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Optimisation of resources, skills and organisational capabilities in the BOP environment. Application of the "entrepreneurial bricolage" concept to the social enterprise 1001fontaines in Cambodia

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Abstract

Our research work revolves around the following question: is Resource-Based Theory (RBT) universal or contingent?

This research question aims to question the foundations of RBT which recently acquired the status of detautologised theory by exposing it to a particular field of application: the "Base Of the Pyramid" (BOP) market by seeking to categorise it based on its development since Prahalad and Hart's (2002) inaugural proposal.

We begin with the observation that the major works on RBT follow a Darwinian type approach as defined by Fauchart and Gruber (2011).

We shall briefly cover the main founding documents of RBT, the successive stages which have enabled it to acquire the status of detautologised theory and we shall compile an initial list of RBT works which relate to the BOP environment.

With effectuation theory (Sarasvathy, 2001), we mobilise the concept of "entrepreneurial bricolage" developed by Baker and Nelson (2005), itself inspired by Lévi-Strauss (1967), to analyse how social entrepreneurs are thus able to "create from nothing" or with "what is to hand", by mobilising capabilities and resources specific to this environment, a need, a product or a service and address it long term by adopting an approach with accessibility to the most underprivileged.

Our research system revolves around the case study of a social enterprise which has created a network of water kiosks in Cambodia in the "Bottom Of the Pyramid" (BOP) environment.

At this stage, our contribution makes it possible to highlight the lack of RBT work in the BOP environment and contribute to developing this new analysis framework while categorising it at the same time. We also believe that the concept of "entrepreneurial bricolage" may be part of the future development of RBT, and in particular in terms of individual and collective organisational aspects.

Key words: RBT, entrepreneurial bricolage, capabilities, BOP, constrained environment

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INTRODUCTION

Our research work revolves around the following question: is Resource-Based Theory universal or contingent? This research question aims to question the foundations of RBT which recently acquired the status of detautologised theory by exposing it to a particular field of application: the "Base Of the Pyramid" market.

Resource-based theory, which has been widely debated in the literature (Penrose, 1959; B. Wernerfelt, 1984; J. Barney, 1991), analyses the competitive advantage of companies from the perspective of their resources and their capabilities rather than their products (Schmidt and Keil, 2013).

It seems of interest to us to test the universality of this theory in an environment restricted by a hostile natural environment, an institutional vacuum (Mair and al, 2012) which is reflected in particular in the BOP environment by productivity constraints (raw material resources, financial resources, production resources), transactional constraints (access to the market, market power, market security) (London and al, 2010), weak infrastructure or even a shortage of human resources (Prado et al, 2018).

Marketing of a product or service can only be considered on condition that an organisation, and all aspects of it (Mintzberg, 1989), is able to cope with these constraints by mobilising its capabilities (Tate and Bal, 2018) or by developing new ones (London and Hart, 2004; Hart, 2007; Hart and Dowell, 2011) to improve its performance.

The prerequisite for performance in the BOP environment is that, despite these constraints, the products or services marketed are accessible to as many people as possible, i.e. as defined by Prahalad (2005), to the 4 billion people at the base of the pyramid who live with less than 2 dollars purchasing power parity per day.

For this stage, we are positioning ourselves more specifically as following on from the work of Baker and Nelson (2005), who, using the concept of "Bricolage" (Lévi-Strauss, 1967), study organisations which are able to market a requirement, a product or a service with "what is to hand". We are continuing this work in the "Bottom of the Pyramid" (BOP) environment by seeking to understand how organisations manage to address this long-term by mobilising resources and specific capabilities and also using an approach with accessibility to the most underprivileged.

We apply this model to a company in Cambodia which meets a natural need (drinkable drinking water) with an embedded community-based approach (Yunus and al, 2012).

We seek to answer the following questions while comparing them to RBT: How is it possible to create a socially successful company in the BOP environment? What are the resources and capabilities which are key to its success in the BOP environment?

In the first part, we mobilised RBT by briefly going over the successive stages which have enabled it to acquire the status of detautologised theory, and then we present the work related to the BOP environment. In order to integrate the entrepreneurial approach and the role of the entrepreneur in exploiting resources and capabilities in this context, we have combined the work on entrepreneurial bricolage with RBT. In the second part, we present our research approach and method which revolve around the longitudinal case study of a social enterprise in Cambodia. Finally, we discuss our first results and briefly present the next stages of our research.

1. THEORETICAL FRAMEWORK

1.1. INTRODUCTION TO RBT

Resource-based theory emphasises the internal factors in a company which make it possible to have a lasting competitive advantage. The approach is therefore focused on the decisions of the company concerning the use of its resources and capabilities.

The resources are defined as tangible and intangible assets that the company controls and that it can use to put strategies in place (Barney & Hesterly, 2006). The capabilities are a subset of the company's resources and refer to the mobilisation of resources and routines on which it can capitalise (Karim and Mitchell, 2000; Winter, 2000).

The resources and capabilities of companies are generally classified into 4 categories: financial, physical, human and organisational (Barney and Hesterly, 2006).

1.2. THE FOUNDING RBT TEXTS

Resource-Based Theory is built upon the founding texts of Penrose (1959), B. Wernerfelt (1984) and J. Barney (1986, 1991).

Penrose's work (1959) serves as a reference (Acedo and al, 2006; Newbert, 2007). According to it, organisations mobilise a collection of productive resources to optimise their performances. The idiosyncrasy of the resource environment is down to what use is made of them. Each organisation is therefore unique in the relationship it has with its environment. They differ in their ability to survive or thrive where the same resource can be without value for one and on the contrary have a lot of value for another. It is the recombining of productive resources at its disposal that enables it to cope and gives it the ability to perform well.

Wernerfelt (1984) insists on the need for organisations to identify and to acquire vital resources to produce the goods or provide the services to obtain a competitive advantage in their markets. Barney (1986) integrates the organisational culture aspect as an element which is a potential source of a competitive advantage.

Prahalad and Hamel (1990) question the skills (capabilities) that organisations must have to achieve their strategic objectives. They recommend that organisations focus on exploiting their key skills.

Barney (1991) proposes the VRIO[1] "Framework" aimed at defining the characteristics of a resource which is potentially a source of a competitive advantage. It is structured in the form of a questionnaire on the value of the organisation, the scarcity of its offer, the difficulty of imitating or reproducing the product produced or service performed and on its organisational capabilities.

