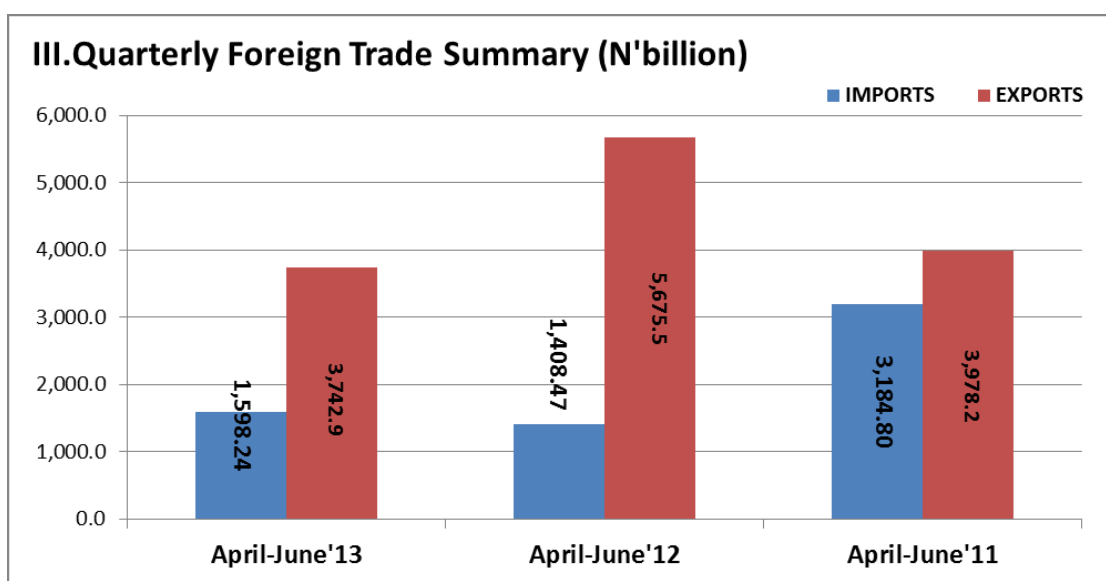


Figure 7: Quarterly foreign trade report.

National bureau of statistics

During the period of time also, exports to various continents indicated that Europe ranked first with N1,410.3 billion or 37.7% of total exports, followed by The Americas with N971.0 billion or 25.9%, and Asia with N734.6 billion or 19.6%. While Africa accounted for N503.8 billion or 13.5% of total exports, ECOWAS contributed N218.5 billion or 43.4% of exports to the region (NBS 2013).

As of year 2012, Nigeria's key exporting countries include the US, India, Netherlands, and Spain, while its major importing countries are China, the US, India and the UK. Natural gas, petroleum, tin, iron ore, coal and limestone are Nigeria's natural resources, which constitutes the exports materials, Also the major imported materials are finished goods, Machinery & transport equipment and chemicals. However the table below shows the trade relations between Nigeria and Finland from 2009 till 2013.

Million EUR	2009	2010	2011	2012	1-9 2013
Finnish exports	61.5	47.8	23.4	56.3	20.8
Finnish imports	0.1	0.1	1.8	0.8	0.5
Trade balance	61	48	22	56	20

Table 2: Trade relations between Nigeria and Finland

Finnish Customs

5.1 Brief introduction of Nigeria

Nigeria is a Western Africa country, bordering the Gulf of Guinea to its south, Cameroon and Chad to its east, Benin republic to its west and Niger to its north between Benin and Cameroon. Nigeria is a federal republic operating a federating system of government, with three different levels of authority namely; Federal, State and Local government. The division of governing power is among the three arms of government. Each level consists of three arms of government; the executive, the legislature and the Judiciary.

The primary duty of executive arm is to enforce laws and ensures safety of lives of citizens. It also safeguards the sovereignty of the nation and its territory integrity. The Legislative arm of government makes the laws and oversees the Executive arm, while the Judiciary arm interprets the laws made by the legislative. It also handles legal matters ensuing in the country.

The federal government is headed by an elected president with a maximum of two terms of four years each. The current president is Dr. Goodluck Ebele Jonathan. The next general election in the country is due in February 2015.

There are thirty-six states in the federation including Abuja, the federal capital territory (FCT). The country is divided into six geo-political zones namely; North-west, North-central, North-east, South-west, South-east and the South-south zone. There are 774 local government areas in the country. The below figure shows the map of Nigeria and all of its states.



Figure 8: Map of Nigeria. Google maps

Nigeria has English as its official language, and an estimated population of 169.28 million as of 2013. It obtained independence from British rule in October 1st 1960 after sixty years of colonial rule. The major religions are Christianity and Islam. Though there are more than 350 ethnic tribes in Nigeria, the three major tribes are; Yoruba, Hausa and Igbo. Its currency is the Naira with an average exchange rate of 1 Naira (N) to 210 Euros (€).

5.2 Political factor

The legal and political environments in a foreign market are critical to perception of the international trading SMEs. The Nigerian Government been aware of this fact is keenly working to sustain democratic principles, enhance security for life and property, and rebuild and maintain infrastructure that are necessary for the country to attract foreign investment.

Recently, The Federal Government of Nigeria (FGN) called on foreign investors to take advantage of the abundant renewable energy resources in Nigeria by investing in it for power generation. Aside investing in renewable energy, Nigerian government also stressed the available investment opportunities in the transmission segment of Nigeria's power sector. The present minister of state for power, Mr. Mohammed Wakil, made the call while addressing a group of foreign investors at a workshop in Paris, France recently. The minister, in a state-

ment from the Ministry of Power, told the investors that the Federal Government was presently finalizing a comprehensive policy on renewable energy for power generation (Punchng 2014).

The event, was the workshop on Africa Energy Outlook organized by the International Energy Agency and had delegates and ministers of energy from 15 countries from Europe and Africa attending. The minister explained that the policy was also designed to create a safe environment and a level playing field for investors. According to Wakil, Nigeria is already receiving many enquiries on investment opportunities from many parts of the globe.

5.3 Economical factor

As pointed out by (WorldBank 2013), Nigeria being a middle income, mixed economy and emerging market, has expanded its financial, service, communications, technology and entertainment sectors. Its GDP is currently ranked 26th in the world. It is also on track to become one of the 20 largest economies in the world by 2020 Nigeria is constantly remerging its manufacturing sector, which is the third-largest in Africa and produces a vast number of goods and services for export within the West African region.

According to a report published by (Citigroup 2013) in February 2011 and prepared by it analysts Willem Buitter and Ebrahim Rahbari, 3G countries or Global Growth Generators countries are 11 countries economies which have been identified as sources of growth potential and of profitable investment opportunities. The report identified Nigeria as being among the eleven countries with the most promising growth prospects countries namely: Bangladesh, China, Egypt, India, Indonesia, Iraq, Mongolia, Nigeria, Philippines, Sri Lanka and Vietnam. The report also noted that the developing Asia and Africa will be fastest growing regions until 2050.

5.4 Social and cultural factor

Culture deals with a group of people's design for living. It influences every part of their lives, how they spend money and how they consume commodities in general. That is the reason social and cultural behaviors are pertinent to the study of international marketing and investment (Cateora et al. 2009 94). Nigeria is the most populous country in Africa and is considered a regional power. The country is a forward looking and progressive nation, with its strength in its diversity. Islam and Christianity are the major religions along with a variety of local beliefs.

Nigeria holds considerable influence in the Africa continent. Its citizens are generally proud of their country. The country is endowed with vast deposits of natural resources making it the eighth largest oil producing nation in the world. It also has a well educated and industrious society, thus, Nigeria attracts a great deal of foreign trade and investment.

Due to the Nigerians' generous attitude toward time, it is advisable to schedule business meetings well in advance, preferably a month or two before the intended visit. Confirm the appointment by calling a day before. It is better to arrive on time for business meetings, as being punctual is appreciated. However, this may be difficult due to the rather chaotic traffic in major cities. Working hours in Nigeria are Monday to Friday, 8am to 5 pm. In the northern part of the country, Friday is a holiday for the Muslim community (Finpro 2014).

Nigeria is a hierarchical society. Senior executives and colleagues expect a high degree of respect. Therefore, it is common that people of a higher rank interrupt discussions during meetings. In Nigerian business culture, the most senior manager typically makes the decisions. Nevertheless, employee inputs are encouraged and rewarded (Finpro 2014).

