

China in the African Ports: A String of Pearls in the Making?

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ABSTRACT

The *Asian Dragon* is challenging the economic hegemony of the United States but at the same time depends on energy imports to sustain its economic growth. Most of China's Oil comes from the Middle East and Africa, and the supply passes through the Indian Ocean and the Malacca Strait, a critical choke point. Western literature has extended the idea of *String of Pearls* -denied by China-, consisting in a number of ports strategically controlled by China along the energy *Sea Lanes of Communication* (SLOC). China considers economic development -thus, energetic security- a core issue for the Chinese nation. The thesis supports the idea that China is enhancing its presence in the African ports, and that partially meets the *String of Pearls* strategy main points. The thesis is divided in two parts, first, in *What* is the actual Chinese pattern in the African littoral; and second, see if this strategy fits in the *String of Pearls* model. A number of ports are examined and a pattern of action is defined objectively; afterwards this pattern is situated into the *String of Pearls* context and analysed through a Structural Realist lens. Though the balance of power between China and the US is a global issue, this thesis is focused only on what concerns the Chinese strategy directly related to the listed African ports. The thesis conclusions claim that China is following a stable pattern towards the African ports and meeting some of the *String of Pearls* strategy points.

Keywords: China in Africa, African ports, SLOC, String of Pearls, Structural Realism.

Word count: 16.455

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ACKNOWLEDGEMENTS

Studying in Sweden was an exciting and rewarding experience which I would repeat without hesitation. Thanks to all the people I have argued, laughed, partied or went for a *fika* with. Without them the experience would not have been what it was.

I would like to thank my family for supporting me when it was necessary. Without them the whole experience would not have been possible.

My gratitude to my thesis supervisor Roger Greatrex and to the teachers of our centre, even the toughest ones.

I also want to thank my classmates simply for being as they are, all of them, it was great to spend these two years together. A hug to you all.

Finally, special greetings to some *härliga* people I have met in Sweden during this time. Especially to the Stensman family, Rebecca, Lina S. and Lina N.

LIST OF ABBREVIATIONS

- BRICS** – Brazil, Russia, India, China and South Africa (group)
CCCC – China Communications Construction Company
CH – China's Chery Holdings
CHEC – China Harbor Engineering Company
CIF – China International Fund
CMH – China Merchant Holdings
CPI – China Power Investment
CRBC – China Road and Bridge Corporation
CREC – China Railway Engineering Construction
DoD – Department of Defense
EXIM – Export Import Bank of China
GDP – Gross Domestic Product
IOR – Indian Ocean Region
LAPSSET – Lamu Port Southern Sudan-Ethiopia Transport (project)
PLA – People's Liberation Army
SLOC – Sea Lanes of Communication
SoP – String of Pearls
US – United States
USCC – United States China economic and security review Commission

INTRODUCTION

Coolly observe, calmly deal with things, hold your position, hide your capacities, bide your time, accomplish things where possible.

Deng Xiaoping, 1989

Problem statement and aim of research

Nowadays China is a main actor in the international scenario; though it is still the second biggest economy in the world -close behind the US- it is rapidly fulfilling the steps to take the global economic lead (Anderlini, 2014)¹. But this depends on whether Chinese economy is able to keep growing at the current levels. The problem is China depends on energy resource imports in order to keep that growth. Although coal is China's main energy resource; Oil also makes up an important share of the energy demand. The share of China's oil imports coming from Africa represented a 23% of the total oil imports in 2013 (EIA, 2014).

At the same time, all Chinese energy imports coming from Middle East and Africa depend on maritime transport, across the Indian Ocean and the Malacca Strait. According to the US, China has three core interests (USCC, 2013: 229)²; among them, economic development, and energy security is the basis of that development. For this reason, China has established a network of Chinese-influenced ports along the Northern Indian Ocean SLOCs in order to protect its energy flow. That phenomenon was defined as a *String of Pearls* by Allen Hamilton (2005). In other words, a safe path to secure Chinese energy routes in the Indian Ocean. It is difficult to say how far China is willing to go to defend its energy security –given the case- or if the other regional powers will allow China to become a real threat. The world witnessing nowadays China's struggle for the hegemony in what they consider their influence area: the South China Sea and the East China Sea. For example, by controlling the South China Sea, China would gain a direct access and freedom of movements to protect the most critical point in their energy SLOC: the Malacca Strait. It is nowadays managed by Singapore, Indonesia and Malaysia, but China aims to be able to defend its own interests by itself.

The SoP described in 2005 has already been discussed and studied by a number of scholars. This

1 According to Anderlini, it is likely to happen during 2014.

2 The three core interests are: (1) National security, (2) sovereignty and territorial integrity, (3) economic and social sustained development (USCC, 2013: 229).

thesis studies a phenomenon that is occurring right now along the eastern and western African littoral. It seems to emulate a port-oriented strategy of influence, as stated in the SoP model. This thesis aims to find what is the pattern of the Chinese influence over these ports, in case it exists.

Afterwards, the paper will look at the outcome of the study and see how the Chinese strategy in the African ports fit in the *String of Pearls* model. The geopolitics of the area on that issue will be a grand theme in the upcoming years. A possible military use of the Chinese-influenced ports worldwide –and especially in the Indian Ocean- is seen as a future possible threat by the US and its allies. Thus, it is not probable that they would follow a *laissez-faire* policy if China tries to gain regional hegemony in any part of the globe. Whether that will ever happen is impossible to predict; but now we can study the possible first steps of that possible strategy in the African continent.

Although this thesis is focused only on Africa, the Chinese aim of being involved in ports abroad is a global trend. Examples of that phenomenon can be found, for example, in Barcelona, Seattle or Zeebrugge NV. Barcelona Port is seen by China as one of its main gates to Europe. The Chinese Hutchinson Port Holdings, which is a private port holding, has invested €465 Million in the last 3 years to expand the container terminal (Catalan News Agency, 2014). In the case of Seattle, China Shipping Terminal, a state-owned company, became few years ago an equity-partner with the terminal operator SSA Terminals (Seattle PI, 2008). The same company keeps acquiring port assets worldwide, as in Zeebrugge NV port in Belgium. In 2013 the company acquired a 24% stake of the terminal, which is the busiest in Northern Europe (Murphy and Chiu, 2013). It is worth keeping in mind the dynamics of China in the ports worldwide, as in these three examples, even if the ways are not exactly the same as what is observed in Africa.

Research questions and purpose

The purpose of this thesis is, first, to understand how China is expanding its influence in the coasts of Eastern and Western Africa, by establishing a Chinese pattern towards the African ports. Second, situate this pattern in the context of the SoP strategy in order to find if the former fits in the latter. By answering these two questions, the thesis aims to help to achieve a better understanding on an ongoing subject. In other words, obtain a regional pattern, and then find if it matches a broader strategy.

The research questions were formulated to be clear and concise, note that the second question is

clearly subordinate to the results of the first. The questions are:

1. What is the Chinese pattern towards the African ports where it is involved?
2. Does this pattern fit in the *String of Pearls* strategy model?

Disposition

The contents of this thesis are presented in a way to provide the reader an ordered and progressive knowledge on the issue at hand.

In first place the methodology used during this study is introduced, discussing the main points I stand for on ontology and epistemology. It also includes a description of the research design, explaining why a documentary analysis was the most appropriate for this research. It is followed by the analysis of the chosen method, grounded theory, examining its three main steps: *data collection*, *analysis* and *integration*. In the next chapter the theory is presented but I found appropriate to also introduce four concepts used during the thesis, providing an extended knowledge on the research topic and theoretical universe. The literature review chapter is divided in two sections, the first one includes literature discussing the SoP as a model; the second part is centred on literature linking the SoP strategy with Africa, offering a more focused point of view on what is actually the research main topic.

The research is divided in two main chapters, responding to the logic of the two research questions; each one with a clear profile of its own. In first place, grounded theory is used to obtain what is the Chinese pattern in the African ports. Few examples on the methodological steps followed during the research are provided in the first pages of this chapter. The second part of the study comes next, in this chapter the theoretical framework is integrated in the research while the pattern is compared to the SoP model. Finally a conclusions chapter explains there is actually a pattern, and that pattern matches partially the SoP model.

METHODOLOGY

Ontology and Epistemology

Ontology refers to assumptions about the nature of the world and what can we know about it (Ritchie and Lewis, 2003: 16). The ontological stance of this thesis is subtle realism –also called critical realism-; which is a variant of realism, influenced by idealism (Ibid.19). I accept there is an existing external reality that is independent of our understandings and beliefs. Furthermore, the only way to find the reality is through a combination of the human mind and socially constructed meanings (Ibid.16).

Epistemology is related to the ways of learning and knowing about the social world (Ibid. 13); thus, how is it possible to achieve knowledge about the world? I stand for positivism since I believe the world is an independent reality that is not affected by the researcher. This study presents evidences as an origin for the obtained conclusions. Because of that, knowledge is acquired mainly by induction, since the goal is to obtain patterns and associations based on observations of the world. It is also –partly- deductive, since there are processes involving working with the qualitative research (Ibid.14). An example of that is the second part of the thesis, when the qualitative research conducted previously is interpreted under a certain theoretical framework.