The question of value: do the firm's resources and capabilities enable it to address the opportunities and threats related to the environment in which it operates? The question of scarcity: is a particular resource controlled by a small number of competitors? The question of imitability and substitution: do firms without resources have to face a significant acquisition cost to develop a new resource in-house? The question of organisation: does the firm have policies and procedures which make it possible to support the exploitation of value, scarcity and the imitation cost of its resources?

Barney also considers that the resources and capabilities are shared in a heterogeneous way between companies and that their mobility is imperfect as transferring resources necessarily entails a cost. This is the first successful formalisation of RBT (Liouville, 2008) and the most

[1] "Valuable", "Rare", "Inimitable", "Organised"

understandable (Newbert, 2007) even if some authors criticize the ability of this framework to justify the competitive advantage since it fails to integrate the concept of the company's dynamic capabilities (Kraaijenbrink, 2009).

1.3. RBT HAS ACQUIRED THE STATUS OF DETAUTOLOGISED THEORY

Several authors have sought to highlight the tautological character of the Resource-Based View (RBV) (Priem and Butler, 2001a and 2001b; Arend, 2003) given the statements characterised as "statements of the obvious" (Liouville, 2008). A dialogue was established with supporters of its detautologisation who have not retreated behind the principle of incommensurability (Kuhn, 1970) which has led to the emergence of a "second generation" theory with a partial overhaul of the initial proposals of its founders (Liouville, 2008).

Barney (2011) thus considers that RBV has acquired the status of a theory for three main reasons. Firstly, the researchers investigating this field no longer use the acronym RBV. They use RBT. Then different segmentations have emerged in recent years based on the RBT foundation: a natural component of RBV (Natural-Based View) developed by Hart (1995) and the concept of dynamic capabilities developed by Teece, Pisano and Shuen (1997). Finally, the fact that RBT is combined with other research perspectives such as the institutional theory (Oliver, 1997) or the organisational economy (Combs and Ketchen, 1999) tends to demonstrate the robustness of RBT.

1.4. RBT AND ITS APPLICATION IN THE BOP ENVIRONMENT

1.4.1. The BOP market: a component of the NRBV concept

In his initial proposal in 1995, Hart suggested expanding resource-based theory to a Natural Resource-Based View (NRBT). This means proceeding with the study of the interaction between the company and its natural environment.

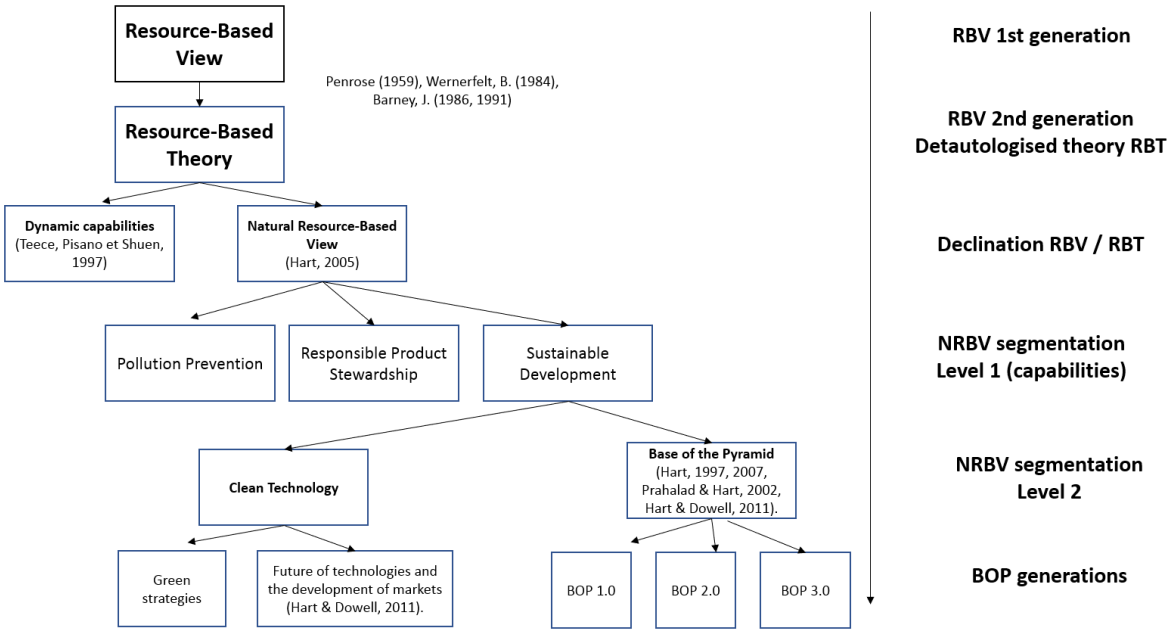
The natural environment can actually force the company to achieve a lasting competitive advantage. The constraints generated by the natural environment such as degradation of the ecosystem or the depletion of resources create discontinuities in the environment of the firm that are likely to threaten its existing resources and capabilities.

Hart thus identifies three strategic capabilities: pollution prevention, (responsible) product stewardship and sustainable development.

Over the last 20 years, the first two have been discussed while the third has had little attention (Hart and Dowell, 2011). The sustainable development component has since been separated

into two parts: clean technology and the BOP (Base of the Pyramid) (Hart, 1997, 2007, Prahalad and Hart, 2002, Hart and Dowell, 2011). Clean technology was mentioned in the article in 1995 as being the possibility for the company to reduce the products used and the consumption of energy by developing new skills. In 1997, Hart distinguishes 1) the green strategies (two components - preventing pollution and product stewardship) which rely mainly on improving the production of existing products and 2) the future of technologies and the development of markets (Hart and Dowell, 2011). The growing interest in the "base (or bottom) of the pyramid" was catalysed by an article by Prahalad and Hart (2002) which mentions "the fortune at the bottom of the pyramid" to highlight the potential of a market of four billion people, i.e. people who live on less than 2 dollars purchasing power parity per day.

Figure 1 - Evolution of RBV into RBT and applications



Prahalad has developed twelve principles (2006) to develop in developing markets and more specifically BOP markets[2].