6 Renewable energy potentials in Nigeria

“Nigeria has vast in renewable energy potential and resources for power generation which are yet to be tapped. This includes wind, solar, hydro, among others. Investment returns are guaranteed and the investment climate is very positive. Our government is at the stage of finalizing a national policy on renewable energy for power generation. This will cover framework and procedures for investment by public and private bodies. It will give details of rights and responsibilities as well as vision of the national government in this sector” (Wakil 2014).

With the vast renewable energy resources and a National Energy Policy (NEP) as well as a National Renewable Energy Master plan (NREMP), Nigeria is well positioned to up-scale the use of renewable energy. The way forward for Nigeria is to pass the NEP and the NREMP into law to ensure their sustained implementation from one government to another (Sambo 2009). The National Renewable Energy Master plan (NREMP) is road map for renewable energy development with the support of UNDP.

It articulates Nigeria's vision for achieving sustainable development, the plan envisions gradually moving from a fossil economy to renewable energy driven one. It targets a number of renewable energy technologies, namely:

Small-hydro: 600 MW in 2015 and 2, 000 MW by 2025

Solar PV: 500 MW by 2025

Biomass-based power plants: 50 MW in 2015 and 400 MW by 2025

Wind: 40 MW for wind energy by 2025

Electrification is also targeted under the plan, with improvements from the 2005 level of 42% to 60% by 2015, and 75% by 2025 (Connect 2013).

According to (UNIDO 2013), Nigeria has only 40% of the total population living in urban areas has access to electricity. Also less than 20 percent of the rural households have access to electricity. The electricity that is being supplied is unreliable and mostly of inferior quality for the end users due to frequent breakdowns and grid failures. Most manufacturing establishments are not connected to the national grid and those connected receive electricity only for a few hours per day.

Hence, most establishments depend on their own backup diesel generators for their electricity needs. Due to diesel usage, the electricity costs for industries are very high resulting in increased production costs affecting their competitiveness. Roughly speaking the cost per kWh of diesel generated electricity is about double the cost of electricity provided by the national grid. Specific areas of uses for renewable energy include households for heat for cooking, warming water, power for lighting, communication and electronics. Commercial and public services usage includes healthcare, education, administration, business.

According to the annual (REN21) Renewables Global Status Report which documents annual progress and deepening engagement in developing countries, for renewable energy policies, markets, and investments. Developing countries need to build more enabling infrastructure in the next 10 years, noted many experts. However, paths for infrastructure development may not follow traditional models, noted other experts, who foresaw expanding markets uniquely tied to the lack of full rural electrification and weak centralized power grids in many countries.

Experts believed that this expansion will accelerate through 2020 and beyond in leading countries such as Argentina, Chile, Colombia, Egypt, Ghana, Indonesia, Jordan, Kenya, Mexico, Nigeria, the Philippines, South Africa, and Thailand. It is believed that renewable energy markets will become even broader-based in a larger number of countries, as developing countries take increasing leadership (Martinot 2013).

6.1 Renewable energy demands

Electricity generation in Nigeria is characterized by excess capacity and inadequate supply. It has been observed that peak demand is often about one-third of installed capacity because of the non-availability of spare parts and poor maintenance. However, it is a growth industry which if permitted to operate with minimal Government intervention, could be a major contributor to the national economy. The electric power sub-sector in Nigeria is recently deregulated through the privatization and decentralization of the once dominating by Power Holding Company of Nigeria [PHCN], a former Government owned company.

Presently, the electricity demand in Nigeria is over 15,000 MW whereas the installed capacity is around 6,000 MW and the actual generation is only between 3,600 MW and 4,000 MW. This large gap is being met by individual using diesel generating sets installed by the industrial, commercial sectors and also households (UNIDO 2013, 55).

6.2 Suitability of Solar Photo-Voltaic (PV) energy

“Nigeria has great potential in solar energy. Average solar insolation stands at roughly 5.25 kWh/ m²/day. Solar energy in the North of the country provides a more suitable potential for photovoltaic use, with insulations of up to 7 kWh/ m²/day. Solar photovoltaic technologies are used for small-scale power supply in some rural electrification programs for some States of the federation. It is estimated that approximately 500 PV installations are in use in the country, with capacities ranging from 7.2 - 35 kWp. Most are government-owned while the rest are installed by private companies, NGOs and individuals” (Connect 2013). The figure below shows a map of Nigeria’s average annual solar radiation between 2004 - 2010

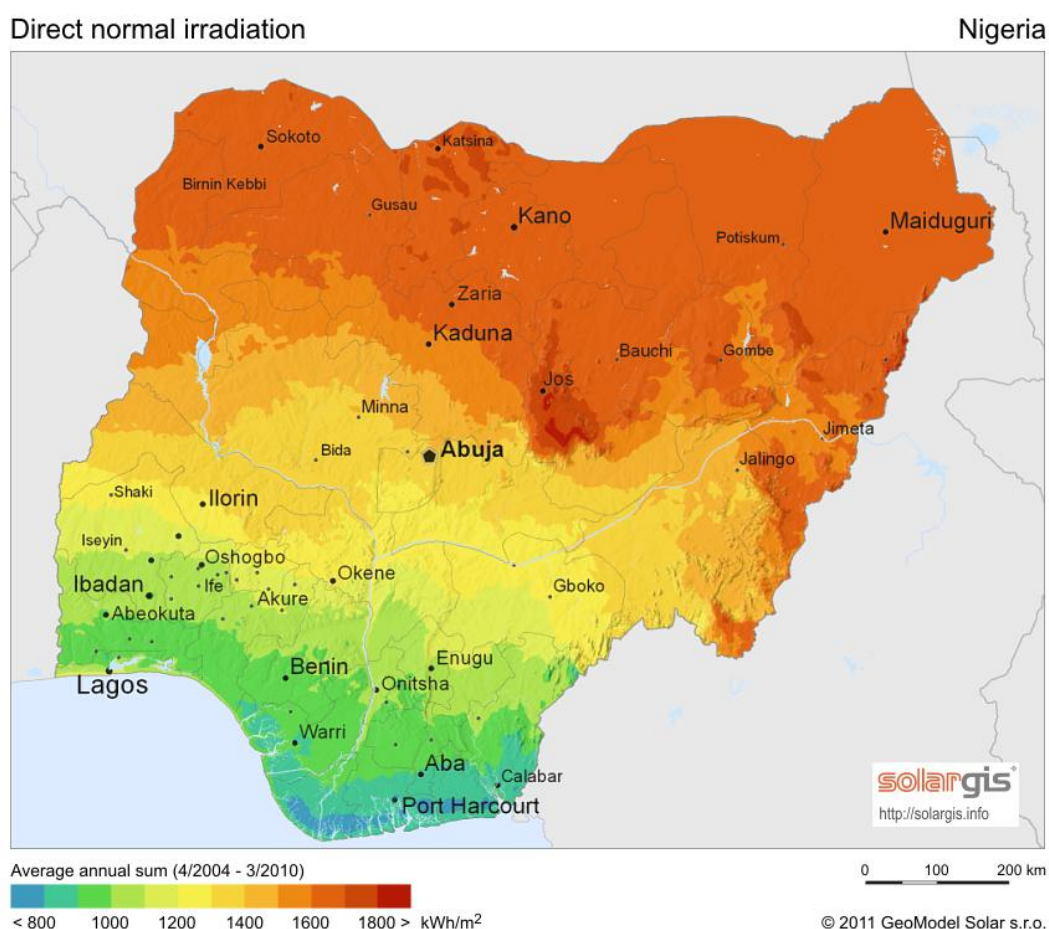


Figure 9: Average annual solar radiation. solargis.info

Solar PV is already becoming competitive with diesel generators, which represents a real revolution in off-grid electricity. Therefore with constant improvements, it is believed that the Solar PV will become firmly established as rural service infrastructure develops. There is also a vast proliferation of mobile phones usage in rural areas and thereby the need for charging by potentially hundreds of millions of rural households. People who walk miles to charge mobile phones will be example of target consumers of solar PV charging modules.