Research design

A qualitative research was considered the most appropriate approach for the research conducted in this thesis. Strauss and Corbin (2008) presented qualitative research as “any type of research that produces findings not arrived at by statistical procedures or other means of quantification” (Ibid. 11). Qualitative methods are the most suitable to work on research questions requiring an understanding or explanation of social phenomena and their contexts; specially when the issue at hand involves some complexity and the processes studied occur over time (Ritchie and Lewis, 2003: 5). This research proposes to study an ongoing episode, involving several and different variables interrelated to obtain a pattern. The research is based on a documentary analysis of primary data, followed by a secondary analysis of data.

Documentary Analysis

By using documentary analysis, this study seeks an understanding of the subjective content of existing documents (Ibid.35). Moreover, documentary sources are convenient when the situations cannot be investigated by questioning or direct observation (Hammersley and Atkinson, 1995). For the grounded theory, the gathered primary data are mostly newspaper articles and statements released by companies and embassies, also information published in few specialized websites. In the second part of the thesis, document analysis relies on policy documents issued by governments or organizations, academic papers and newspaper articles.

The research includes, in first place, a *naturally occurring data analysis*, that has been defined by David Silverman (2010) as data produced without any kind of intervention by the researcher, in contrast to researcher-initiated data. The observation and analysis of documents allows “an ‘enactment’ of the social phenomena in their original settings” (Ritchie and Lewis, 2003: 45). The researcher is bid to decide which type of data illuminates best the research topic (Ibid. 56); and the study at hand -involving companies and governments in a continental process- was determinant to my choosing naturally occurring data over generated data. Generated data would have required both acceptance from the subjects representing states and companies, and a high sum of economic resources to travel abroad. Naturally occurring data provides enough information to respond the questions of the thesis from an outer point of view.

The study also includes secondary data analysis, in order to answer the second research question. Apart from the policy documents collected as primary data, also qualitative material is also a part of this analysis. It is the case of the *String of Pearls* model, which is used as a basis to contrast with the previous qualitative research. The secondary data analysis can be a valuable resource since it provides an opportunity to bring a new perspective to data already existing; using elements of the data not fully analysed before or form a base for a comparison with the newly collected data (Ibid. 61).

Critical approach

In first place, this thesis does not claim to obtain a perfect pattern of Chinese action towards the African ports. A broader study from another discipline, using quantitative methods or taking into account different variables, could lead to a broader explanation. This study claims to define a

general pattern, as a base for a further and more detailed research in the future.

Secondly, it is necessary to clarify that the author is not using information from a Chinese perspective, apart from embassy or company statements in English. There are no Chinese sources in the thesis due to language constraints. Also, there are no Chinese produced texts apart from the mentioned, which means any conclusion obtained in this thesis is built up from an outsider point of view. Since the thesis analyses the SoP strategy it is from the point of view of those who assume it as a possible reality, i.e. authors with an *occidental* point of view.

Grounded Theory

The question itself requires the researcher to obtain a pattern, looking for *What* is performed in a concrete geographical area. Grounded theory is the most suitable approach for theory generation, in this case, a pattern of behaviour. The aim of this research is to develop a “set of well-developed categories (themes, concepts) that are systematically interrelated through statements of relationship to form a theoretical framework that explains some phenomenon” (Ibid. 55). The theory generation process is divided in three main parts: Data Collection, Analysis and Integration.

Data Collection

The data collection process is based on document collecting, used as a primary source of information. Particularly newspaper articles, specialized websites and statements published by companies or embassies, between 2006 and May 2014, in French and English. As Corbin and Strauss (2008) point out, data collection has no restriction of sources to be used together or alone (Ibid. 27). The data collection was based on a list of fifteen African ports where China is involved in some way. The ports were not selected in advance, it was the constant data gathering that resulted in the choice of the most relevant ones for the study. In other words, not all the ports I gathered data from the beginning were included in the final presented set. I considered fifteen a representative – and do-able- set of cases for a Master thesis. Regarding the articles, they were collected from both African and international newspapers. The articles were selected among a major set based on their value for the study purposes, quality of their information and reliability of the source. The company statements are all collected from Chinese companies mentioned during the thesis. On the other hand, the embassy statements were found both in Chinese embassies in Africa and embassies of the African countries in China.

Analysis

During the analysis process, the collected data is reduced into manageable units. Coding is the process of “taking raw data and raising it to a conceptual level” (Ibid. 66). In first place, an *open coding* phase will be conducted in order to break data apart and associate concepts to stand for blocks of raw data (Ibid. 195). The data is broken down into manageable pieces, writing them down in *memos* (Ibid. 193) that are a specialized type of *written records*, containing the products of the analyses (Ibid. 117). Memos are sorted by categories, sometimes linking two or more concepts; memos are a way to record the analysis step by step (Ibid. 106-8). The next step of coding is the *axial coding*, which is the act of relating the former concepts or categories to each other (Ibid. 195). This study entails the analysis and data collection as two parallel processes; data collection is only finished when reaching a *data saturation point* (Kolb, 2012: 85).

Theoretical sampling is the method used in this research when collecting data based on concepts or themes derived from data, providing a better understanding to identify relationships between concepts (Corbin and Strauss, 2008: 143). Constant comparison is an ongoing process during the analysis of the data, incidents found are compared with other incidents to find similarities and differences (Ibid. 73). During the comparative analysis process, “incidents that are found to be conceptually similar to previously coded incidents are given the same conceptual label and put under the same code” (Ibid. 195).

Integration

The last step of the theory generation process is *integration*. It consists in linking categories around the core category and refining the resulting theoretical construction (Ibid. 263). It requires sorting out all the memos written during the analysis process and fitting them together (Ibid. 274). In the case of this research, there is not a single core category but a main thread “China’s presence in the African ports”; core categories are split in a number of statements, defining the pattern that is asked to obtain. It is also a fact that many concepts belong to more than one of the core categories, and not always is possible to interpret them in the same way. The outcome of the process is a pattern, or a structure that integrated all together provides an answer to the first Research Question. Finally, an example of control *port* is presented in order to test the theory.

Note on the Second Research Question.

In order to answer the second research question a study on secondary analysis will be conducted, as stated few paragraphs above. The outcome of the qualitative research will be framed in the existing SoP model. Policy oriented documents, academic papers and newspaper articles directly related to the comparison at hand, will be used to help achieve a better understanding and link the categories. In fact, a secondary analysis of data means “returning to a data set which was collected for one set of purposes, to re-examine it with a slightly different set of objectives (...) or to look at it from a different theoretical perspective” (Ritchie and Lewis, 2003: 76). Which means also that the chosen theoretical framework –presented in the next chapter- provides the major set of concepts and provides the guidelines for the interpretation of the comparison.

THEORETICAL FRAMEWORK

Key concepts

Malacca Dilemma

The concept was first announced by the former Chinese president Hu Jintao in 2003 when he used the expression “the Malacca Strait Dilemma” in a Central Military Commission reunion. One third of the world’s international trade passes through the Malacca strait, and more than the 80% of China’s crude oil imports (Yhome, 2013). The strait is about 1000 km long and in some points it is as narrow as 15 km or even 2.5 km at its narrowest point. That would expose China to a possible energy blockade in case of hostility with another power. Because of the narrow condition of the strait, a blockade could be achieved by land-based forces, making use land based artillery and airpower. For that reason China started searching for alternatives, choosing finally the oil pipeline through Myanmar. But it is not a final solution since Chinese oil imports grow “faster than the pipeline can alleviate” and the problem will remain unsolved in 1-2 years (Sarma, 2013).

‘Places, not bases’ policy

Concept fashioned in 1991 by the US military regarding a concrete naval policy. It consists in the possibility for military vessels to be eventually hosted in ports that are not considered *bases* run by formal allies -as Japan or Korea are for the US-. That allows the US to keep military strength in areas without military bases, and therefore guarantee the stability of its fleet (Choong, 2011). The Commander Douglas M. Deets referred to the concept in his paper *It's the Economy! U.S. Facilities Access in Southeast Asia* (1998) and displayed the example of Philippines and Singapore occurred in 1991. He explains how it did not suppose a problem for the US to keep its presence in the South China Sea after losing the naval bases in Philippines (Deets, 1998: 7). The US only needed enhanced facilities access and they could get that in Singapore, thus keeping a strong power without *bases*. He goes further and praises the *places, not bases* policy, since it does not require a high budget to maintain (Ibid. 8).