[2] 1) focus on the performance of prices, 2) develop hybrid solutions combining old and new technologies, 3) conduct scalable operations which can be transferred to other countries, cultures and languages, 4) develop environmentally-friendly products to preserve natural resources, 5) reinvent the offer to adapt to the customs and traditions of the BOP environment, 6) build infrastructure which overcomes the constraints of the BOP environment, 7) de-skill work, 8) "educate" clients to use the products and services marketed, 9) design products that can function in hostile environments, 10) design interfaces adapted for users, 11) think of methods of distribution to reach the scattered rural markets and high-density urban markets, 12) focus on broad architecture, facilitating the rapid incorporation of new systems.

Following on from this, Anderson and Markedis (2007)[3] highlighted four aspects to take into account in terms of strategic innovation in developing countries. They are the 4As - "affordability, acceptability, availability and awareness" - to take into account factors affecting purchasing power and the quality of life of the populations evolving in the BOP environment which are of different types: in particular a low level of infrastructure, little accessible information on the market conditions of a product or service, an insufficient level of knowledge to form an opinion on a service or a product and a significant level of illiteracy (Vachani and Smith, 2008). It is not about winning over new clients ("who") as they are potentially by nature numerous because they are not served by the agents of the traditional economy, but instead taking an interest in the specific needs of these BOP homes ("new what") and how to address them ("new how"). Unlike the developed markets where companies are looking to identify and create new advantages for clients, in the BOP type markets, it means offering or adapting products to the customs and traditions of clients while making them economically accessible ("affordability" and "acceptability" aspects).

In the BOP environment, distribution networks need to be developed when they do not exist and demand for a product or service where it is absent or low needs to be created. According to them this means emphasising a "new how" by focusing on two aspects ("availability" and "awareness"). The literature on BOP strategies is certainly plentiful but it is not the subject of a theory. We therefore consider the BOP market as a field of application.

1.4.2. The BOP market: a promising field of application for RBT

Barney (2011) identifies BOP as a potentially promising field of research for resource-based theory[4].

The main works on RBT have a Darwinian type approach as defined by Fauchart and Gruber (2011). The founders of a company with a Darwinian social identity aim for individual enrichment. The ability to differentiate themselves from the competition is at the heart of the Darwinian entrepreneurial approach.

BOP sector works can be divided into 3 major stages.

[3] They only cover 3 of Prahalad's 4 As (awareness, access, affordability and availability)

[4] "[...]the resources and capabilities required to enter and succeed in base-of-the-pyramid (BoP) markets are discussed. BoP remains an intriguing and fertile ground for organizational research— roughly one sixth of the world's population lives on one dollar per day or less, yet little inquiry has examined these individuals' interactions with organizations, and theory development within this realm has been minimal "

BOP 1.0, which is based on the initial proposal of Prahalad and Hart (2002), aims primarily to adapt the product offer and to work on the ability of the company to distribute it to the poorest people. It may also be considered a priori that the BOP 1.0 aspect is part of a delayed profitability approach. From this point of view, the BOP market can be seen as a market of the future. So when Danone built a yoghurt factory in Bangladesh in the form of a "Joint Venture" with the Grameen movement, beyond the social approach desired by Franck Riboud and Emmanuel Faber, we can imagine the development potential for the group. In some way it's an adaptive Darwinian approach.

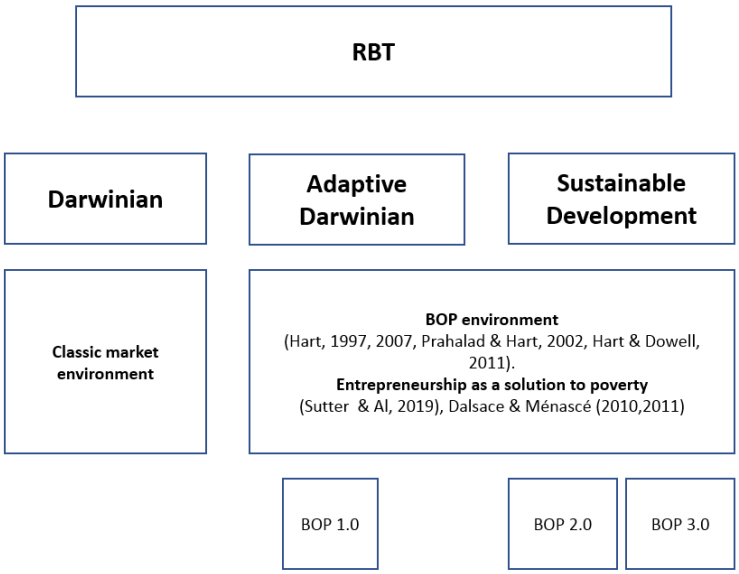
BOP 2.0 fits in more with the idea of co-creating products and value with the communities (Simanis and al, 2008). Hart (2017) distinguishes between the two approaches by describing the first as a "search for fortune at the base of the pyramid" and the second as the "creation of fortune with the base of the pyramid".

BOP 3.0 is part of a more sustainable development approach to reducing poverty (Hart, 2017; Dembek, and al. 2019) in the spirit of the 17 sustainable development goals set by the United Nations for 2030. The social aspect is more at the heart of the concerns of the projects which have adopted this approach.

The social enterprise is a type of organisation which may be representative of this category. It primarily pursues a social mission while engaging in business activities to support its operations through the sale of products or services (Battilana and al, 2015).

So, we classify the main works on RBT using the following classification:

Figure 2 - Application of RBT using 3 approaches: Darwinian, adaptive Darwinian and sustainable development



1.4.3. Resource-based theory applied to the BOP environment: first works

London and Hart (2004) consider that the success of the projects of multinational companies in the BOP environment require three capabilities: the recognition of and collaboration with non-traditional partners (non-profit organisations and partners known for their social expertise which have a reputation locally without however being strongly dependent on them), the co-invention of personalised solutions (adaptations of products by distributors, co-development of the company model and the product analysed through the lens of its functionality, and not spending too much time on protecting patents and trademarks) and the strengthening of local capabilities (recognising the value of local institutions, provision of training to local entrepreneurs and partners, the absence of local infrastructure and services). They also propose the development of a fourth capability: "social embeddedness".

Hart and Dowell (2011) consider that the key resource in the BOP environment is "embedded innovation" to cope with the lack of formal institutions, poor infrastructure and a low literacy rate, i.e. the co-construction of economic models connected to communities (London and Hart, 2011).