The cost implication of using solar PV energy has been reduced over the years. Many solar PV experts and visionaries are optimistic about the future of solar PV. “A lot of new markets for solar PV are going to pop out of the woodwork as the cost per watt declines, the sky is the limit as one said. Another lamented persistent perceptions of solar PV as exotic, when in fact its maturity is beginning to rival wind and geothermal. One longstanding industry expert projected that global solar PV capacity could reach 400-800 GW as soon as 2020, and could reach as high as 8,000 GW by 2050” (Martinot 2013, 56). The figure below shows a typical installation of solar PV panels.



Figure 10: Solar PV panel installed on house roof

Also according to recent history, one common metric for PV progress has been the module price in dollars per watt. This metric has undergone a long decline that has accelerated in recent years, and in 2011 it approached an historic level of \$1/watt. Many experts pointed to the dramatic reductions in this metric in recent years. Manufacturing cost has been reduced by 3-4 times, from \$6/watt in 2000 to below \$1.50/watt today. Also, several experts in 2011 predicted prices below \$1/watt in the near future (Martinot 2013, 56).

7 Importation strategy into Nigeria

Small and medium enterprises (SMEs), are always critical provider of jobs and wealth in nations economies, however they are less powerful force outside their home countries, usually because of their limited resources. Many of the SMEs in spite of their local growth and capacity never go into international markets. Traditional growth and expansion of the SMEs internationalization is exporting. This involves goods manufactured in one country is imported to buyers or consumers in another country (Doole & Lowe 2008, 145).

The target SMEs that this thesis brings to its main consideration are the Finnish SMEs in the field of renewable energy production and services, such as the that of the case study of the research, i.e. Naps Solar Systems Oy. These are the companies that seeks importation roadmaps into nigeria, in order to expand their global presence. Since importation by SMEs from Finland to Nigeria is a typical example of international business, there is need for guided study on the strategies and necessary actions to be adopted before actual steps are taken.

As (Albaum & Duerr 2008) describe, strategic decision concerns issues such as choice of countries, product markets, target segments, mode of entry, and timing of market entry. The first and important first step for intending exporter to international markets is for the SME to assess its readiness to enter such markets. It also went further to say that the export success of a company depends on its market and industry, and the chosen export strategy.

As a result, there are two major components of export strategy, namely product policy and market selection. Figure 11 shows an adapted export planning process for the Finnish renewable energy production SMEs seeking to go into emerging markets.

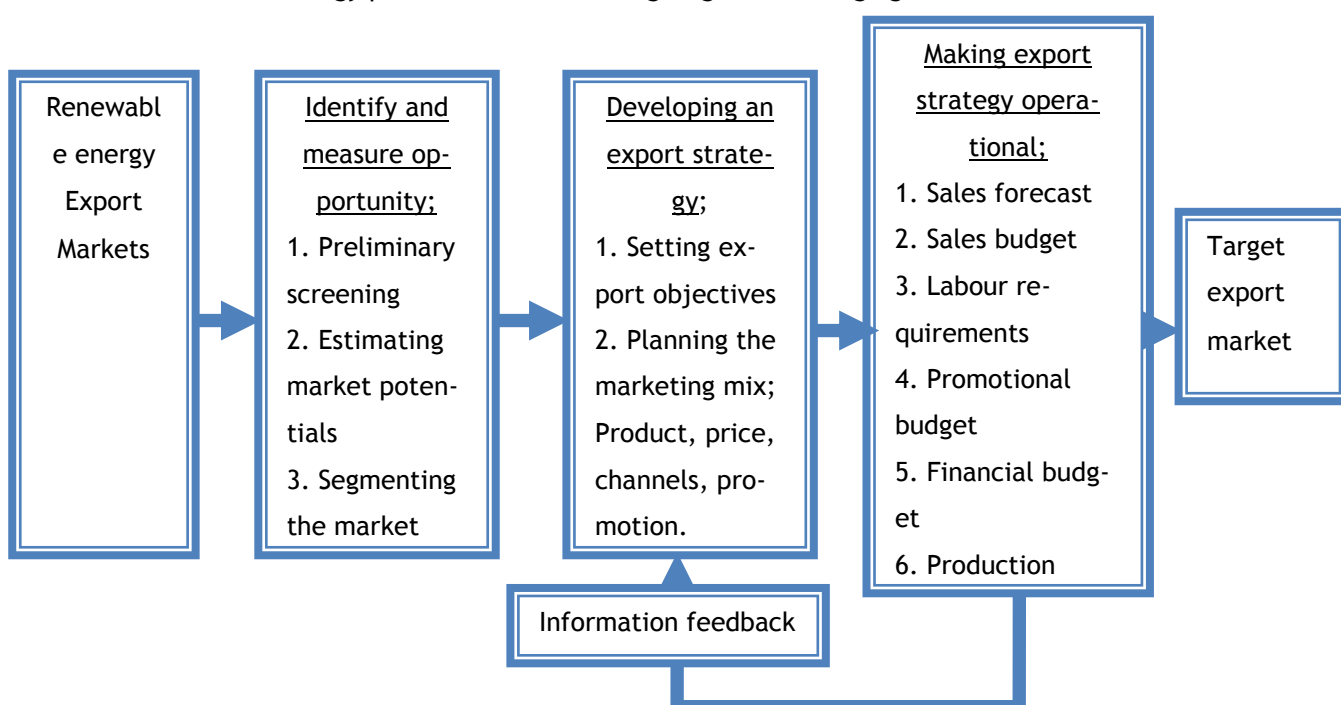


Figure 11: Export planning process

7.1 Market entry strategies

For most SMEs, the most important international business decision that they are likely to take is how to enter into new or emerging markets. This is a critical decision because such commitments will affect every other areas of their business for a long time to come. There is however no single ideal mode of market entry strategy (Doole & Lowe 2008, 231).

The strategy for how foreign markets should be entered should be viewed as a holistic plan. This will set objectives, resources, and policies that will be the company's guide in international marketing operations over future period in which they can achieve sustained growth in the foreign market. An international market entry mode is an organizational undertaken needed for the entry of a company's product, services or technology into a country.

According to (Czinkota et al. 2009, 215), international trades hold the promise of discovering new market areas, but companies cannot just simply move into the international marketplace and expect to be successful. SMEs must adjust and plan for the increasing opportunities abroad, have quality products, understand consumer needs and make adequate market study or surveys on the target country.

However the fast rate of globalization reduces the ability of SMEs to embrace the challenges of exportation into new markets. The intention of a typical SME is to get its products to the final consumers in the emerging markets, hence the need to discuss the theories surrounding marketing distributions and its channels. The need therefore arises for third party research and study on export/import related issues such as is been done in the process of this thesis.

The most typical international entry and expansion channels are exporting and importing, licensing and franchising. These shall all be discussed in the following sections of this chapter. It is explained by (Hollensen 2011, 551) that distribution channels typically account for 15-40 percent of the retail price of goods and services in an industry. However, as explained by (Doole & Lowe 2008, 158), "Exporting and importing have become inextricably linked so that the challenge is one of adding value to imported components no matter where they are sourced, they can be re-exported in order to meet international customers' needs effectively and profitably".

Another expansion channel is local presence arrangement in target country, through local partner SMEs or foreign direct investment (FDI). SMEs exporting or importing products do so in either direct or indirect way. FDI is defined by (Bradley 2005, 270), is an expansion channel that requires high financial commitment involving the transfer of technology, skills, manufacturing, management, marketing and other production processes by a company in a country to another.

The relationship between the exporter and the importer is shown in the figure below. It shows the flow of products from manufacturer to the various forms of customer i.e. retailers, consumer, and the larger consumer, considering both direct and indirect form of export. This is a typical route or path that products follow between a manufacturer and end consumers.