Security Dilemma

The concept was introduced by John Herz in his book *Idealist Internationalism and the Security Dilemma* (1951) and was used in abundant literature since then. Picking Robert Jervis' Security Dilemma's definition; "in international politics, however, one state's gain in security often inadvertently threatens other" (Jervis, 1978: 170), and that can lead to conflict among these states even if it was not intended to in the beginning (Ibid. 170-1). According to him "the greater the range of interests that have to be protected, the more likely it is that national efforts to maintain the *status quo* will clash" (Ibid. 185). China is indeed interested in keeping the *status quo* of its energy imports, securing them as much as possible.

'String of Pearls' model

The concept was first used in the report *Energy Futures in Asia* (2005)³ by the US Department of Defense (The Washington Times, 2005). It states that China aims to have military settlements along its strategic SLOC (Sea Lanes of Communication), especially to protect its Oil shipments coming from Middle East. Strategic diplomatic relations are established along the SLOC to achieve that purpose. Because of that, the SoP strategy upholders consider there is a risk of military control over these supply lanes by the Chinese navy. The model refers to a number of harbours in IOR in countries like Pakistan (Gwadar), Sri Lanka or Burma, among others. There is also the *Malacca Dilemma* to take into consideration here; China is aware of the vulnerability of its SLOC, which can easily get a blockade and have critical consequences for China's economy. The SoP would be a response to that weakness, which could eventually become a threat, in order to minimize the risk for that to occur (Pehrson, 2006: 5, 7).

Synthesizing the above, the main points of the SoP pattern used as an element of comparison in this thesis are the following:

- a) Aim to have strategic military settlements along the SLOC. China would be adopting a SoP strategy of bases and diplomatic ties, including a naval base at Gwadar, Pakistan, among other "pearls" and agreements along the SLOC (The Washington Times, 2005).

- b) Strategic Diplomatic Relations; since "China is building strategic relationships along the sea

³ Its content was developed by The Washington Times, the original report is not leaked to be consulted.

lanes (...) that suggest defensive and offensive positioning to protect China's energy interests, but also to serve broad security objectives" (Ibid.).

c) Control of strategic chokepoints; predicting that China intends "to build up naval power at 'chokepoints' along the sea routes from the Persian Gulf to the South China Sea" (Ibid.).

International Relations theory: Structural Realism.

The analysis of the international scenario is based on the Structural Realist perspective of the International Relations theory; stated in 1979 in Kenneth Waltz's book, *Theory of International Politics*. Within the Structural Realist perspective family, this thesis uses the Offensive Realist view, introduced by John Mearsheimer's in his book *The Tragedy of Great Power Politics* (2001). Most of Mearsheimer's assumptions and conclusions were also referred to in Waltz's book⁴. Why use Structural Realism? Because it is focused on the behaviour of great powers in the international system and this suits the purpose of analysing China's actions in the global scene. Thus, introduced in the second part of the study, the theory becomes a lens to interpret the obtained outcomes.

But, what are the main positions defended by Offensive Structural Realism? It is pointed on five assumptions that combined together are "power incentives for great powers to act offensively" (Ibid. 32).

1. The International System is anarchic, there is no central authority above the states (Ibid. 30), and matching Waltz's, who wrote that "international systems are decentralized and anarchic" (Waltz, 1979: 88).

2. All the great powers have some offensive military capability that can become a potential threat independently of the military capabilities of each one (Mearsheimer, 2001: 30).

3. States can never be certain about other states' intentions, "which means that states can never be sure that other states do not have offensive intentions to go along with their offensive capabilities" (Ibid. 31).

4. Survival is the primary goal of the great powers; and a common goal for all states (Ibid. 31). In a

⁴ Though Waltz is considered a Defensive Realist, he presented the main assumptions of Structural Realism in his book.

similar way, Waltz also wrote, "I assume that states seek to ensure their survival (...) Survival is a prerequisite to achieving any goals states may have" (Waltz, 1979: 91).

5. Great powers are rational actors, thus "they pay attention to the long term as well as the immediate consequences of their actions" (Mearsheimer, 2001: 31).

According to Mearsheimer, these previous statements lead to three patterns of behaviour.

a) Fear. For a great power, any other great power is a potential enemy; they become suspicious of the intentions of each other. Great powers are also aware that a political issue could lead to war, and they fear the possible consequences of an armed conflict (Ibid. 32-33).

b) Self-Help. States cannot depend on other states to grant their security; alliances exist but are something temporary and not to recall on. And "states operating in a self-help world almost always act according to their own self-interest and do not subordinate their interests to the interests of other states" (Ibid. 33).

c) Power Maximization. In order to assure survival, states aim to become the most powerful state in the system. The stronger a state is, the safer it becomes, and less likely to be attacked. The ideal situation would be to become the hegemon, guaranteeing survival. The power pursuit of a state only ends when hegemony is achieved and completely dominates the system (Ibid. 34).

The theory is based on the *security dilemma* logic; for a state, increasing security –by gaining power- would always be done at other states' security –and power- expenses (Ibid. 35-36).

Offensive realism distinguishes between global hegemony -dominate the world- and regional hegemony -dominate a geographical area-, and it is almost impossible for any state to become a global hegemon. The theory claims that great powers pursue regional hegemony; as for example, the US possess regional hegemony in the Western hemisphere since the beginning of the 20th Century⁵, being the only country achieving regional hegemony in modern history (Ibid. 41). Regional hegemons do not want to compete with any other regional hegemon and try to prevent that occurring. In the case a great power is about to become a regional hegemon, the current regional hegemon would intervene in the region, an action referred to as an *offshore balancer* (Ibid. 41-2).

⁵ Since then, the United States remain unchallenged in the Americas.

Translating this perspective into the Chinese case, it is clear that China is a great power, and it could become soon a military superpower. That can be perceived as a threat for the US -the regional hegemon- and, according to Mearsheimer, military conflicts with its rising challenger are more likely to occur. China aims at regional hegemony in its natural area East Asia, we can observe how it is pushing to gain control over the South and East China Seas, creating some tensions with its neighbours. The US is likely to try to prevent China to become hegemonic in the region by supporting China's neighbouring great powers –such as India or Japan- that are concerned by China's expansion.

The presence of China in the Indian Ocean and Africa meets that perspective; China would be trying to maximize its power in a region crucial for its energy supplies. At the same time, in Africa, China has seen an opportunity to expand its economic and political interests, a region where other great powers are not especially involved. That allows China to freely invest in constructing major ports and infrastructures, enhancing its presence and influence in the area. At the same time, China could eventually consider crucial to make another use to these ports if its core interests were affected and it lead to military tensions with the regional hegemon or other great powers. According to the theory, the main goal of a state is survival, and anything that is affecting China's economic growth is affecting its survival.

Finally, when considering the maximization of power, the concept of *wealth* should be introduced. Mearsheimer and offensive realists consider the existence of *Military Power* and *Latent Power*, the latter consists in the capability of translating wealth into military power. Size of population and economic capacity are the main elements in which *Latent Power* is based. It does not mean that *Latent Power* is always translated into *Military Power*⁶, but it is a possibility. That consideration will be useful to take into account when answering the second research question.

6 In his book, Mearsheimer used Great Britain as an example of country that did not translate wealth into military power.

LITERATURE REVIEW

The literature discussed below is all related to the SoP strategy and also to Africa. To make it more understandable it is divided in two parts. In first place, there are texts discussing whether the SoP strategy is a threat or not, not referring to Africa in particular. In second place, the literature linking the SoP and Africa, which is more focused on the issue at hand.

Is the Chinese *String of Pearls* a threat?

The literature mentioned in this section discusses whether there is a potential threat of a Chinese *pearls* strategy in the Indian Ocean. Even if it is not related directly to the African ports, it is useful to see how this strategy is seen from different points of view.

Among the literature discussing the Chinese ports in the IOR, there are diverse opinions supporting the idea that these ports are a potential regional threat. Back in 2006, Christopher J. Pehrson -then a lieutenant colonel in the US Air Force- published the paper *String of Pearls: Meeting the Challenge of China's Rising Power Across the Asian Littoral* (2006)⁷. He states that China's main concerns are related to energy security that rely on sea-conducted transport, and China needs to secure its maritime energy lanes (Pehrson, 2006: 5). He wrote, "in the event China chose to pursue a more aggressive course, by seeking hegemony along the 'String of Pearls', the challenge to the United States could not be ignored" (Ibid. 11); admitting that it would be a threat for the hegemonic power in the region, the US. In his opinion a "strong military posture and healthy security relationships will hedge against a possible challenge from China should Beijing attempt to dominate the 'String of Pearls' region"; and keeps explaining how the events could take place, "if Washington assumes China is striving for regional hegemony and responds with an aggressive military posture, it could cause China to respond in kind, fostering a vicious cycle of military build-up and counterbalancing measures" (Ibid. 22). Pehrson also argued that the US should keep a strong position in the region in order to prevent China to control the region and become a real threat. He also admits that no one knows the real intentions of China, whether they are peaceful development or regional hegemony (Ibid. 9).