In order to integrate the entrepreneurial approach of the company in the seed stage and the role of the entrepreneur in exploiting resources and capabilities in this context, we have combined the work on entrepreneurial bricolage with RBT (Baker and Nelson, 2005).

1.5. THE CONCEPT OF "ENTREPRENEURIAL BRICOLAGE" AS A KEY TO UNDERSTANDING ORGANISATIONAL MODELS DEVELOPING IN THE BOP ENVIRONMENT

The concept of "entrepreneurial bricolage" developed by Baker and Nelson (2005) is based on the concept of "bricolage" developed by Lévi-Strauss (1967). *" […] a form of activity is available to us which, from a technical point of view, makes it fairly easy to design what, from a speculative point of view, could be a science but we prefer to call "primary" rather than primitive: it is what is commonly referred to as bricolage".*

This is particularly interesting in terms of understanding how using identical resources, organisations create relatively heterogeneous values. Being able to "create from nothing" and to make with "what is to hand" (Lévi-Strauss, 1967) takes on its full meaning in the BOP environment.

" […] Excited by his project, his first practical step is actually backwards-looking: he must return to an already formed whole, consisting of tools and materials; do or re-do, an inventory; finally and especially, get involved in a kind of discussion, to list, before choosing from amongst them,

the possible answers that the whole may offer to the problems it raises. All of these miscellaneous items which constitute his treasure are examined by him to understand what each of them could "mean", thus contributing to both defining a whole to be created, but which will only differ in the end from the instrumental whole by the internal arrangement of the parts". […] The engineer also examines, since the existence of an "interlocutor" for him results from the fact that his resources, his power, and his knowledge are never unlimited", and that this negative form would be resistance with which it is essential to come to terms. One might be tempted to say that he examines the universe, while the bricoleur focuses on a collection of the remains of human works, that is to say a sub-set of the culture. […]. […] Like the bricoleur, faced with such data he can't just do anything; he too will have to start by listing a predetermined set of theoretical and practical knowledge, and technical resources, which restrict the possible solutions. "

In figure 3, Baker and Nelson (2005) propose a "bricolage" model in a context where there is shortage which can potentially lead to growth of the organisation. According to the authors, the organisation can mobilise new resources or by recombining those available to cope with a given problem.

This offers three possibilities. A first step is to acquire levels and types of external resources. A second possibility is, including for those who sought to explore the acquisition of external resources, to avoid facing the new challenge, which can lead to the organisation remaining inert, to reduce its workforce or even be dissolved. The third possibility is to engage in a "Bricolage" approach as defined by Lévi-Strauss (1969) by recombining the resources "to hand" to cope with the constrained environment with which the organisation has to cope.

The approach is to test and to cope with the limitations of the constrained environment, which creates a context conducive to creativity, improvisation, the search for combinations of skills, tolerance of ambiguity, disorder and setbacks and encourages the positive emergence of social skills and networks.

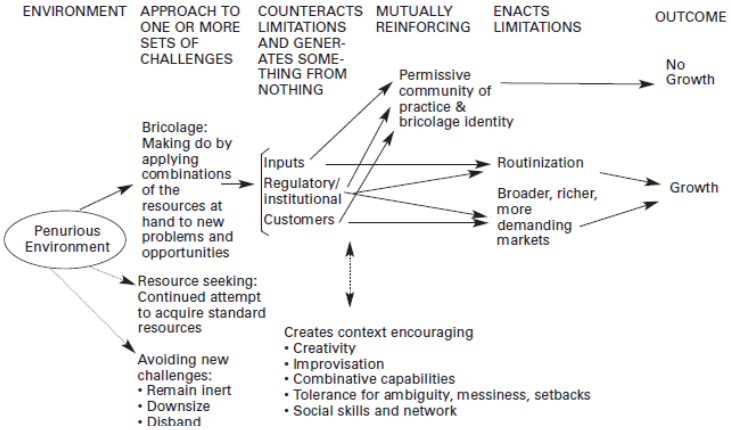
Baker and Nelson identify different types of embedded resources: 1) the equipment, skills and labour, 2) the regulatory and institutional field, 3) the clients.

They consider that this practice of "bricolage" may in some cases generate models which mutually reinforce each other and, contribute to creating a particular company identity and a community of practices which may have the permissive effect of maintaining the organisation in a form of stagnant growth: this is "parallel"-type "bricolage".

According to them, the organisations practising "selective bricolage" create something "from nothing" in a small number of areas. They retain their ability to take advantage of the unique

services created by "bricolage" to generate growth by focusing on some of the activities they perform effectively with a "routine" approach. They have a propensity to offer their products or services to larger markets, and often to a more demanding and therefore more lucrative clientele. From a regulatory and institutional point of view, by focusing on a standardised framework, organisations practising "selective bricolage" are able to grow more easily than those practising "parallel bricolage".

Figure 3 – A "bricolage" and growth process model (Baker and Nelson, 2005)



Companies operating in an environment where there are shortages and practising "entrepreneurial bricolage" are often those that are the result of a social-type approach which involves identifying opportunities arising from issues neglected by society with positive externalities not taken into account either by the market or by the government (Santos, 2012).

2. METHODOLOGICAL FRAMEWORK SELECTED AND THE FIELD OF RESEARCH

2.1. METHODOLOGICAL FRAMEWORK

The longitudinal case study (Yin, 1984) of 1001fontaines was undertaken in an approach to understand the players (Eisenhardt, 1989, Dumez, 2016) in the tradition of Dilthey, Weber and Popper and descriptive (Kidder, 1982). It seems particularly appropriate for the relatively recent and multi-disciplinary fields of research (Eisenhardt, 1989).

"The case study is an empirical investigation which examines a contemporary phenomenon in its real context when the boundaries between phenomenon and context are not clear and for which multiple sources of data are used" (Yin, 1990).

This choice also makes it possible to cope with the abundance of information collected by doing an analysis of the case even if the style remains descriptive (Gersick, 1988; Pettigrew, 1988).

Our collection system is organised around several focuses: the study of the organisation's internal documents, non-participatory observation at internal meetings, a week-long assignment in the NGO Teuk Saat, the local partner of 1001fontaines, and at two sites in Cambodia and conducting interviews.