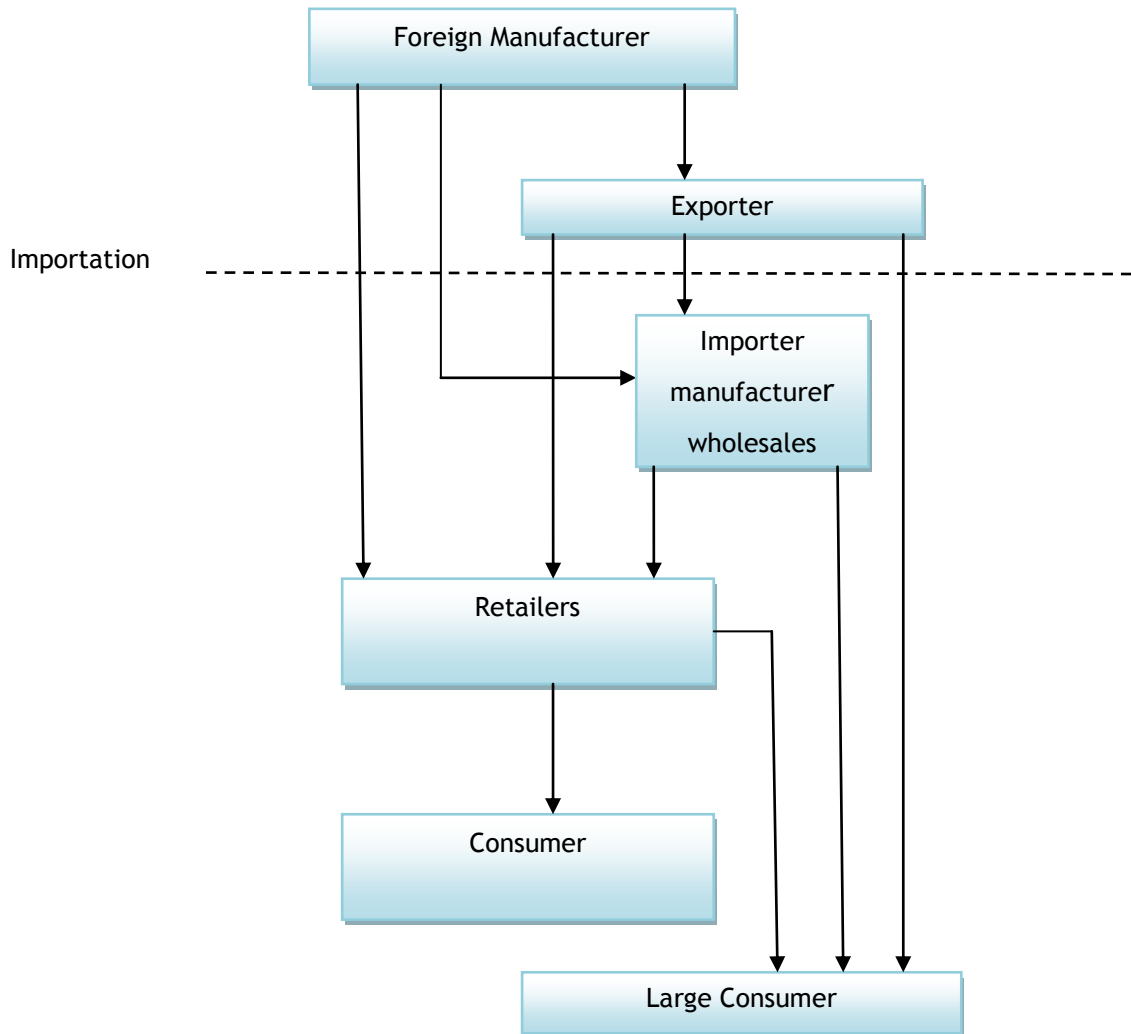


Fig 12: Indirect and direct export.

Adapted from Albaum & Duerr 2008

7.2 Indirect exportation

Indirect exports are the types that the SME in the actual exportation process through an intermediary and does not deal with the end consumers or business partners, and as pointed out by (Albaum & Duerr 2008, 308), there are two main alternatives to SMEs intending to export indirectly. They are ;

- Using an international marketing organisation
- Using a cooperative or business partner

SMEs that have limited or little resources for international business often use the simplest and lowest cost mode of entry into markets. This is achieved by having their products sold abroad by other companies.

As been said by (Czinkota et al. 2009, 224), The two market entry modes; direct and indirect importers and exporters frequently use trade intermediaries who handles difficults, but important details such as that of documentation, financing and transportation. Its also go further to say that roles of the intermediaries include identification of suppliers and retailers, and helping with long and short term of market penetration efforts.

The two main types of international intermediaries are export management companies and trading companies. Through the involvement of these intermediaries and export facilitators, SMEs can deliver their products to customers in foreign countries, thereby reducing financial and time constraints. The basic difference between the two intermediaries types is that the merchants takes ownership of the exported products, while the agents does not.

Export management companies (EMCs) according to (Czinkota et al. 2009, 224) are Companies that specialze in international business and exports as a representative or distributors. They have specific professionalism in selecting markets because of language capabilities and previous exposures in terms of maintaining relevant contacts in the relevant market sector of the target export destination.

Export facilitators are another important stakeholder in the export/import activities. They are agencies outside the company who helps in the process of entering foreign markets. They typically provide information leading to useful knowledge of exportation practices and markets reports on various sector of industries and services. They howver do not involve the actual transactions. They also may be private or publicly owned.

An influential group in the private type of export facilitators are called distributors. This type of facilitator often is involved through SMEs international activities in order to improve their distribution horizon or reach, They encourage domestic SMEs in production to enter new markets. Another type of private facilitators according to (Czinkota et al. 2009, 227) are banks, accounting and consulting firms. They serve majorly to by alerting their clients to international opportunities, for instance banks can work with the SMEs by acting like pathfinders in foreign or emerging markets.

Chambers of commerce and business associations that are associated with SMEs often sensitise them for international business trades or export. The Finnish-Nigerian chamber of commerce, which is curently been developed will serve a very important source of reliable renewable energy market information for the local Finnish SMEs.

The other set of export facilitator are the public sector type. This is in form of government interventions to facilitate the exportation effort of SMEs. Most countries now maintain export promotion agencies (EPA). They visit the SMEs with the aim of helping to actualise their international business opportunities and exportation aspirations, through spontaneous access to available resources. These resources include provision of relevant data, research and markets reports, professional advice, and financial information.

These government agencies also sponsor events that brings together stakeholders and inform them about new business opportunities in foreign markets. The Finnish government's agency for export promotion is the Finpro. Since it was established in 1919, initially called Finnish Export Association immediately began to build an international network of representatives and placed correspondents and contact people in different parts of the world.

In 1970, it was decided that the planning, preparation and production of export promotion operations would be concentrated in the Finnish Foreign Trade Association. In December 2000, the Ministry for Trade and Industry established a committee to promote exports and company internationalization. Central tasks of this new body were to specify the roles of the different actors promoting exports and internationalization, to define the levels of resource available and to clarify the need for co-operation. Operations carried out by Finpro follow the lines established in this committee's recommendations (Finpro 2014).

The third type of facilitator, as expressed in (Czinkota et al. 2009, 228) are the educational institutions such as universities. They facilitates networking opportunities, provide clients academic or professional business advice. They can also develop trade education projects. It further explained that students from such institutions may choose a firm or SME for analysis of its potentials in the international or emerging market as a course or even a thesis, thus with the supervision of teachers, the students can be helped to develop a report which are in turn useful for these SMEs with little financial capacity to conduct such research. This kind of research also helps the students to be acquainted with real life problems.

This research is exactly founded on this kind of group of business facilitators. The author of this thesis with the guide of the supervisors has worked with NAPS Solar Systems, the chosen case company to achieve easy facilitation of exportation of renewable energy products by Finnish SMEs.

7.3 Direct exportation

According to (Albaum & Duerr 2008, 321), Direct exporting is an exporting method that involves a manufacturer or exporter selling directly to an importer or consumer in a foreign market area. Consequently, the transaction process between countries is done directly by a dependent company of the exporter or a foreign marketing organization. (Doole & Lowe 2008,

239) also says that SMEs intending to maintain a lasting sales or operation in the international or foreign market must be proactive in the exporting process. This however, needs a clear commitment from such SMEs.

Another point of important decision making as explained by (Doole & Lowe 2008, 241) is that “ Once individual market have been selected and the responsibilities for exporting have been allocated, the decision needs to be taken about precisely how the company should be represented in the new market of entry ”. This means that it is not just enough to select an entry market or even the best intermediary, but it is of utmost interest to specify how these exporting partners should represent such SMEs. This should be done with care so as to protect the long term interest of the exporting SME. Suitable methods of direct exportation for SMEs in the renewable energy production as suggested by this research are explained in the following sub-sections.

7.3.1 Agents

(Hollensen 2007 318, 319) describe agent is an “independent company that sells to customers on behalf of the manufacturer (exporter). The sale’s agents profits are derived from a commission (typically 5-10%) paid by the manufacturer on a pre-agreed basis.” They provide the most popular means of low cost direct exporting in foreign markets. They usually represent a number of exporters. It further explained that there are three types of agents namely exclusive, semi-exclusive, and non-exclusive agents.