A less pessimistic point of view exposed Vivian Yang in the article *Is China's String of Pearls Real?* (2011), critical with the explained most threatening version of the strategy. She admits the

⁷ It was published by the *Strategic Studies Institute*, an institution depending on the US Government.

potential military threat that supposes the SoP, but at the same time reminds that it is not a reality yet. According to her "the String of Pearls model fails to accurately describe the Chinese national security reality. China has not built foreign naval bases, yet the pearls are indeed manifestations of increasing Chinese naval presence and capabilities". She fully agrees with Pehrson when stating "the United States should do whatever it can to keep the String of Pearls a theory rather than provoke China into making it into a reality"; hence, it depends on the US to avoid the theory to become a reality. When it comes to the ownership of the bases, Yang believes "commercial ports do not necessary lead to naval bases" and even if China is getting military agreements in some ports, there is no need to own the port. She mentions the *places, not bases* policy (Yang, 2011).

The article *China's Foreign Ports: The New Masters and Commanders* (The Economist, 2013) shows an even more sceptical vision about the existence of the SoP; by stating "Is this string theory convincing? Even if the policy exists, it might not work". He explains that "state-owned firms are in charge of most of China's maritime activity, and their motives are at least partly commercial" and later insists on the commercial character of China's port strategy. However, it admits that "it could become a flashpoint for diplomatic tensions". The article is helpful to note the global nature of this phenomenon, not only in the IOR.

Towards Africa

Chinese investments in the African ports, i.e. China enhancing its influence in the African littoral, is a new issue. There is less literature at hand to be reviewed, but some of the articles discuss whether a Chinese expansion there can presuppose a military threat.

In May 2013, the European Parliamentary Research Service issued the article *China's presence in African ports: investment across the ocean*. Apart from synthesizing the whole situation of China in the African continent, it is relevant that they refer to a military connection between China and the Eastern African ports:

"With regard to Chinese geopolitical interests in the Persian Gulf, ports with Chinese influence on Africa's east coast, can also be useful for Chinese warships to obtain fuel, supplies or repairs. The military importance given by Beijing to the Persian Gulf is related not only to the role it plays in Chinese internal policy regarding energy, diplomatic and economic issues, but also in the international

political scene”.

Ross Anthony published the article *Infrastructure and influence: China's presence on the coast of East Africa* (2013), in which denied the possibility of military use of the Eastern African ports by China, at least in the short-term. He wrote, ”to conflate Chinese infrastructural development projects with imminent political and even military influence is a mistake. This is not to say that China necessarily has no desire to increase such influence”. According to him ”the increased presence of the Chinese in the Indian Ocean region and in Africa has generated an alarmist discourse within the Euro-American sphere”; claiming the extreme fear prospects are exaggerated and come from certain circles of opinion.

As factors to reject that possibility in the short term he arguments that China -or state-owned Chinese companies- has no ownership of the port infrastructures; not being possible to use them for military purposes. Another reason to support his statement is that ”these companies operate largely according to market interests” (Ibid. 145); thus they are not driven by military purposes.

He also situates the African port investments as part of the SoP strategy; giving this research another reason to associate both strategies. Regarding that connection, he wrote:

”From a geostrategic point of view, the East African port developments can be situated within the context of the greater Indian Ocean, in which these ports are but two of a much vaster array of Chinese infrastructural activity stretching from Africa to Myanmar. Christopher Pehrson has referred to this phenomenon as a *String of Pearls*” (Ibid. 136).

DEFINING A PATTERN: GROUNDED THEORY RESEARCH

What is the Chinese pattern towards the African ports where it is involved?

Foreword

China is gaining influence in several African ports. Some similarities can be found when it comes to how China addresses this strategy, which allows the researcher to think there is a pattern of action. As explained in the last chapter, the ports conforming the classical SoP along the IOR are slightly different among themselves. China relies on many different contexts in order to gain influence there, there are not as many similarities as when observing the African ports as a whole. That makes the Chinese pattern of interaction with the African ports way more homogeneous than in the ports observed in the SoP strategy in the IOR.

A Chinese pattern in the Eastern and Western African coasts is developed after analysing a number of newspaper articles, and statements from companies and embassies. The articles are related to China and each one of the relevant ports taken into account. The ports are: Takoradi (Ghana), Kribi (Cameroon), Lobito (Angola), Lekki (Nigeria), Lome (Togo), Conakry and Boffa (Guinea), Abidjan (Côte d'Ivoire), Djibouti (Djibouti), Pointe Noire (Congo-Brazzaville), Walvis Bay (Namibia), Richards Bay (South Africa), Mombasa and Lamu (Kenya), Bagamoyo (Tanzania).

Examples on the coding process

In first place, as data was collected, it was associated to concepts. The examples listed below were the most common among them:

Investment – railway – project -financial – development – access - loan – Chinese bank – ships - expansion -infrastructure – contract – roads – employment – regional – economic development – container terminal – strategic partnership – growth – port operator – hub – Chinese company – raw materials – resources – world market – import/export goods – fuel.

When conceptualizing these codes, they were grouped in collectives by similarity. For example, *access-infrastructure-railway-highway*, would be in the same group. The same was done with all the codes presented above and also for the less common codes that do not appear in this section.

Both categories and concepts were compiled in memos, in order to record the ongoing analysis. In the last part of coding, the categories were interrelated, process leading to the first provisional statements. Some of them were:

- China usually has had long-term diplomatic ties with the countries.
- Ports situated all along the African coast, both Indian and Atlantic Ocean.
- China is interested in improving African ports' capacity.
- China has economic interests in these countries → Imports / Exports.
- China operates there through its state-owned companies (construction / management / banks).
- Most of the cases of port contracts of port construction/expansion are linked to:
 - a) Infrastructure constructions (railway/highway) → linking to Chinese nearby interests.
 - b) Loans / financial.
 - c) Developmental aid campaign.
- China is interested in using these ports to enhance economic interests in the area, to give an exit mainly to its: natural and energetic resources (mining, oil, etc.).
- There is mutual benefit both for China and each one of these African countries.
- Bilateral relations. Each country negotiates its conditions with China.
- Chinese nationals eventually move there in some of the investments or a deals (construction workers, company workers); also temporary instructors to teach local people, if it is part of the deal.
- China is seen as a reliable port constructor and manager. African countries can count on the accorded dates for the projects to be finished. Responsibility and efficiency.
- Chinese vessels have called in some of these ports. In one case even People Liberation Army's vessels.
- Chinese state-owned companies are always involved in the projects.

The integration part came next and it is best explained when observing the main categories that were assumed for the pattern later in this chapter.

Ports Overview

In first place, a brief description of the fifteen ports part of the study, providing their main characteristics and important facts.

Mombasa (Kenya) – There have been long-term diplomatic ties between Kenya and China, 50 years in 2014. An existing military cooperation between both countries was enhanced from 1998, when Kenya benefits "from China's support in modernizing" its military (Standard Digital News, 2014). In summer 2013 China and Kenya signed a \$5 billion contract for which China is to finance the construction of a railway connecting Uganda with Mombasa port (Baldé, 2013). Also, the Chinese company China Road and Bridge Corporation (CRBC) won the tender to build a railway connecting Mombasa to the capital, Nairobi (Jorgic, 2013).

Lamu Port (Kenya) – Lamu will become the largest port in Africa when it is finished in 2030. The Chinese company China Communications Construction Company (CCCC) will construct its first three berths⁸, a \$484 million project (Jorgic, 2013). The Chinese contractor will build the port facilities, an oil refinery, and the port connections to major infrastructures. Both China and Kenya will benefit from the project: China sees a possibility for container traffic and oil imports increase; while Kenya –despite environmental concerns- presents it as a big boost for its GDP. The mega-port construction will be a major part in the Vision 2030 project⁹ which includes a 1500km railway, a 1730km road network and an oil pipeline (Stevensson, 2013). The project will allow South Sudan's oil¹⁰ to be drained directly to Lamu Port to be exported, instead of passing through Sudan and having to pay fees.

Bagamoyo (Tanzania) – In March 2013 President Xi Jinping visited Tanzania and set a deal to finance the construction of a new massive port in Bagamoyo, which will become the largest port in Africa when finished in 2017. The deal includes the construction of the necessary railway connections and other infrastructures. The project will cost \$10 billion and the company China Merchants¹¹ (CMH) is part of the deal in order to operate and manage the port when it is constructed (Dumoulin, 2013).

Richards Bay (South Africa) – China's Chery Holdings attained a deal in South Africa, during a BRICS meeting, to build and repair ships at Richards Bay port (Herskovitz, 2013). The project includes a "new shipbuilding and repair facility". During the same meeting, a China Development Bank¹² (CDB) lent \$5 billion to the South African company Transnet to build the railways used to

⁸ Jorgic reports there are thirty-two berths expected in total.

⁹ According to Stevensson, it is a project launched by the Kenyan Government including a number of modern infrastructures linking the port to South Sudan (Juba) and Ethiopia (Addis Ababa).

¹⁰ South Sudan encompasses 75% of former Sudan's oil in its territory (Stevensson, 2013)

¹¹ China Merchants is the largest Chinese state-owned port operator (China Merchants International, n.d.).