The longitudinal nature of the case is expressed both in terms of the historical analysis of 1001fontaines, an understanding of the issues present, but also its future strategy, in particular through its deployment in new countries as well as its willingness to initiate a consortium of players on projects to access drinking water in rural areas.

2.2. PRESENTATION OF A FIELD OF RESEARCH

The choice to choose 1001fontaines is justified by the major social impact of the project (500,000 beneficiaries with a goal of 1,000,000 beneficiaries by 2020 in Cambodia), its presence in different areas of action (Cambodia, Madagascar, India) and the innovative character of its organisational and legal structures.

As Mintzberg (1979) recommends, it is important to choose an organisation with clearly defined objectives. Our prior knowledge of the organisation makes us think that it has an established strategic line and has entrepreneurial and social intentions likely to provide answers to the questions that we are asking ourselves.

1001fontaines' objective is to "enable small, isolated communities to meet, by themselves and without infrastructure or specific skills, their drinking water requirements." It is based on a "new what" and two "new hows" as defined by Prahalad (2006), Anderson and Markedis (2007). A "new what" which consists of endeavouring to supply essential drinking water needs, i.e. 2 litres per day and per person served at the point of consumption in 20 litre containers, which makes it possible to eliminate the main diseases caused by water. A first "new how" which aims to produce this water at a very low cost in the villages to cover their needs. This production is based on a water treatment system using UV-ray based disinfection, which is a solar-powered system. The creation of a production unit in villages makes it possible to serve only local demand and therefore restrict the distribution costs. So, water is sold at 1 euro cent per litre ("affordability" aspect).

A second "new how" which seeks to ensure the sustainability of the production model by creating entrepreneurial activity for the production of water, usually by associating a family with it which generates sufficient income to maintain its production tool and live off this activity.

It is structured around three players: the head of the social franchise UV+ Solaire responsible for its promotion, the NGO 1001fontaines responsible for raising funds in order to finance the installation in new villages and the local NGO already embedded there.

3. RESULTS[5]

In order to integrate the entrepreneurial approach and the role of the entrepreneur in exploiting resources and capabilities in the BOP environment, we are going to go over the different stages of Baker and Nelson's (2005) model (figure 3).

3.1. A LAUNCH AIMED AT SECURING DRINKING WATER FOR LOCAL COMMUNITIES IN THREE VILLAGES IN CAMBODIA

The initiative is the result of the meeting between Chay Lo, a young Cambodian, and François Jaquenoud, a former partner at Accenture, and facilitated by Virginie Legrand working in the humanitarian sector with Enfants du Mékong in Cambodia. Chay Lo explains that the Cambodian villagers have no other choice than to drink water from the pond, resulting in infant mortality of nearly 20% and diarrhoea for children, which is the leading cause of absenteeism at school.

At this point François Jaquenoud wanted to "do something […] in areas that nobody has ever done in the world. […] The only thing that I was missing was a case study so I could very well have joined a start-up or joined a large group and worked on diversification […]. I am motivated by something quite different to most people. It is first and foremost architecture and creating something".

After a pilot phase in three villages in Cambodia in 2005 which demonstrated the viability of the model, they aspire to determining the size of "a solution which is as generic as possible and which can be rolled out not only in Cambodia but in all countries […].

Here we can see the entrepreneurial intent and preconceptions of François Jaquenoud, the architect of 1001fontaines' economic model, and the logic of an engineer as opposed to that of a bricoleur.

3.2. THE CONSTRAINED ENVIRONMENT: THE VILLAGES LOCATED IN RURAL AREAS

Cambodia is a country of 15 million inhabitants with a rural population of nearly 11.8 million inhabitants. It is ranked 145th out of 190 countries in the Human Development Index (HDI) just

[5] We invite the reader to refer to figure 4 while reading this part covering the different stages of Baker and Nelson's (2005) model

after Bangladesh (144th) and Kenya (147th). 1001fontaines works in rural (3.7 million people)[6] and semi-rural (8.1 million inhabitants) areas [7][8].

The level of infrastructure is minimal with in particular in rural areas difficulty accessing villages by road, telecommunications which are almost non-existent and significant energy scarcity (13% access to energy in rural and semi-rural areas).

Water is abundant because of the Mekong River, the river Tonlé Sap and the rainy season. So 34,000 cubic metres of surface water is available per year per inhabitant.

11% of people living in rural areas (and 12% for people living in semi-rural areas) potentially have access to drinking water supply solutions.

The main economic activity in these villages is growing rice which enables these families to generate monthly income of $20 per family, which is five to six times below the poverty line that is generally set at 1 dollar per day and per person. Agricultural activity represents 35% of the gross domestic product and is closely dependent on the level of rainfall and is restricted by frequent flooding.

3.3. A FIRST "BRICOLAGE" ASPECT WHICH INVOLVES AN EXPLORATORY APPROACH

The first phase of setting up 1001fontaines in a country is experimental (Phase 0: exploration) and aims to analyse the characteristics of a country that may be expressed in different ways in order to build the economic model which is best suited.

There is a dialogue with the culture and the natural environment of villages where the 1001fontaines' offer is proposed.

At the cultural level, " […] For example, the whole concept of 1001fontaines' sponsorship which is to distribute the water free of charge in schools "was in fact suggested to us by the elders in the community […] of Along Tameï".

At the environmental level, energy resources, particularly water, are not localised in the same place and the water requires different treatment. At the cultural level, from one country to

[6] The communes in rural areas are "communes without significant slums, where the population is rare, with a density often less than 50 inhabitants per square kilometre and an average of 5,000 inhabitants. This type of commune is hardly conducive to the development of infrastructure in a fully commercial approach".

[7] Communes in semi-rural areas are "either communes with a growth centre (a concentration of less than 1,000 households or 5,000 inhabitants) or small communes with a high density population. This type of commune has characteristics which are closer to those of areas which are not very urbanised. These semi-rural communes represent approximately 55% of rural communes and more than half of the country's population".

[8] The definitions of communes in rural and semi-rural areas are those of the firm Seva (2017).

another, the decision-making centres in villages are not the same and the sensitivity of the populations to the quality of water is different.

This learning phase enables the organisation to adapt its model for the next stage of its deployment. It takes an average of eighteen months to put in place the project given that a year is required to take a step back to understand seasonal phenomena in particular, climatic conditions which can vary from one region to another or any form of cultural contingency whose understanding is essential to the success of the project.