The most used form of new foreign markets entry is through the use of exclusive agents. This type of agent possesses exclusive rights to define sales coverage or target consumer demography. A non-exclusive agent markets various products, which may include direct competitors with the exporters (Hollensen 2007, 318).

7.3.2 Distributors

As described by (Doole & Lowe 2008, 242), distributors buy products manufacturer or exporters and sell them to consumers. They distribute and take market risk on left over products that are not sold. They also work to maintain exclusive rights for a particular sales area, and represents an exporter or manufacturer for all sales and servicing concerns in that specific area. This services are usually done in exchange for an appreciable amount of capital investment that is required in distribution and selling the products in question.

7.3.3 Franchising

This is a mode of expansion channel that involves marketing products or services in which the legal right to use an exporters’ or manufacturers’ brand name, trademark or method of

operation is granted to another company called the franchisee. This is done so that there is a fee in return paid to the exporter or manufacturer called the franchiser. The franchiser also provides the needed assistance and training, consequently exercising significant control over the franchisee's method of operation (Doole & Lowe 2008, 243).

The key reasons why franchising is another suitable option for international expansion stated according to (Czinkota et al. 2009, 231), are due to its market potential, its financial gain and saturated domestic markets in some cases. This means that the franchisee in most cases has an advantage even in saturated markets because they have better knowledge of the coverage area and therefore better market potential. The franchisee is of benefit in this system of expansion because it minimises the cost of implementing an already existing type of business.

7.4 Before commencing exportation process

Renewable energy SMEs need to be determined in its preparations for exportations by evaluating its internal financial and managerial strengths and weaknesses. This has to be done within the context of the global industry in which SMEs products or services belongs, as this will influence the competitiveness and strategic opportunities available to such SME. Motivation to export to international market or emerging markets such as that of renewable energy is an essential key for SMEs to be successful in today's world of globalization.

As pointed out by (Czinkota et al. 2009, 217), management normally would consider risking international business by only when they are stimulated. The two major types of motivations that necessitates firms to go abroad are "proactive and reactive motivations". The motivations resulting from stimuli for internally initiated or strategic change are called proactive, while the reactive motivations are those stimuli that results from a company's responses from an external sources' influence.

A major proactive motivation for exporters would be profit, particularly for SMEs operations, the initial profits capabilities are usually low due to cost of preparations for the international activities, and also the losses due to early mistakes on their part. The table below shows a general overview of major motivation for SMEs exporting their product abroad

Proactive motivation	Reactive motivations
Profit advantage	Competitive pressures
Unique products	Overproduction
Technological advancements	Declining domestic sales
Exclusive information	Excess capacity
Tax benefit	Saturated domestic markets
	Proximity to ports and customers

Table 3: Major motivations of SMEs to export. Adapted from (Czinkota et al. 2009)

7.5 International logistics

Initiating export activities bring SMEs in new directions, ultimately because exporting to foreign markets especially emerging markets is a critical change taking place. According to (Czinkota et al. 2009 216), while the highest level of management makes the decision to regarding exportations, the actual implemetation is the responsibility of the marketing personnel. This unit of the organisation need not be a a large, since one personnel can actually handle issues of exportation at least for the initial stage. It also goes further in saying that the first and all important step in developing international commitment is to become aware of such opportunities and then be familiar with logistics and its attending documenta-tion.

As defined by (Czinkota et al. 2009, 308), International logistics is “The design and management of a system that controls the forward and reverse flow of materials, services and informtion into, through and out of the international corporation. It encompasses the total movement concept by covering the entire range of operations concerned with movement including exports and imports”, while (Wikipedia 2014) defines logistics as the management of the flow of goods between the point of origin and the point of consumption in order to meet some requirements.

Exportation or Importation activities offers SMEs with new opportunities, new ways of doing business and other attending difficulties as well. The problems may vary from strategic concerns such as product delivery or compliance with the government regulations. Also of great concern is the issue of machinery of conducting international business transactions such as variety of documentations including commercial invoices, bills of lading, consular invoices, inspection certificates and shippers’ export declaration.

7.5.1 Export documentation

A major difficulty faced by SMEs in exportation is the amount of papers that are essential to the performance of their export contracts. According to (Reuvid & Sherlock 2011, 223), It is often perceived by SMEs that documentation involved in the facilitation of their exportation are quite cumbersome, and design to hinder rather assist their export efforts. It went further to say that there are often elements of negligence or lack of adequate and up to date information on the part of SMEs’ management, resulting in disastrous consequences. This is also a reason why around 70 percent of documents set presented to banks for letters of credit are rejected on first presentation (Reuvid & Sherlock 2011).

International consignments often take more one piece of document to transport. The set of document that is involved in exportation may be quite simple consisting of three or four papers or rather complex including a number of specialized documents. These set of documen-

tation also vary from one consignment to another depending on the type of goods or products, mode of transportation, destination or method of payment.

These documentations are compulsory processes in order to conform to domestic and foreign regulations. This thesis has identified the set of required international trade documents between Finland and Nigeria, typically for renewable energy products below. These export/import documentation as required of an exporter by the Nigerian Customs Service for all non food or drug products or consignment which includes the renewable energy products, and especially the Solar energy module are explained as follows;

7.5.2 Bill of lading

“A bill of lading is contract between the exporter and the carrier indicating that the carrier has accepted responsibility for the goods and will provide transportation in return for the payment” (Czinkota et al. 2009, 303). This means that exporter which is the owner of the products is entering into an agreement that transfers temporary ownership with the carrier or liner until the goods are safely delivered to a consignee or importer, this services is done for an exchange of payment which is either prepaid or post paid.

Again according to (Wikipedia 2014), “The Bill of Lading is a document of title of goods, transferable by endorsement and is a receipt from shipping company regarding the number of packages with a particular weight and markings and a contract for the transportation of same to a port of destination mentioned therein”.It is a document generated by a shipping line or its agent, giving details of a shipment, alongside this principal purpose, the bill of lading also certifies that the goods have been shipped aboard a vessel and in many cases certifies the condition of the goods at the point of loading. It also requires the carrier to release the products to a named party at the destination port.

7.5.3 Commercial invoice

A commercial invoice is a form of export invoice that is of importance to customs authorities that states basic information about the transaction, including a description of the products, total cost of products sold, addresses of the shipper and seller and delivery of payments terms. The buyer uses the invoice to prove ownership and arrange payments (Czinkota et al. 2009, 303). Although there is no standard format, the document must include a few specific pieces of information such as the parties involved in the shipping transaction, the goods being transported, and the country of manufacture. It must also include a statement certifying that the invoice is true, and a signature.

7.5.4 Pro forma invoice

“A pro forma invoice is a document that states a commitment from the seller to provide specified goods to the buyer at specific prices. It is often used to declare value for customs” (Wikipedia 2014). It is not issued by the seller until the seller and buyer have agreed to the terms of the order. The main functions of the pro forma invoice is that it serves as an interim invoice which shows what the final invoice will be when the order is placed. Another major use is to obtain advance payment sometimes called pro forma payment (Reuvid & Sherlock 2011, 175).

7.5.5 Letters of credit

Though this type of document is not always mandatory to facilitate the actual transportation of products by any means of transportation or to comply with the customs requirements. They are however critical to implement the exchange of goods for money across international borders. They also act as financial protection for both the buyer and the seller.

7.5.6 Packing list

A packing list is a detailed list of all the items to be transported. It usually contains a minimum of brief description of the products' weight, length, width, height and how many quantity is contained in each package. These are all used to calculate the cubic capacity for each item. (Rushton et al. 2014)

7.5.7 International transportation modes

Transportation is a key consideration when planning for international trade. Choosing the right mode of transport is critical to ensure your import or export operation is efficient and cost-effective. There are four ways of importing and exporting namely; road, rail, air and sea. Exporters sometimes need to use more than one type of transport.

Transportation modes are an essential component of transport systems since they are the means by which mobility is supported. As defined by (Rodrigue 2014) “Transport modes are the means by which people and freight achieve mobility. They fall into one of three basic types, depending on over what surface they travel - land (road, rail and pipelines), water (shipping), and air.”

The author of this thesis has identified the two most suitable transportation modes for exportation of renewable energy products due to dimensions in sizes and weights concerns. They are the ocean or maritime and the air shipping. These are further discussed in the following section of the thesis.