¹² China Development Bank is a Chinese government-owned financial institution (Chen, 2013).

carry coal and iron. Richards Bay is a major export point for coal (2013).

Abidjan (Côte d'Ivoire) – The Chinese company China Harbour Engineering Company (CHEC) signed a \$933 million construction contract with the Abidjan Port Authority; the project includes "a waterway and basin dredging construction of a container terminal..." (CCCC, 2013). In July 2012 a Chinese government massive infrastructure \$5 billion investment was announced¹³. The investment was announced in the context of the 30th anniversary since diplomatic relations between China and Côte d'Ivoire were established (Global Times, 2012).

Conakry-Boffa (Guinea) – In November 2012, CHEC and Conakry Terminal signed a partnership to construct the expansion of the container terminal in Conakry Port. The \$59 million project includes the enlargement of the port and a railway connection. (Guinee Web, 2012). In parallel, a \$6 billion mining deal was awarded to the Chinese firm China Power Investment (CPI)¹⁴. It is meant to finance the construction of a deep-water port, a coal power plant and a refinery in Boffa¹⁵, in exchange for mining and digging rights (Bate, 2012).

Djibouti – In January 2013 CMH acquired the 23.5% of the share in Port of Djibouti SA for \$185 million, (Port Technology, 2013). In 2014, Djibouti and China celebrated the 35th anniversary of diplomatic relationships. A new \$16.5 million investment plan¹⁶ by the Chinese government was announced at the same time (All Africa, 2014b).

Kribi (Cameroon) – In January 2011 the Export Import Bank of China¹⁷ (EXIM) offered Cameroon a \$435 million¹⁸ concessionary loan to construct the deep-water port and its corresponding road and rail links (Business in Cameroon, 2013). The function of Kribi port would be for the shipment of "iron ore, alumina, cobalt and nickel from a series of mining projects due to come into operation over the next five years"; the port would become a gateway to the minerals extracted from the mining-rich Cameroon. It was also planned to construct direct road and rail links from the mining areas to the port (Tansamusa, 2011). The construction project is developed by CHEC, which promised the port to start being operational by June 2014 (Business in Cameroon, 2013). There has

13 Among the investments announced, Global Times report: A highway connecting Abidjan port to Grand Bassam, help resolve the water shortage problem, a new railway line in the west, a hydroelectric power station, an Olympic Stadium, and more.

14 CPI Corp. is a state-owned electricity producer in China (Bloomberg Businessweek, n.d.a).

15 As Bate explains, Guinea is rich in bauxite, essential to produce alumina. Both the alumina refinery and the deep water port will be settled in the coastal city of Boffa (120km west of the capital).

16 All Africa reports the deal includes the construction of a hospital, a national archive, a primary school, new boreholes and school material like computers.

17 Export Import Bank of China (Exim Bank) is a state-owned bank, established in 1994 (China Exim Bank, n.d.).

18 According to Business in Cameroon, Exim Bank is funding the 85% of the project.

been a debate in Cameroon whether if this project will serve the purpose of reducing unemployment in the area. Although many manual jobs are offered during the construction phase, there is scepticism about the real chances for Cameroonians to work in the port after its construction. They are mostly non-specialized workers and port jobs require some technical knowledge. There are also voices claiming that the construction suppose a so-fast and isolated step towards industrialization (Kingsley, 2013).

Lobito (Angola) – In 2010, CHEC got a \$1.2 billion deal to modernize and extend Lobito port (Macau Hub, 2010), the port expansion project¹⁹ was finished in December 2013 (CHEC, 2013). The port extension and modernization is capital to export the mineral resources extracted in DR Congo and Zambia. There is a railway corridor project between Benguela and Katanga (DR Congo), a 1344 km rail line with Chinese companies involved. China Railway Engineering Corporation (CREC)²⁰ is in charge of the rail construction, while China International Fund (CIF)²¹ is managing the infrastructure (China Africa Reporting, 2014).

Lekki (Nigeria) – In May 2012 CHEC got a \$679 million contract to construct the first phase²² of Lekki Port. The port will become the "largest deep-water port in Western Africa", working as a commercial gate to Nigeria and its neighbouring countries (CHEC, 2012).

Pointe Noire (Congo-Brazzaville) – A Chinese investment in the port of Pointe Noire was announced in February 2014. The general cargo and break bulk terminals will be constructed by CRBC²³. The funds for the project were provided by the Chinese government and Chinese banks. The project also includes road and rail links connections to the port (World Cargo News, 2014).

Walvis Bay (Namibia) – In November 2013 CHEC signed a \$318 million contract with the Namibian Ports Authority, to expand the port by constructing a new terminal. It is supposed to be operational by 2017 (Namib Times, 2013) and will connote an economic push for the country's economy. The investments suppose a 3% of Namibia's GDP and it is expected to lower the transport cost of goods (Isaacs, 2013).

19 Including a dock enlargement, a dry dock, and a container and mineral terminals. CHEC also completed in 2010 a previous project also part of the port, consisting of the bridge over the mangroves (Macau Hub, 2010).

20 CREC is a state-owned construction company (Bloomberg Businessweek, n.d.b).

21 CIF is a chinese-owned group based in Hong Kong (CIF, n.d).

22 The first phase includes a container terminal along a 1.5 km coastline, a breakwater, a six kilometers length channel, three container terminals, and all the port facilities (CHEC, 2012).

23 According to World Cargo News the project also includes a liquid bulk terminal, 31 berths, a business park a power plant and an oil refinery.

Takoradi (Ghana) – In September 2012 CHEC signed a \$150 million with Ghana Ports and Harbour Authority for the expansion of Takoradi Port. CHEC will construct the first phase of the expansion, about a 60% of the project; the 40% remaining will be at charge of Ghanaian companies. The project also includes the construction of access roads (African Review, 2012).

Lomo (Togo) – In August 2012, CMH acquired the 50% stake in Thesar Maritime for \$206 million, “which owns a 35-year concession to operate and develop a container terminal in Lomo” (Sinoship News, 2012). It was meant to become the first deep-water port in Western Africa when finished in 2013 (So, 2012).

Pattern

After integrating the codes and categories, six characteristics were identified, conforming a pattern. Other references than the study primary data are also used, just in order to provide context information or deepen into concepts that need further explanation.

Old partnerships

China has long-standing ties with most of the countries in Africa. The People's Republic of China started getting involved in Africa in the 1960s, supporting diverse popular liberation armies against the former elites and European imperialism. That made China obtain sympathies in the countries where the national or revolutionary movements were succeeding (Taylor, 2006: 3-5). Afterward it came a competition between China and the USSR to get a preminent position, and the USSR clearly won this battle. Chinese retreat lasted only until the 1980s, when there was a renewed interest in Africa, this time not related to fight the imperialism but to guarantee China's economic growth. Deng Xiaoping's strategy fixed Africa as a strategic place to obtain resources for the Chinese economy. In the 1990s came the collapse of the Soviet Union, and it left a free path for China to regain preminent relations with the African countries (Ibid.).

If we look at the countries of the ports listed in the analysis, we can observe that the great majority have a long tradition of diplomatic ties with China. It is the case of Côte d'Ivoire, since 1983 (China.org.cn, 2006a); or Djibouti, since 1979 (Embassy of Djibouti, n.d.); Kenya, since 1963 (Xinhua, 2013), Tanzania, since 1964 (China's Embassy in Tanzania, 2008), South Africa, since 1998 (China Daily, 2007), Guinea, since 1959 (Sino-Africa, 2011), Cameroon, since 1971 (People's

Daily Online, 2010), Angola, since 1983 (China.org.cn, 2006c), Nigeria, since 1971 (Uba, 2009), Congo-Brazzaville, since 1964 (China.org.cn, 2006d), Namibia, since 1990 (Embassy of China in Namibia), Ghana, since 1960 (Embassy of China in Ghana), and Togo, since 1972 (China.org.cn, 2006e).

Synthesizing the above, processes of decolonization were followed by diplomatic relations, with the exceptions of Namibia and South Africa. Namibia was part of South Africa, and South Africa did not have an early nor common decolonization process. It was four years after the fall of the apartheid regime -1994- when South Africa and China attained regular diplomatic relations. Namibia and China started a diplomatic relationship in 1990, the same year Namibia obtained full independence.

Atlantic and Indian Ocean investments

Observing the ports investments distribution along the African coasts it is possible to state that investments are situated randomly along the coasts. They are not situated just in a concrete littoral area. Hence, taking Africa as a whole, Chinese port investments are not an Indian-Ocean-oriented strategy but a strategy we can find also in the Atlantic Ocean side of the continent (see Annex Fig.1).

Moreover, looking at the timing the investments were made, it does not show a progressive expansion east to west. Investments are not made according to a progressive spatial expansion but depending on other criteria (as concrete economic interests by area, for example) and the chances to make these investments.