At the operational level, the level of income and purchasing power parity in rural areas are not the same in all countries, villages do not have the same population density, the way of consuming is not the same, there are differences in terms of legislation, taxation, the containers available to purchase do not come in the same formats, and infrastructure (roads in particular) is not the same. This first phase is also crucial because it also aims to identify the local partner who will accompany the project until it is self-sufficient and beyond that is likely to take over the initiative.

In order to test the model being constructed, new sites are deployed (phase 1) in additional villages (6 to 10 villages). Phases 0 and 1 represent eighteen months of work. Phase 2 is a phase that involves determining the size of the economic model of platforms in order to deploy the project to as many people as possible.

The platforms have an operational assistance function for entrepreneurs and are responsible for handling the logistics of the deployment of the project.

"We need to control all of that. We control the quality of the water. We have our own laboratories. That justifies the platform". The laboratory does the tests and reports them. If at a given time there is a new generation of tests that arrive on the market, there must be people who are able to assess if this new generation of tests are of use to us or not. The number of sites to support operationally per platform is assessed to determine the optimal cost structure (60 sites in Cambodia) given the population density around the water treatment sites.

The duration of this phase is determined by the capacity of 1001fontaines to raise funds and institutional funding.

3.4. A SOCIALLY EMBEDDED EXPANSION STAGE

Once the economic balance of the first platform is achieved, usually three to four years after its launch, other platforms are deployed in order to expand the solution nationally (phase 3).

The project is rolled out in successive waves, with each wave enabling the installation in 10 new villages of a drinking water production unit.

This water is produced locally using the surface water and distributed in 20 litre containers using local operators. In each village, the installation of a production unit aims during the test phase for minimum production of 1,000 litres per day during the dry season.

"Our projects are first and foremost community projects, and initially we "deal" with the community to do the project where they are located. It is usually them who have chosen the entrepreneur and we always need to find a balance between the personal interests of the entrepreneur and the social interests of the whole community, so for example when the entrepreneur wants to increase their price, they must do so with the agreement of the community and us, so we sometimes have to act as arbitrator".

The initiative is embedded locally in Cambodia through the NGO partner Teuk Saat which acts as an engineering company by facilitating the creation of new sites.

In Cambodia, it is the Ministry of Rural Development which is in charge of developing policies, planning, regulations, financing and the general coordination of water provision projects.

Teuk Saat is attached to this Ministry because the project is characterised as community-based. It facilitates relations with the local authorities: heads of villages, representatives of the Ministry of Rural Development or other NGOs present in the same locations.

All projects are monitored by direct relations with the communes and heads of villages. The village community is committed to providing the project with land and a place to install the production unit and plays a fundamental role in the deployment of the project since it is in particular responsible for being involved in setting the price of water and choosing operators.

The economic self-sufficiency of an entrepreneur is ensured when there is 15% penetration in a village. The financial sustainability of a platform is made possible thanks to "assistance fees" paid monthly by each of the entrepreneurs for the services provided by Teuk Saat.

3.5. MEETING A NATURAL NEED BY INSTALLING WATER KIOSKS

The initial donation is in effect used to create a need (and meet it long-term with a price of one cent per litre) by installing a water kiosk in a village. This need will be solvent in the long run.

"Philanthropy makes it possible to finance the "CAPEX[9]" i.e. the construction of the station and the salary of the entrepreneur over 18 months. Then the "OPEX" i.e. operating expenses are covered by the sale of water containers distributed by the entrepreneur."

1001fontaines justifies this "charitable logic to finance the initial investment […] but also to finance the Water or Fountain sponsorship programmes [10]".

[9] OPEX = "Operating Expenses" and CAPEX = "Capital Expenditures"
[10] Programmes to distribute water in subsidised villages

3.6. STRENGTHENING OF THE ORGANISATION'S CAPABILITIES

One of the main levers of the economic model is the assistance of the partner local structure and that of entrepreneurs who must administer a small water station.

"We have a 70-80% success rate. The entrepreneur now has our knowledge… that began with the ability to select the right ones, through the learning period, and the ability to train them well. Our entrepreneurs at the end of a year know how to manage their business."

3.7. AN ILLUSTRATION OF "SELECTIVE BRICOLAGE"

Jean-François Rambicur, President of 1001fontaines, justifies choosing not to diversify the offer for two main reasons. "Firstly, we are not secure and sustainable enough. We don't have the critical size of fleet. The second thing is that we have a triptych model of health: water, hygiene and sanitation. We have studied the sanitation projects but the models are quite different. For hygiene, they are potentially more similar. Ask entrepreneurs to sell soaps, hygiene products even, but it must remain a social initiative. We don't have sufficient quality engineering and operations. We don't have the level of control in our water industry that means we can begin to diversify."

This "selective bricolage" as defined by Mintzberg (1989) aims to standardise the procedures of organisation in a routine way. Here we find the three aspects of standardisation: 1) "work process" with the standardisation of content which are specified and programmed in terms of purification and distribution of water via a system of regional platforms, 2) "outputs" with a specific two level aspect in terms of water prices and water quality, 3) "standardisation of skills" with an academy which aims to share good practices of "champion sites" with sites in difficulty (tier III sites).

3.8. THE OPERATIONAL RESULTS WHICH WORK ON TWO LEVELS

"What we are looking for is impact and sustainability. There is always this desire to ensure that there is always at the most favourable point of equilibrium between the entrepreneur's actual profitability and accessibility. "

"Thinking about the price of water comes in a very pragmatic way because the price of water is an ongoing debate for us, and it is the balance between what is necessary for the entrepreneur to live, finance themselves and be profitable and the lowest price possible to maximize accessibility effectively for a population".

3.9. DISSEMINATION OF THE MODEL: REPLICATION IN OTHER COUNTRIES AS A BRIDGE FOR GROWTH OF THE INITIATIVE

By using what it has learnt in Cambodia, 1001fontaines has highlighted the six criteria prior to its intervention in a new country: " […] 1) the availability of sufficient water, and water that can be treated, 2) a proven issue in terms of access to quality water, 3) a significant market size, 4) the existence of a reliable and long-term local partner, 5) the existence of an entrepreneurial spirit, 6) possible political support".