7.5.8 Maritime transportation

In the 20th century, maritime transport grew exponentially as changes in international trade and seaborne trade became interrelated. Maritime transportation, like all transportation, is a derived demand that exists to support trade relations. These trade relations are also influenced by the existing maritime shipping capacity. There is thus a level of reciprocity between trade and maritime shipping capabilities. Maritime shipping is dominated by bulk cargo, which roughly accounted for 69.6% of all the ton-miles shipped in 2005 and as of 2006, seaborne trade accounted for 89.6% of global trade in terms of volume and 70.1% in terms of value (Rodrigue et al. 2014).

Maritime transportation is dominantly focused on freight since there are no other effective alternative to the long distance transportation of large amounts of freight. Physical properties of water conferring buoyancy and limited friction, makes maritime transportation the most effective mode to move large quantities of cargo over long distances. Before the era of intercontinental air transportation, transcontinental passenger services were assumed by liner passenger ships, dominantly over the North Atlantic. The systematic growth of maritime freight traffic has been influenced by the following, hence its suitability for the transportation of renewable energy products:

Globalization: The international division of production and trade liberalization incited a large amount of parts and finished goods to be carried over long distances.

Technical improvements: Ships and maritime terminals have become more efficient in terms of their throughput and their ability to handle several types of goods (e.g. containers, natural gas, refrigerated goods), enabling to support long distance sourcing.

Economies of scale: The growth in the size of ships permitted maritime transportation to become increasingly cost effective, a trend which has been strengthened by containerization (Rodrigue et al. 2014).

7.5.9 Air transportation

The use of air freight has grown fast in recent years, it accounted for 2 percent share of world trade in goods measured by weight, but more than 40% by value. For the international operations, freight can account to 45% of the revenue of a regular airline. Typically, air cargo relates to time sensitive, valuable or perishable freight carried over long distances. This is particularly suitable in supporting "just-in-time" production and distribution strategies with low inventory levels. Air cargo has also a particular market for emergency situations where the fast delivery of supplies (e.g. medical, food) prevails over cost issues (Czinkota et al. 2009, 308; Rodrigue et al. 2014).

7.5.10 International product packaging and storage

International packaging and storage is of high importance because it deals with issues of safe and secure arrival of products that are exported. In developing packaging, environmental conditions such as climate and handling conditions must be considered. Exporters must also deal with international storage issues in order to determine where to locate inventories. The responsibility of adequate packaging is upon the shipper of the products. Since the cost of shipping is usually calculated on the basis of weight of the product and the packaging, the packaging weight is to be considered especially in air freight. Though the material used in packaging must be adequately strong to allow stacking in international transportation.

In Nigeria, duties are calculated according to the gross weight of consignments, including the weight of the packaging. This is explained in details in section 7.7 of this work. International packaging often pose a challenge to shippers, therefore a major solution to this challenge is the introduction of intermodal containers. They are large metal crates that fit on trucks, ships, trains or air planes, thereby easing the problems of frequent transfer of products internationally (Czinkota et al. 2009, 314). Containers also proffer solutions to theft and safety of shipped products.

According to (Rushton et al. 2014, 255-256), warehouses are critical component of most modern supply chains. They are likely to be needed in various stages of production and distribution of goods. Warehousing is one of the most costly of the supply, therefore its successful management is crucial considering cost and services. Once the decision is made to use foreign storage facilities, the warehouse conditions must be carefully analysed by making use of proper coding of products and making use of package dimensions that are acceptable to the warehousing system.

7.6 Product certification

Exporters will unavoidably encounter wide range of technical requirement in different countries, especially in emerging markets. The reason why these may act as hindrances is that the exporter may not be able to comply with standard or certification required for such standard. Another reason it may be of difficulty is that the cost of compliance, in terms of product modification, testing and certification may makes the selling cost of the products to be uncompetitive in such emerging markets. In order to decide which certifications are to be applied to a particular consignment and at what level, there are three important information that the customs service consider, namely;

Description

Origin

Value

Product Certification, in general terms, is the process of certifying that a product conforms to the requirements stipulated in the relevant specifications or standards. In Standards Organization of Nigeria (SON), Product Certification is carried out through conformity assessment which is an activity concerned with determining directly or indirectly that a process, product or service fulfills relevant requirements. Conformity assessments in SON involve factory inspections, testing, certification, auditing and surveillance, among others (SON 2014).

7.6.1 SONCAP

“SONCAP is the Standards Organization of Nigeria (SON) Conformity Assessment Program. It was in line with the statutory functions of the Standards Organization of Nigeria (SON) as established by CAP S 9 of the Laws of the Federation of Nigeria 2004 and subsequent amendments, that the SONCAP program was introduced in 2005 by the Federal Government of Nigeria to address the challenges of the increasing influx of substandard and unsafe products into the country. In 2012, the program was reengineered to ensure that goods imported into Nigeria meet the minimum requirements of Nigeria Industrial Standards or any other approved international standards”. (SON 2014).

“The program is a set of conformity assessment and verification procedures applicable to all products imported into Nigeria except those under the purview of the exemption list. The compliance of such products is with the applicable Nigeria Industrial Standards (NIS) specifications and/or other approved International Standards prior to shipment. The scheme is ratified by the World Trade Organization (WTO) and it forms the basis for ensuring that all goods imported into Nigeria conform to NIS or equivalent acceptable international standards. Four International Accredited Firms (IAFs) namely; China Certification and Inspection (group) Company Limited (CCIC), Cotecna Inspection Limited (Cotecna), Swede Control Intertek Limited (Intertek) and SGS Societe Generale de Surveillance (SGS) were appointed to administer SONCAP globally on behalf of SON”. (SON 2014).

According to Mr Tosan Akin, the Director of product registration at SON, the scheme was designed to ensure that imported products meet the specifications of acceptable standards for the protection of Nigerian consumers from unsafe and substandard finished products. Under the SONCAP scheme, conformity to approved standards is a mandatory requirement for imported products. Therefore the SONCAP certificate is mandatory for Customs clearance of goods under the import requirements of the Federal Government of Nigeria.

SONCAP is a pre-shipment verification of conformity to Standards process used to verify that products to be imported into Nigeria are in conformity with the applicable NIS or approved equivalents, and technical regulations before shipment. Under the SONCAP regime, imports are required to undergo verification and testing at country of exporting and a SONCAP Certifi-

cate (SC) issued demonstrating that the products meet the applicable standards and regulations or a Non-Conformity Report (NCR) where the goods do not comply.

The conformity assessment elements undertaken in SONCAP include but not limited to physical inspection prior to shipment, sampling, testing and analysis in accredited laboratories, audit of product processes and systems, and documentary check of conformity with regulations and overall assessment of conformity to standards. The testing of products is carried out as provided for in the accreditation agreement with emphasis on quality, performance and safety. Testing is governed by the provisions of ISO 17025 in terms of organization of the testing laboratory, technical staff qualifications, training/experience, testing and measuring equipment, calibration, test methods and procedures, records and test reports (SON 2014).

7.6.2 Procedure for SONCAP compliance

The scheme entails two mandatory processes of verification of product quality to meet specified standards such as NIS, International Organization for Standardization (ISO), and International Electro-technical Committee (IEC) and approved standards of other nations among others. The processes are:

Product Certificate 1 (Unregistered Status)

Product Certificate 2 (Registered Status)

Product Certificate 3 (Licensed Status)

Certificate of Conformity (CoC)

SONCAP Certification (SC)

These documents are mandatory for importation and Customs clearance of SONCAP regulated goods under the import requirements of the Federal Government of Nigeria.

Product Certificate 1 (Unregistered Status), Product Certificate 2 (Registered Status) or Product Certificate 3 (Licensed Status) issued under Routes A, B and C respectively are required for the opening of Form 'M.' The Product Certificate 1 (Unregistered Status) is valid for one shipment only whereas the Product Certificate 2 (Registered Status) or Product Certificate 3 (Licensed Status) are valid for a period of one year.

The SONCAP Certificate (SC) is a mandatory Customs clearance document in Nigeria. It is issued by Standards Organization of Nigeria (SON) on receipt of Certificate of Conformity (CoC) from the IAFs. The Certificate is applicable to SONCAP regulated products.