Project funding through state-owned banks or Chinese Government

Funding and loans were required in order to finance projects related to the ports or the port construction itself, it was found in six of the ports. It is the case of Boffa, where CPI is one of the funding companies to construct energy and resource related infrastructures. CPI is a Chinese state-owned power generator and mining company (Bloomberg Businessweek, n.d.). In Kribi Port the EXIM bank, a Chinese public bank, granted a concessionary loan to Cameroon's government to finance 85% of the port construction. The same bank, EXIM, granted a \$5 billion for the expansion of Abidjan port. In Pointe Noire, the Chinese Government and mainly Chinese state-owned banks

fund the port project construction (World Cargo News, 2014). In Mombasa, the Chinese Government is funding the construction of a railway from the port. In Bagamoyo, the financial is also at charge of the Chinese Government. In South Africa, CDB is providing financial for renewing the railway carrying minerals, directly heading to Richards Bay port. Thus, we find Chinese financing in almost half of the cases listed in the analysis, but financing was not required in all of the ports presented.

We can observe how in three out of these seven cases, is the Chinese Government that directly financed the projects. Three of the cases -one of them shared with the Chinese Government- are financed by state-owned Chinese banks. And finally there is one case of a Chinese public investment company financing a project. In all the cases, the Chinese Government is directly involved funding the port or port-related projects; in most of the cases in a direct way, in the rest through public banks or companies.

Project construction through state-owned engineering companies

When analysing the construction of new ports, port expansions, or infrastructures, we find Chinese state-owned companies in charge of the projects. This is the case of CCCC that will directly be at charge of the construction of Lamu Port. CHEC, a division of CCCC (Hoovers, n.d.), is engaged in construction in Abidjan, Conakry, Kribi, Lobito, Lekki, Takoradi and Walvis Bay. CRBC is also a division of CCCC (CRBC, n.d.), and constructs the port of Pointe Noire, apart from the port and a railway in Mombasa. In Richards Bay, China's Chery Holdings (CH), a division of the state-owned Chery (Waldmeir, 2010), is at charge of the construction; while in Bagamoyo it is CMH. In Lobito Port, CREC is at charge of the rail construction between the port and the DR of Congo.

The fact is that most of the construction work is undertaken by one major Chinese public company: CCCC, since CHEC and CRBC are both divisions of the CCCC group. In the case of Bagamoyo, Lobito and Richards Bay, a different solution was found to construct the port, by allowing a different company to take care of the construction. Thus, China is involved in eleven of the port projects -or port-linked infrastructures- through using state-owned construction companies.

Port management through state-owned companies

China is making deals to operate diverse ports once they are finished. It is the case of Djibouti, Lekki, Togo and Bagamoyo, whether by getting a full operator concession or by buying a stake of the current operator. In all four cases CMH is the operator involved in the deal, as it was detailed in the overview section. It is worth to remind that CMH is the largest of the state-owned port operators in China (CMH, n.d.)

Economic interests, resource exploitation and infrastructural projects

The ports in which China is investing are usually situated in a strategic area near to exploitation zones for China's resources. In some cases, infrastructures linking the port with these areas are also constructed by China. In Abidjan, China is interested in the booming mineral industry (zinc and manganese) from Côte d'Ivoire (Monnier, 2014), but also from Burkina Faso and Mali. An exclusive minerals terminal is part of the port expansion project. In the case of Conakry, there is a project nearby, in Boffa, specially oriented to export alumina²⁴, including the construction of a refinery and a deep-water port (Bate, 2012). Kribi port is also intended to be used for the shipment of iron ore, alumina, cobalt and nickel from the mining projects nearby, due to become operational between 2012 and 2016 (Tansamusa, 2011). Lobito port is important for China since it is linked to DR Congo and Zambia by the Benguela Railway corridor. The Chinese company Sinohydro, and later CRBC restored and are at charge of the railroad. China is interested in mining areas as the cobalt reserves in Katanga (DR Congo) and copper reserves in Zambia (China-Africa Reporting, 2014). Lekki port construction responds to a major demand on import and export of goods in the area, it will provide a sea channel for goods imports and exports for Nigeria and its neighbouring countries (CCCC, 2012). The same for Pointe Noire port, interested in “improve the country's capacity to import and export goods” (AllAfrica, 2014a), but in that case there are also oil and mining interests like iron ore mines in the east of the country, or the construction of an oil refinery (World Cargo News, 2014). In Richards Bay, in parallel on the port construction, CDB is financing the revamping of the aging rail lines in the country, used to transport coal, iron ore and goods (Herskovitz, 2013). Lamu port will become the main piece in the LAPSSSET corridor project²⁵, connecting South Sudan, Ethiopia and the port (Alic, 2013). In Bagamoyo, China wants to facilitate East Africa's mineral exports that are now being channelled through Durban or Mombasa; it is the

²⁴ Bate explains the total cost of the project was \$6 billion, financed by CPI.

²⁵ The LAPSSSET project includes Lamu Port, an oil refinery in the port, a 1300km oil pipeline, a 1720 km highway, a 1620km railway line and three international airports (Alic, 2013).

case of the minerals imported from Zambia, Zimbabwe or DR Congo (Balile, 2013). And finally, in Walvis Bay port, the main reason behind the port expansion is to reduce the transport cost for exports and imports in the area (Isaacs, 2013).

In most of the cases, the economic reasons for the investments respond to enhancing China's supply of natural resources, i.e. oil and minerals, with mining the most common activity among them. In some cases -though less common- the main reason is to activate international goods exchange. China is especially interested in increasing its exports into the African markets (Taylor, 2006).

Attached infrastructures are not constructed in all the cases but may be found in all those involving mineral resources interests. In such cases, railway enhancement is the preferred option in order to create a transport corridor. Oil refineries are also built when oil is among the economic reason to invest in the port.

Outcome

If we look at the six characteristics exposed before and put them all together, it is possible to establish a general model of Chinese involvement in the African ports. The way China invests in the listed ports is not exactly the same in all the cases but it is possible to extract a pattern of involvement. The pattern will be tested on a *control* African port in order to check its reliability as a general model.

Synthesizing, diplomatic relations between each one of these countries and China are consolidated for many years, with two exceptions. There is *no geographical preference* for China to get involved in one or other side of Africa; there are cases both in the Atlantic and Indian Ocean coast and the observed procedures do not differ. The geographical position along the Atlantic or Indian Ocean coast is not a determinant element for China to prefer one port and discard another. The fact is that *all the investments* are related to China's economic development (natural resources, goods import and exports); which leads to the conclusion that this is the *determinant element* for China to invest in these ports; and not the geographic situation. When financing the projects, China always uses state-owned banks or it is directly the Chinese Government that directly lends the capital. When there are contracts including constructions (ports or infrastructures) there is *always* a Chinese specialized company to take care of the project. In almost all cases the company is part of the CCCC group. If the deal is to operate a port, the port management company *will always be* state-

owned; the favourite company to get the deal is *almost always* CMH. Hence, all the Chinese activities towards the African ports are closely under the control of the Chinese state; and the interests they serve are suitable for the Chinese economic development.

Testing the pattern

Nacala port (Mozambique)

In September 2012, CHEC signed a \$73 million contract with the Brazilian CVRD Inco; in order to build the Nacala Port Wharf. It is part of the Nacala Corridor Project, consistent on a rail system channelling coal from the inner province of Tait. It was the first main contract for China in Mozambique, and was meant to be completed in 24 months (CHEC, 2012).

Again, China is involved in the expansion of an African port, in this case, in the Indian Ocean littoral. China and Mozambique have long-term diplomatic relations, since 1975 (China.org.cn, 2006b) The company who got the contract to construct the new wharf in Nacala Port is a Chinese state-owned firm, in fact CHEC, one of the favourite when it comes to ports construction. Furthermore, the construction of this wharf is clearly related to a mining project China may be interested in. In that case, coal, an energy resource important for China's economic growth. This case fulfils the pattern described before, except for the absence of constructing main infrastructures around the port. It is worth to say that CHEC was incorporated into the project when all the other contracts (e.g. railway) of the Nacala Corridor Project were already awarded to another construction firm -CVRD Inco- (Dredging Today, 2012). Thus only the port terminal could be awarded to a Chinese firm.

FRAMING THE PATTERN IN THE STRING OF PEARLS MODEL

Does this pattern fit in the String of Pearls model?

Contrasting the obtained pattern with the String of Pearls model

As an overview, it would be helpful to see what means the Indian Ocean for China. In Australia's current official *Maritime Doctrine* (2010)²⁶, it is stated the following:

"The unhindered movement of shipping from the Middle East to North Asia is vital to the economies of Australia's other major trading partners in East Asia. Japan, South Korea, and to a lesser extent China, are absolutely dependent upon seaborne imports for energy resources and raw materials. Global economies are now so interconnected that any interruption of, or interference with, this shipping would have rapid and detrimental effects on our economy and export competitiveness as well as on those of the countries directly affected." (Ibid. 26).