3.9.1. Growth of the organisation and achieving self-sufficiency in Cambodia

Julien Ancele, the managing director, indicates that "each project has a clear strategy. So the 1001fontaines project in Cambodia dos not aim to reimburse the capital deployed, which would require doubling the prices to achieve that. We aim above all else to balance the OPEX and not reimburse the CAPEX. Each project has its equilibrium level. The social and economic project in Cambodia involves 250 villages being covered and 1,000,000 beneficiaries targeted" through 4 platforms with a penetration rate in villages of 25%.

François Jaquenoud believes that "the business model" essentially fulfils the preoccupation with sustainability. […] The impact is determined […] by our ability to raise funds. The impact has two aspects, two components: it's the number of villages and it's the penetration rate in the villages, the number of clients that it is able to generate.

It is the work of each entrepreneur to generate new clients which will be the engine to maximize penetration in the village and the other component which is the number of sites and thus depends on our ability to raise funds."

3.9.2. Specific outcomes and overall results

One of the logos used by 1001fontaines is a double drop "which are two drops intertwined. And in the double drop there is a big drop and a small drop".

"The meaning of the large drop and the small drop […] is that there are two benefits to the project: there is a benefit in terms of health and a second benefit in terms of economic activities. We improve health in the villages and at the same time we create an economic activity which enables a family to get out of poverty through its work. The fact that there is a big drop and a small drop […] the major benefit is in terms of health and the economic benefit; the family that becomes an entrepreneur […] is not the main benefit".

The direct beneficiaries of the initiative are therefore the families in the villages who can now have drinking water at a very low price (1 euro cent per litre) with immediate health benefits.

4. DISCUSSION

The two questions asked at the beginning of this paper are as follows:

How is it possible to create a socially successful company in the BOP environment? What are the resources and capabilities which are essential for the success of a company in the BOP environment?

The model proposed by Baker and Nelson (2005) enables us to provide partial answers to the first question. It shines a light on the entrepreneurial approach in the BOP environment. It enables us, through effectuation theory, to understand what the stages were which determined the success of 1001fontaines in achieving specific results (in terms of health and economic impact) but also identifying what might be the strategic approach to choose in terms of the growth of the organisation by mobilising the notions of "selective bricolage" and "parallel bricolage".

The companies working in the BOP environment can indeed be tempted to diversify their activities by opportunity or economic necessity by compromising their ability to be socially effective.

The standardisation of the procedures of the organisation with routine reasoning (Mintzberg, 1989) is an element that seems essential in order to integrate into the BOP environment to ensure that controlled activities remain so.

Baker and Nelson's model also makes it possible, with longitudinal reasoning, to identify the resources and capabilities which are key to the organisation as defined by Prahalad and Hamel (1990).

The importance of organisational learning (Tippins and Sohi, 2003) and the establishment of an organisational culture as defined by Barney (1986) in the BOP environment are crucial.

In this case, even if the entrepreneurial incentive at the start is more that of an "engineer", there is a dialogue with the culture (the community which can be regarded as a central resource for the organisation) and the natural environment (water) of villages.

The difference between the bricoleur and the engineer may not be as Lévi-Strauss emphasised "as absolute as we might think. It remains real however, to the extent that compared to these constraints summarising the state of civilization, the engineer always seeks to open up a pathway to position themselves ahead, while the bricoleur, voluntarily or forcibly, remains below, which is another way of saying that the first works with concepts and the second with signs".

Therefore, in the next stage we seek to investigate this classification to identify those entrepreneurial approaches that are more "engineer" or more "bricoleur" in the BOP environment. As regards the second question, our non-participatory observation and our interviews enable us to identify four key resources in the case.

Table 1: classification of the 1001fontaines initiative's resources and capabilities

Resources	Capabilities
Financial	« Fundraising » - Donations and institutional financing
"Integrated innovation" - Community (agent)	Social embeddedness – deep dialogue
Organisational Productive tool Network of entrepreneurs Shareholder Agreement / Social Business charter	Water treatment Water distribution Social capabilities
Strategic alliances Local organisations International organisations	Execution Advocacy

Financial resources determine the deployment of 1001fontaines' sites. The model for funding growth was developed in three ways. Donations and institutional financing fund the new water kiosks, reinforce organisational capabilities (concept of "capacity building" at 1001fontaines which echoes the concept used in the field of development aid[11]) and the financing of the operating deficit generated by the organisation's defaulting sites.

The community demonstrates its commitment by making land available to install the production unit. It is also key in the deployment of the project as it is responsible for being involved in setting the price of the water and the choice of operators.

It can also be akin to a co-operative when it comes to exchanges between "gifts and deferred counter-gifts" (Alain Marie, 2012) in the sense of "potlatch" as defined by Marcel Mauss (1924). The result is a form of moral obligation for the operator chosen by the community to be able to cope with its "debt" in the eyes of the community.

[11] "Capacity building" is "a process that only covers the first stages of creating or creating capacities and assumes that there is no existing capacity" (UNDP[11], 2009).

The community incentive is an element that we are going to study in the next stage because, with regard to our first field investigations, it seems that the most successful 1001fontaines sites are those where the community is particularly involved. It appears that the community can play the role of agent in the BOP environment.

The organisational resources of the company are critical because they make it possible to satisfy a natural need (drinking water) by installing water kiosks in the BOP environment.

This occurs through its capacity to treat surface water with a simple purification process. This is easily imitated and the organisation has never sought to protect it or make it inimitable or non-substitutable as defined by Barney (1991).

The capacity to distribute water is essential and 1001fontaines is constantly seeking to improve the accessibility of potential clients to its offer. For this, 1001fontaines combines various distribution channels. So, in addition to the existing home delivery channel, a more systematic use of traders as distribution points, as well as "on-demand" delivery have been developed.

The organisation, which also integrated capital-intensive type funds at the top of the UV+ Solaire franchise, has put in place a shareholder's agreement and a Social Business charter (Yunus, 2006) in order to retain its social capacity[12].

"By agreeing to append this charter to their shareholders agreement, the shareholders of UV+Solaire have confirmed their adherence to the principles and commitments […]".[13]

It should also be noted that an "exit clause for failing to fulfil a societal objective" was integrated into the Shareholders' Agreement after which one or more violations of the provisions of the Agreement but also the Charter are likely to lead to the exclusion of the party responsible. The "Social Business" charter is broken down into principles and commitments which themselves can be translated into key performance indicators.