The SONCAP compliance procedures are designed to provide flexibility in the testing of regulated products by exporters. Any exporter is at liberty to select any of the IAFs laboratories or approved Accreditation Agents laboratories which will be used for testing the samples, as provided for above. (SON 2014)

7.6.3 Certificate fees

The administrative fees for issuance of both the product and SONCAP certificates are as follows:

Product Certificate Type 1 (Unregistered Status) = \$300

Product Certificate Type 2 (Registered Status) = \$300

Product Certificate Type 3 (Licensed Status) = \$1,300

Additional models to be included in the same certificate and covered in the same test report are charged at an additional \$5 per month per model which translates to \$60 per annum.

The cost of new products is \$300.

Certificate of Conformity = \$300

Certificate amendment fee = \$100

Non Conformity Report = \$350 (SON 2014).

7.7 The Importation process explained

The process of international trading activities between an exporter or manufacturer in Finland in and an importer in Nigeria is explained in this section of thesis. According to the Mr. Adeshola Esho, the assistant deputy comptroller on public relations officer of Nigeria Customs Service, the first step in the importation process is for the importer to make contact and an agreement with the exporter. This means that exports and imports always occur simultaneously, because the process of exportation is not complete without a corresponding importation and vice versa. The side of the process that this has concentrated on is the importation in to Nigeria, which is explained in this section of this research work.

“Nigerian Customs Service (NCS) Guidelines for Importation

- a. Any person intending to import physical goods into Nigeria shall in the first Instance process e-Form ‘M’ through any authorized dealer bank irrespective of the value and whether or not payment is involved.

- b. All applications for goods subject to destination inspection shall carry the “BA” code, while those exempted shall include “CB” in the prefix of the numbering system of the e-form ‘M’.
- c. The e-Form ‘M’ and the relevant pro-forma invoice (which shall have a validity period of three months) shall carry a proper description of goods to be imported to facilitate price verification via;
 - i. Generic product name i.e. product type, category;
 - ii. Mark or brand name of the product, where applicable;
 - iii. Model name and/or model or reference number, where applicable;
 - iv. Description of the quality, grade, specification, capacity, size, performance.
 - v. Quantity and packaging and/or packing.
- d. Documents in respect of each import transaction shall carry the name of the product, country of origin, specifications, date of manufacture, batch or lot number, Standards to which the goods have been produced (e.g. NIS, British Standards PD. ISO, IES, Din, etc)
- e. All goods to be imported into the country shall be labeled in ENGLISH in addition to any other language of transaction; otherwise the goods shall be confiscated
- f. Electrical appliances (fluorescent lamps, electric bulbs, electric irons and ties, etc) shall carry information on life performance while cables shall carry information on the ratings.
- g. All electronic equipment and instruments shall carry:
 - i. Instructions Manual;
 - ii. Safety information and/or safety signs;
 - iii. A guaranty/warranty of at least six months.
- h. All imports into the country shall be accompanied by the following documents:
 - 1. Combined Certificate of Value and Origin (CCVO), shall contain the following information.
 - i. e-Form ‘M’ No;
 - ii. Adequate description of goods;
 - iii. Port of destination. (The actual port shall be specified e.g. Tin-Can, Apapa, Kano, Onne, etc);
 - iv. Shipment identification, date of shipment, country of origin, country of supply.
 - 2. Packing List.
 - 3. Shipped/Clean on Board Bill of Lading/Airway Bill/Railway Bill/Road Way bill.

4. Manufacturer's certificate of production, chemical analysis report which shall state standards, where applicable, should be made available.
5. Laboratory test certificates for chemicals, foods, beverages, pharmaceuticals, electrical appliances and other regulated products, where applicable." (FEDERAL MINISTRY OF FINANCE 2013)

7.7.1 Import procedures

- "1. Duly completed e-Form 'M' shall be submitted electronically to an authorized dealer bank with the following attached documents:
- a. Pro forma Invoice
 - b. Insurance certificate
 - c. Regulatory certificate/permits (e.g. NAFDAC, SON, DPR, etc)
2. However the originals of the documents listed 'a,b,c' should be submitted to the bank.
3. Upon receipt of duly completed and submitted copy of the e-Form 'M' from the importer, the authorized dealer bank shall:
- a. Ensure that the e-Form 'M' is duly completed.
 - b. Compare the attached documents with the original;
 - c. Ensure that proper Know-Your-Customer (K-Y-C) and be satisfied that all the relevant documents forwarded are genuine.
 - d. After completion of (a) to (c), the bank shall validate and transmit the e-Forms 'M', to the Nigeria Customs Service (NCS)" (FEDERAL MINISTRY OF FINANCE 2013)

7.7.2 Responsibilities of the importer

- "1. It shall be the duty of the importer to ensure that the exporter makes available the pro-forma invoice in accordance with the imports procedure of the country. As a result, there must be no ambiguity in the description of the goods.
2. The importer shall also ensure that all the documents to be forwarded to the authorized dealer bank are genuine and verifiable.
3. All the requirements listed under the imports procedure must be complied with before documents are submitted to the authorized dealer bank.
4. Upon Registration of the e-Form 'M' by NCS, the importer shall advise the Supplier to arrange for the shipment of the goods." (FEDERAL MINISTRY OF FINANCE 2013)

7.7.3 Responsibilities of the exporter

“On consignment of goods for shipment, the overseas supplier shall:

- a. Make available three sets each, of original Combined Certificate of value and Origin (CCVO); Transport document (depending on the mode of transport) and Packing list to his/her bank.
- b. Forward only two (2) sets of the documents in (a) above through his/her banker to the relevant overseas correspondent bank of the Nigerian Authorized Dealer Bank, for transactions valid for foreign exchange as well as those requiring issuance of Certificate of Capital Importation and/or those involving supplier’s credit. The third copy should be forwarded to the authorized dealer bank that validates the e-Form ‘M’.
- c. Similarly, in the case of Bills for Collection and Unconfirmed Letters of Credit, two sets should be forwarded either through the supplier’s bank or the offshore correspondent of the issuing bank, to the issuing bank, while the third copy is forwarded directly to the Nigerian authorized dealer bank.
- d. In the case of “Not-valid for foreign exchange” transactions, only two sets should be forwarded directly to the bank that validate the e-Form ‘M’.
- e. In the case of dutiable personal effects, two sets should be forwarded to the designated bank and if they are non-dutiable personal effects, the two sets should be forwarded to NCS.” (FEDERAL MINISTRY OF FINANCE 2013)

7.7.4 Responsibilities of the carriers

“1. It shall be the responsibility of Shipping lines/air carriers to ensure that all goods being consigned for shipment to Nigeria are covered by appropriate e-Form ‘M’.

2. The e-Form M number MUST be reflected on the Bill of Lading, Airway Bill or Roadway bill for such goods.

3. An advance summary of the manifest of the cargoes must be made available to the NCS electronically immediately the vessel depart the last port of call” (FEDERAL MINISTRY OF FINANCE 2013).

The flow diagram below shows the overall activities or procedure of importation between an importer in Nigeria and an exporter from Finland including all the stakeholders in the import/export industry. It reflects all the procedures and guidelines that were aforementioned and explained.