Thus, recognizes the capital importance of the Sea Lanes of Communication in the Indian Ocean, especially for East Asian countries like China; and warns about the tragic economic consequences for these countries if these were interrupted. On the other hand, US policy documents identify China's three core interests:

"Authoritative Chinese speeches and documents define as (1) national security; (2) sovereignty and territorial integrity; and (3) economic and social sustained development. Beijing makes core interest declarations to signal to other countries that China is unwilling to compromise on particular policy issues and to imply that China would use force to defend its core interests" (USCC, 2013: 271)

It is convenient to sum up the main threats referred in the String of Pearls strategy literature and articles and check if they live up to the reality of these fourteen ports.

²⁶ The current *Australian Maritime Doctrine* document was issued in 2010 by the Royal Australian Navy, being its capstone doctrine.

Aim to have strategic military settlements along the strategic Sea Lanes of Communication (SLOCs)

The SoP defendants state that China may be interested in protecting its Oil shipments coming from the Middle-East exporters by sea. China would control a number of ports along the SLOC in order to secure the energetic imports. But is it the same case in Africa?

Management is not ownership

In first place, the ports listed in the first part of the study should be sorted again from another point of view. It will help to situate these ports into the geostrategic context. It is important to look at what is the real power of China over these ports. Having domination over a port is not the same as obtaining a contract for construction or providing a loan. When it comes to port management, China has no public company operating -or deals to operate in the future- in ten of the ports. On the other hand, China is, or will be, involved in the management of four of the ports: Djibouti, Lekki, Togo and Bagamoyo; listed below.

Djibouti Port (Djibouti). China Merchants Holdings International owns the 23'5% of the operator in the port, Port of Djibouti SA (Hiiraan Online, 2013).

Lekki (Nigeria). China Merchants Holdings International got a 47'5% stake²⁷ of the container-terminal operator in Lekki Port (Richardson, 2010).

Lomo (Togo). China Merchants Holdings International obtained in 2012 the 50% share²⁸ of the operator, with a 35-year concession (Sinoship, 2012).

Bagamoyo (Tanzania). China Merchants Holdings (International) has got a deal to operate the port when it is constructed (Dumoulin, 2013).

As observed, China has moved forward to operate four out of the fifteen ports of this study. The majority of the ports are still under construction, and it is not decided who will manage the ports in the future, but these four are a current reality. However, in Djibouti, CMH has a non-majority share

²⁷ By obtaining the Israel's Zim Integrated Shipping share for \$154 million, together with China Africa Development Fund (Richardson, 2010).

²⁸ Acquired the 50% stake of Thesar Maritime for \$206 million (Sinoship, 2012).

of the operator, the same as in Lekki. In Lomo CMH obtained half the share; and finally, in Bagamoyo, CMH has been identified as the operator of the port once it is finished.

From all the ways of Chinese involvement in African ports, operating a port is the closest the Chinese state-owned companies can come to actually having a real control of the port. Furthermore, all the ports remain in the ownership of their respective countries, and they are state-owned, even if foreign companies are in charge of terminal management.

Context and considerations

The African ports China is involved in are not necessarily situated along sea shipment lanes towards China. The logic of the strategy of China in the African ports responds apparently to geographical convenience for their economic interests -imports and exports-. The listed ports are linked to China's economic interests in that concrete area that leads us to interpret each port as making sense and having a role by itself. Objectively *it is not possible* to read them as part of a broad net of ports related to the same objective, but rather as diverse. Protecting an energy SLOC was the main cause driving the authors taking a SoP stance to think that China may be inclined to militarize these ports. However, that cause does not exist in the African ports logic at the moment.

However, there are voices of concern about China's military rise coming from other regional powers in the IOR. It is the case of the paper *Contingencies and Warning Time* (2013) published in the *Centre of Gravity* series²⁹. The author warns about possible tensions in the region by stating: "further, the fertile imagination can always bring forward other kinds of contingency that might affect Australia's interests: attempts to close international straits, interdiction of sea lines of communication, tension between the US and China, for example" (Brabin-Smith, 2013: 6)

Another article, *Pivoting the Map: Australia's Indo-Pacific System* (2012) also stated that India is not comfortable with the situation in the Indian Ocean:

"The China-India strategic dimension of this is real and growing. China sees a growing strategic imperative to safeguard far-flung interests as best it can. So the flag will in some way follow trade – that is, security in one form or another will

29 The Centre of Gravity is one of the publications of the Strategic and Defence Studies Centre, a policy-oriented center in the Australian National University.

follow the presence of large numbers of Chinese nationals and commercial interests. With the Gulf of Aden anti-piracy mission, four continuous years of rotating Chinese naval task forces, (...) For its part, India perceives growing prospects of a diplomatic and potentially naval challenge from China to be occurring in 'its' Indian Ocean". (Medcalf, 2012: 3)

Thus, India sees its interests threatened in its own natural expansion area by Chinese deeds and interference.

A proof of that are the statements of the Indian Navy Vice Admiral KN Sushil. When asked about the PLA Navy, for the case of submarines patrols or the antipiracy exercises in the Gulf of Aden since 2008, he admitted that "China has credibly demonstrated a formidable capability in our backyard" and feared that China would "seriously challenge the Indian Navy's sea control strategy" (Unnithan, 2014).

A proof of that was a document leaked by India's Integrated Defence Staff: *Indian Navy: Perceived Threats to Subsurface Deterrent Capability and Preparedness*; reported by a number of media (Cole, 2013). That document claimed that attacking submarines of the PLA Navy have been seen patrolling in the Indian Ocean. There was a total of 22 cases in 2012, with more occurring until April 2013.

The *2013 Report to Congress* by the U.S. China Economic and Security Review Commission (2013) also warns about China's ways when it comes to defend its economic interests; "China's position is based largely on its view that it has the right to prevent any activity that directly or indirectly threatens its security or economic interests" (Ibid. 224). China expands its economics interests across the African continent -added to the Oil in the Middle East- as the need for more and larger ports points out. That only increases the maritime transit between China and Africa, logically through the Indian Ocean. Knowing that a threat to China's economic interests can lead to military tension, it only makes the Indian Ocean a place more likely for that to eventually occur.

The same document expresses concern about the increasing capabilities of the PLA, being modernized and achieving qualitative improvements. The PLA would be "centred on improving its ability to strike opposing ships at sea and operate at greater distances from the Chinese mainland". The document also admits there is an ongoing process and the operations beyond the Chinese

mainland region are still of "low-intensity" nowadays (Ibid. 233). That would be a reason to be concerned about China's military activities in the Indian Ocean in the mid-term.

Nevertheless, these were SoP assumptions from US, Australia and India points of view. But what is the reality in the African ports? China has been cooperating in the war against piracy in the Somalian coasts and the Gulf of Aden since 2008. When it comes to the ports listed in this work, it is remarkable that Chinese warships of the 15th fleet docked in Mombasa (Kenya) in January 2014. For the first time, two Chinese warships, and 700 navy soldiers, docked in Mombasa after being involved in a counter-piracy campaign in Somalia. Kenya and China celebrated their good relations and cooperation will during the welcome ceremony (Mwakio, 2014). That is the only case of direct implication -even if only once- of the PLA Navy in one of the ports listed in this research.

Thus, the only Chinese military involvement regarding the African Indian Ocean coast was in the context of an international cooperation campaign against the piracy since 2008. It is justified that China had an important role when dealing with the piracy problem since it has economic interests in the area. Both because of Eastern African shipments and the Gulf of Aden transit, a key choke point, since drives to the Suez Channel and the Sea Lane between China and Europe.

The cooperation reality is portrayed, for example, by Ellen Laipsson in her article *New Geopolitics in the Indian Ocean region?* (2013). She wrote that the US and China should be "aimed at finding some areas for cooperation, despite some serious differences of view" in the Indian Ocean, especially because of their shared interest in the Middle East. And also both "want to ensure the Indian Ocean remains a vital transmission belt for global commerce (...) reduce the transnational problems of trafficking, terrorism and piracy" (Laipsson, 2013).

Also, Dennis C. Blair proposed cooperation in his article *What should we do about China?* (2013). He declared that, "Australia and the USA should focus on a blended policy of cooperation with China, along with an insistence on international norms, and maintenance of alliance and military strength". According to him, a closer look at China's "shifting capacity and interests" would be necessary in order to identify the "rising or declining significance" of these issues for China to be "effective in engaging China and building a better future for the region" (Ibid. 3)

A sign that the cooperation between US and China is on the right path in the IOR can be found also in the *2013 Report to Congress* (USCC, 2013). It refers both to the first counter piracy exercise

together in 2012, lasting only 6 hours; and -by contrast- the exercise in August 2013, lasting two days, in the Gulf of Aden; "Paraphrasing a US Fifth Fleet official, the DoD press report said the exercise marked a 'big step forward' from the first US-China counter-piracy exercise in 2012" (Ibid. 231)

Finally, if China is pursuing a military strategy in the listed ports, it would be what Douglas Deets presented as a *places, not bases* strategy, which Vivian Yang also suggested in her article³⁰. She acknowledges the possibility to call commercial ports for "military or strategic purposes", and the fact that China "entertains little desire for a wholly-owned base network" (Yang, 2011). In that case, this research presented several commercial port facilities along the African Littoral; allowing the possibility of meeting that strategy.