1001fontaines has also developed local and international strategic alliances which in the first case enable it to implement its strategic vision in the field and in the second case to be a player in advocating for access to drinking water around the world.

In Cambodia, the backing of a local NGO enables it to be fully embedded. Teuk Saat is in some sense "a sub-contractor of its strategic visions[14]".

This reinforces our approach and encourages us to follow on from the work of London and Hart (2004) and Hart and Dowell (2011) on the need to have a dialogue with local organisations

[12] We are not ignoring the literature on social capacity but we have not explored this concept in detail yet.
[13] Excerpt from the Social Business Charter
[14] Interview with François Jacquenoud

and also the need for a company in the BOP environment to have an "integrated innovation" approach.

At the international level, 1001fontaines aims to "inspire and be a key player in the large-scale deployment of a drinking water solution that meets the fundamental principles of the model". To this end, 1001fontaines aims to back major players in development with the capacity to deploy the model internationally and to initiate a consortium of stakeholders focused on access to drinking water. All partners in this ecosystem will be able to pool their fundraising and advocacy efforts. This capacity is essential because it enables the organisation to maintain or develop its reputation value enabling it to finance its activity by requesting help from major international donors.

CONCLUSION

We seek to test the contingency of the emergent RBT theory in the BOP environment.

The categorisation we have suggested of works on resource-based theory applied to the BOP environment enables us to dissociate the different approaches to the subject. This field of application is particularly dynamic given the economic potential it represents for the stakeholders involved in a BOP 1.0-type approach.

It is also an arena for initiatives aimed at complying with and contributing to goals set by the United Nations for 2030 in a BOP 2.0- or BOP 3.0-type approach.

The first approach is a Darwinian one as defined by Fauchart and Gruber (2011) as the profitability associated with the approach is certainly delayed but potentially lucrative. The second approach is a sustainable development approach.

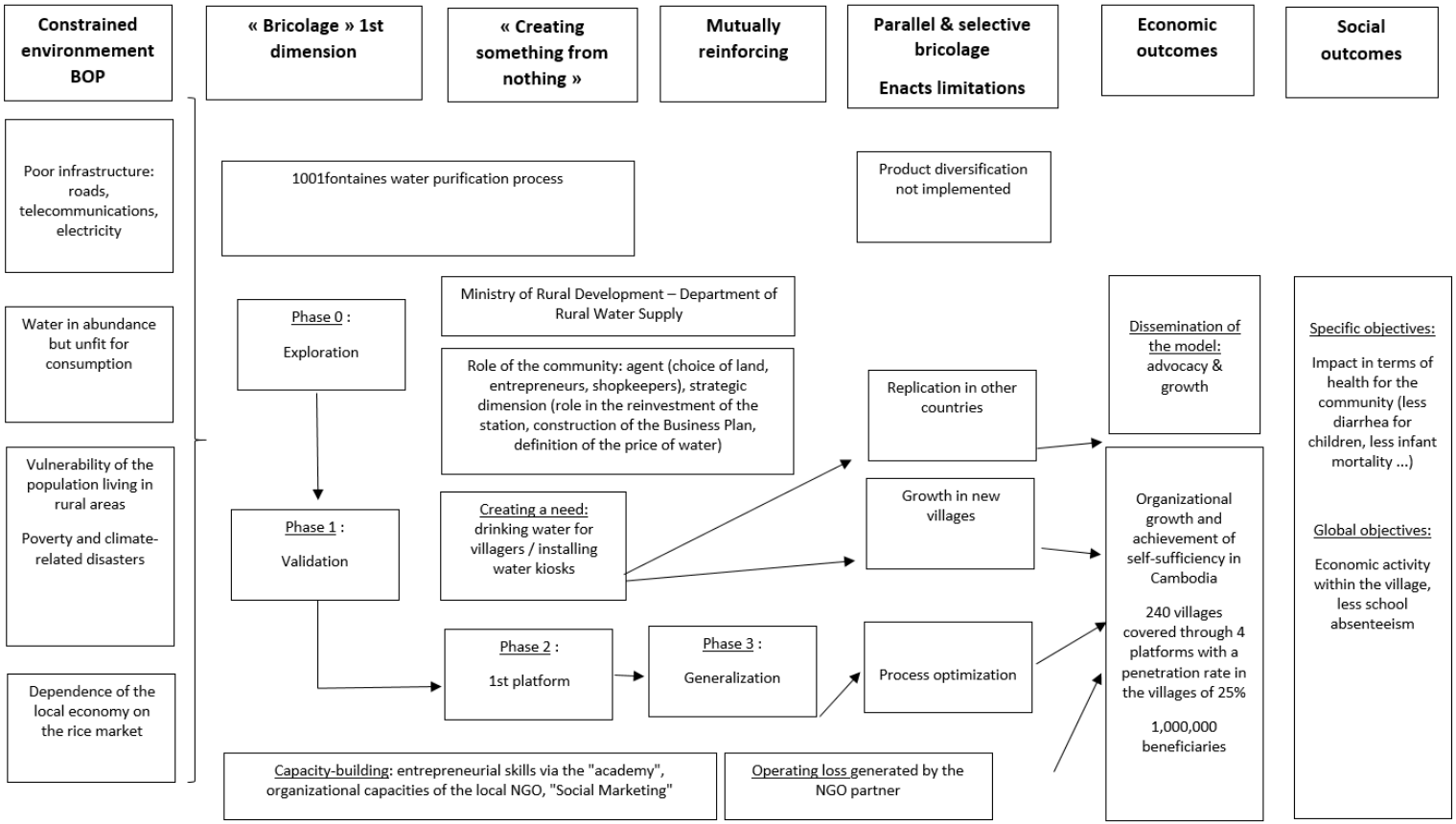
The case study of a social enterprise enables us to question the entrepreneurial approach to adopt in the BOP environment.

It also enables us to think first about the resources and capabilities needed to succeed in this constrained environment.

We plan to expand upon these issues in the next stage by focusing on the role of the community as a key resource in the BOP environment.

This element tells us about the developments to be considered in RBT, which reinforces our questions regarding its universality.

Figure 4 – Application of the entrepreneurial bricolage concept to the social enterprise 1001fontaines in Cambodia



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