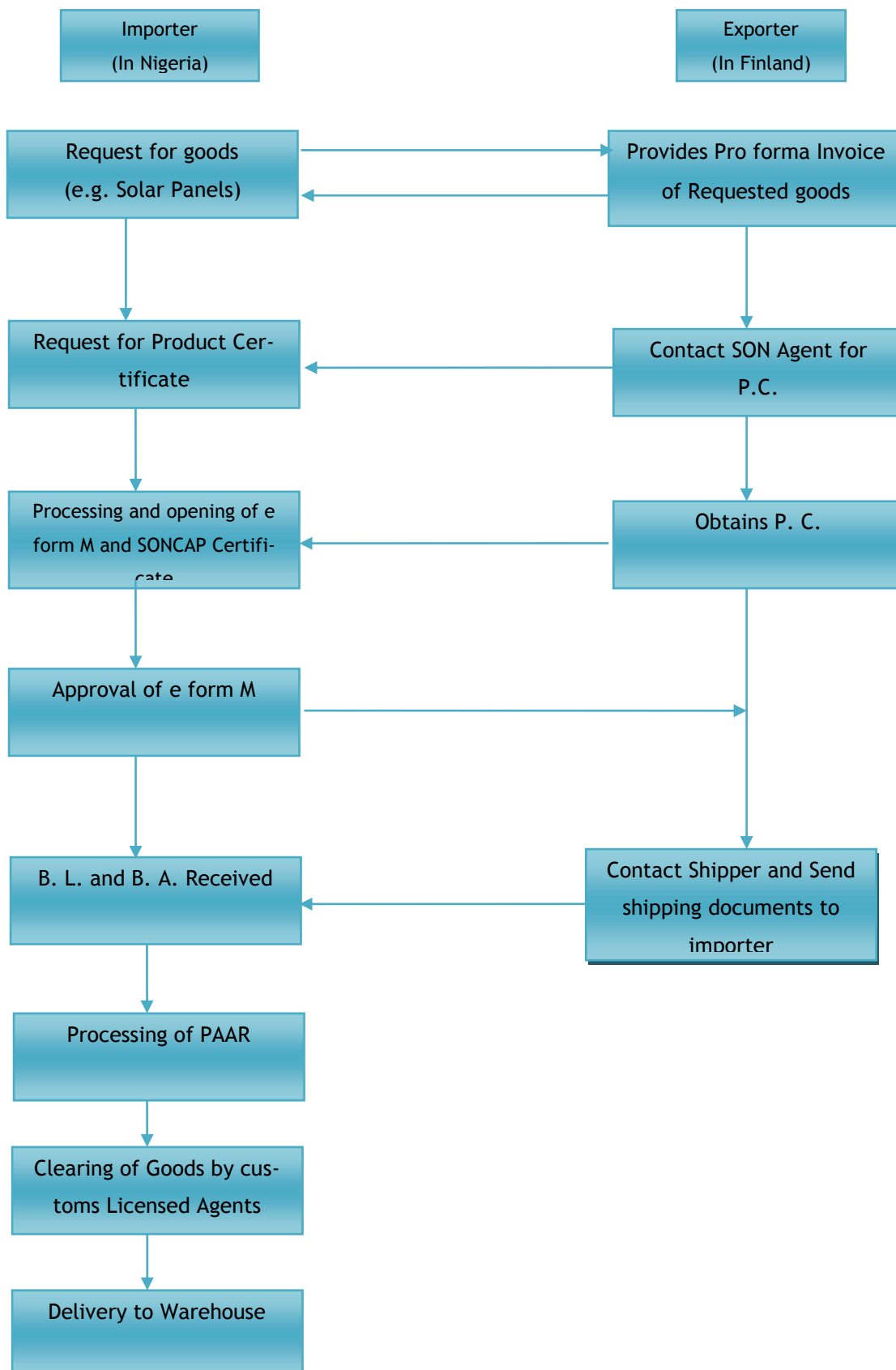


Fig 13: Overview of the export/import procedure

8 Results and conclusion

The author of this thesis has sought to simplify within this research work, the process of international trade between Finnish renewable energy production SMEs and consumers and business counterpart in Nigeria. The emphasis has been laid on the importation process into Nigeria. The thesis outlined in details the typical stakeholders and their role in international trade facilitating industry. It also emphasized the reasons Nigeria should be considered a priority choice for foreign trade destination.

8.1 Research findings

The findings of this research shows that Finnish renewable energy production SMEs interested in long-term investment or in exporting its products to Nigeria, especially due to the use of locally abundant natural resources available, will find opportunities in the energy production market. However, to improve prospects for success, potential investors must educate themselves extensively on local conditions and business practices, establish a local presence, and choose their partners carefully.

8.2 Conclusion and suggestions

According to an edition of Harvard Business Review, CEO of SMEs must understand the new trends and ways in which governments are in developing are redefining their interests and drawing up energy policies. They must also understand that the alternative to entering foreign markets is to stay in their domestic market. While staying back and close to domestic market may ensure lower political and financial risk, it could also mean losing their market share to global competitors.

However conversely, pursuing an international trade strategy without considering geopolitical dynamics could initially be successful, but could also increase the risks that are associated with entering emerging markets. Such risk as were discussed in this thesis include political, economic and cultural. These risks could undermine SMEs foreign business operations in the future if not carefully considered during the planning stage of such business process (Bremmer 2014).

The author of this thesis has therefore decided to conclude this work on two grounds, which targets two main groups of his audience namely the Finnish renewable energy production SMEs and the other stakeholders, and readers making reference to this research.

As part of the first conclusion, executives of Finnish renewable energy production SMEs must ask two important questions as they make efforts to enter emerging markets such as Nigeria. The first is "Is our industry strategically important to the government of the country we plan

to enter?” The second is that “Is our industry strategically important to our home government?”

Therefore the author through this thesis work, has sufficiently describe in details, efforts and preparations made by the Federal Government of Nigeria (FGN) to ensure its abundant solar energy resource is effectively utilized by giving all needed assistance to interested foreign SMEs in the renewable energy production industry. The thesis has also explained the process of importation into Nigeria in details including the stakeholders and all necessary documentation.

The second conclusion that this thesis has arrived at is that more opportunities should be given to students who are willing to work in the renewable energy production industry either as employees of existing companies or as entrepreneurs. Opportunities given to such students will eventually be of great value to Finnish renewable energy SMEs and other partnering countries in international trade, because they bring their international knowledge to bear in the process.

Abbreviations

AC	Alternating Current
BA	Bank Approval
BL	Bill of Laden
B2B	Business-to-business
CEO	Chief Executive Officer
CIA	Central Intelligence Agency
CoC	Certificate of Conformity
DC	Direct Current
ECOWAS	Economic for West African States
FGN	Federal Government of Nigeria
GDP	Gross Domestic Product
GW	Gigawatt
IEA	International Energy Agency
IAF	International Accredited Firms
ISO	International Standard Organization
KWH	Kilowatt Hour
MW	Megawatt
NCS	Nigerian Customs Service
OAU	Organization of African Unity
OECD	Organization for Economic Cooperation and development
PAAR	Pre Arrival Assessment Report
PC	Product certificate
PV	Photovoltaic
SC	SONCAP certificate
SMEs	Small and Medium Size Enterprises
SWERA	Solar and Wind Energy Resource Assessment
UN	United Nations
USD	United States Dollars
WTO	World Trade Organization

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Figures

Figure 1 Use of Research methods	12
Figure 2 Data Sources.....	15
Figure 3 Lead-acid dry cell battery.....	19
Figure 4 Charge controller.....	20
Figure 5 complete power pack.....	20
Figure 6 Freight Forwarders as intermediaries.....	27
Figure 7 Quarterly foreign trade report.....	30
Figure 8 Map of Nigeria.....	32
Figure 9 Average annual solar radiations.....	39
Figure 10 Solar PV panel installed on house roof.....	40
Figure 11 Export planning process.	42
Figure 12 Indirect and Direct export.....	44
Figure 13 Overview of the export/import procedure	65

Tables

Table 1 Difference in research methods.....	14
Table 2 Trade relations between Nigeria and Finland.....	31
Table 3 Major Motivations SMEs to Export.....	50

Appendices

Interview questions 1

Interview Questions for Mr. Adeshola Esho, the assistant public relations officer Nigeria Customs Service.

1. Who are the stakeholders in international trade?
2. What are their roles in exportation to Nigeria?
3. What are the requirements for importation in to Nigeria?
4. What are the procedures for importation into Nigeria?
5. What are the difficulties encountered by importers into Nigeria?

Interview questions 2

Interview Questions for Mr. Tosan Akin, the assistant director of product registration at Standard Organizations of Nigeria

1. What is the role of SON?
2. How does SON carry out its duties of products standards conformity?
3. Who are SON's partners?
4. What is SONCAP?
5. How does SON ensure consumer protection?

Interview questions 3

Interview Questions for Mr. Markus Andersen of NAPS Systems Oy

1. What is NAPS systems' entry strategy for emerging markets?
2. Does NAPS solar systems have motivation or plan to exports its products to west Africa, especially Nigeria?
3. Does NAPS solar systems have adequate knowledge of renewable energy product market study (demand and potentials) in Nigeria?
4. Does NAPS solar systems have any barrier or difficulty to exportation to Nigeria?
5. Who are NAPS solar systems' main competitors locally and globally?
6. Does NAPS solar systems have cooperation with other import/export stakeholders or business partners in other countries where it currently export to?
7. Can you elaborate on the solar energy module product features (what does a solar power module consists of? and what are technical specifications such as dimension, and weight?)