Strategic Diplomatic Relations

The diplomatic relations between China and each one of the African countries of the ports analysed are objectively good. There are several Chinese state-owned companies obtaining contracts and their presence is welcome. In fact, China helps financing projects and mainly offers the experience of its companies to build key infrastructures and harbours. China is also involved in development programs and loans to finance diverse projects across Africa. All these are symptoms of positive diplomatic relations, forged in deeds more than words and always being of mutual benefit for both parts, a win-win relation (Chun, 2013). That leads to think that the perception of China in these countries should be of a reliable country. There may be common trust in order to settle such big and important deals in order to widen or start experiences of bilateral cooperation.

The fact that China has long diplomatic relations with almost all the African countries part of this research was one of the conclusions of the first part of the thesis. But two examples will illustrate how satisfactory are these bilateral relations.

A first example of a positive diplomatic relations is Kenya. When the Chinese vessels docked in Mombasa in 2014, there was an official reception and a celebration of the 50th anniversary of diplomatic relations. Representatives of China and Kenya insisted on keeping on the mutual cooperation. The Chinese ambassador linked the presence of the Chinese fleet with a "genuine friendship of the Chinese people towards the Kenyan people". In the same direction talked the

³⁰ Yang does not introduce the concept herself, it is a common concept used in the US Navy as explained in the theory chapter.

Kenyan Defence Cabinet Secretary, praising the military cooperation as they had "continued as a nation to benefit from China's support in modernizing our military" (Mwakio, 2014). He also declared that "this visit is expected to promote stronger and strategic ties in the field of defence and military cooperation between Kenya and China" (Abdullahi, n.d.). In that case, they praised their good relations regarding military cooperation, since it was a military related event. But their cooperation is extended to many other fields, as it was explained before with construction of Lamu port, infrastructures, etc; leading it all to good diplomatic relations.

An example of how Chinese companies are reliability in their construction contracts can be found in Lobito port. When interviewed, Anapaz Neto, the chairman in Port of Lobito stated that CHEC deserve praise because "they meet deadlines, and do the work on time and very efficiently" (China Daily, 2011). It is not a direct diplomatic issue but shows how Chinese companies are perceived in a number of African countries by the local authorities: they are good at the tasks they have assigned. It contributes to turning China into a country worth dealing with, in other words, a serious partner to help developing a country.

Control of strategic choke points

There are a number of choke points in the Indian Ocean: Cape Sea Route, the Mozambique Channel, the Straits of Hormuz, Straits of Malacca, Bab el-Mandab, Lombok and the Sunda Straits (Van Rooyen, 2011: 8). And among the choke-points situated in the African continent, the strait of Bab el-Mandab, in the Gulf of Aden, is the more relevant. It is relevant because most of China's exports to Europe take that route through the Gulf of Aden and the Suez Channel.

The US -and its allies- have the military hegemony in the north-west Indian. The US Fifth Fleet is based there, in addition to Diego Garcia island, where a UK military base is currently leased to the United States Navy (Hayward, 2010). At the same time, the French navy is present in Djibouti, which is a key point in the Gulf of Aden. According the article *An increasing arc of influence: Iran in the Indian Ocean Region* (Alexander, 2011):

"Djibouti has significant geo-strategic importance in the Horn of Africa due to its location adjacent to the Gulf of Aden and the Bab el-Mandeb choke point leading to the Red Sea and Suez Canal. It is a key US security partner and hosts a significant US and French military presence" (Ibid. 158).

Hence, the Persian Gulf Oil SLOC origin or the Bab el-Mandab straits are not controlled by China. However, China is operating the Port of Djibouti (Hiiraan Online, 2013). It does not suppose a military threat since China is not intending to dock PLA Navy vessels there and their use of the port is exclusively commercial.

CONCLUSIONS

In the first part of the study a pattern was obtained in order to answer the first research question. It was widely explained in its chapter and it can be synthesized in six main points: (1) China is involved in countries with long term diplomatic ties; (2) China shows no preference to investment in the Indian or the Atlantic Ocean littoral; (3) all the investments are related to Chinese economic interests in the area or areas nearby; (4) projects financial comes from Chinese state-owned banks or directly from the Chinese government; (5) Chinese state-owned companies get the construction contracts; (6) and finally, if there is a deal to operate a port, it is granted to a Chinese state-owned port operator. Apart from the pattern itself, it is worth observing that China as a state is directly involved in all the variables.

Next, this pattern was analysed and contrasted along with the SoP main characteristics. It is possible to answer the second research question by stating the following conclusions.

Firstly, out of the fourteen cases object of this research, only four ports are -or will be- managed by China to this or that extent. The SoP model claims for diverse strategies, being *port control* one of them. However, China is involved in managing few of these ports, and in any case it does not mean a total control or ownership of the ports. Apart from that, the Chinese port operator companies claim to use these ports strictly for commercial activities.

Secondly, the main threats listed by SoP authors and literature were listed. Regarding the threat of China aiming to have strategic military ports it was identified an extended concern among some Indian Ocean powers, such as India, the US and Australia. These countries fear a real military threat in the short or mid-term. But contrasted these fears with the ongoing process in the ports of this research, it is not a reality at the moment. Objectively, there is only one and recent precedent of Chinese warships temporarily docking in one of the ports, which was Mombasa. Another reality was the presence of the PLA Navy in diverse missions in the Gulf of Aden since 2008. But that was part of a joint anti-piracy mission, cooperating with other country's fleets. Actually, this cooperation strategy was positively appreciated by other countries' internal voices, such as in Australia and the US. Hence, it seems that the fears of a militarization of the ports are not a reality right now, and the only recent PLA Navy movements in the region did not enhance the mistrust among the other regional powers. However, if China is following a *places, not bases* strategy and plans to turn these commercial port facilities into naval bases in the future, is a question that cannot be answered right

now. But it is clearly a possibility not to be discarded, since great powers tend to maximize their power and chances to survive.

Thirdly, the analysis suggests that China is effectively enhancing its network of strategic diplomatic relations with those countries where China is involved in in this paper. It was illustrated by using two examples: mutual benefits cooperation and reliability. Thus, according to the studied cases, China is helping to develop the African countries it was involved -regarding to ports- by constructing key infrastructures, granting loans and aid programs. At the same time, these governments know they can recall on China and the Chinese companies to construct these infrastructures, as a preferable reliable choice. These companies demonstrate to be effective at their tasks and meet the deadlines. For all this, China meets the SoP pattern point when it comes to build strategic diplomatic relations.

Finally, the strait of Bab el-Mandab was identified as the only strategic choke point at hand to be taken into account. There is an obvious US -and allies- military hegemony in the north-west Indian Ocean; granting the US the control of the Oil SLOC and the commercial transit in the Gulf of Aden. On the other hand, it was mentioned that China takes part of Djibouti Port management, a strategic point in the area, in a purely commercial way.

To conclude, it is not possible to fit the whole of Chinese pattern in the African ports in the SoP strategy, at least not with the reality observed nowadays. To do so otherwise would be to speculate. The only thing occurring is that China is extending a network of commercial facilities and also maintains and enhances its diplomatic relations across the African littoral. But there is no hint to acknowledge an open military expansion or a choke point control. Perhaps this is the reason why the US DoD does not include the -*Chinese*- African ports issue in their annual report concerns. Probably the DoD considers that China would rather prefer to resolve its own natural sea issues and hegemony in its region before intending to deal with an African regional supremacy, as long as the energetic resources keep flowing.

This thesis refers to “China” as a subject since all the activities analysed in this study regarding the African ports somehow depend on the Chinese government, i.e. diplomatic relations, state-owned companies, and economic interests for the Chinese economy. At this point one speculates, beyond the thesis findings, whether it would make sense for China to pursue a SoP strategy in Africa? I would say ‘yes’. In the logic of power maximization, why should not China take advantage of a

situation like this? Even if the ports are commercial, it is China who is gaining influence there. In the worst possible scenario China would have more chances to maximize its power by having a number of ports over which it exerts some influence, rather than none. In that case, a *places, not bases* policy would be the easiest choice at hand. However, the results as of today are not open to speculation and it is not possible to find the SoP strategy in the studied pattern.

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APPENDIX: GEOGRAPHICAL DISTRIBUTION OF THE PORTS



Figure 1 (1) Conakry/Boffa, (2) Abidjan; (3) Takoradi; (4) Lome; (5) Lekki; (6) Kribi; (7) Pointe Noire; (8) Lobito; (9) Walvis Bay; (10) Richards Bay; (11) Bagamoyo; (12) Mombasa; (13) Lamu; (14) Djibouti (Blank map of Africa, n.d.).