Decision-making framework for investing in emerging markets

A demonstration on the cocoa industry in Ivory Coast

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Abstract

Purpose – The purpose of this paper is to identify and understand the obstacles and drivers of financial investors while deciding upon investment opportunities in emerging markets.

Design/methodology/approach – Relevant factors for financial investors in emerging markets were identified through a literature review and a series of expert interviews. Identified factors were broadly grouped into three categories, namely, microeconomic aspects, macroeconomic aspects, and aspects of the functionality of the local banking system. Finally, an expert panel (Delphi) technique is used to validate the findings in cocoa industry in Ivory Coast.

Findings – A decision-making framework that enables the evaluation of the attractiveness of an industry in emerging market from a financial investor perspective is developed and its application is demonstrated on the cocoa industry in Ivory Coast. Probability and consensus of the projections for the individual decision elements are tabulated along with the insights into both encouraging and discouraging aspects.

Research limitations/implications – Current study is a timely contribution to the call for papers in the research literature to develop frameworks that are contextualized in emerging markets. Similar to any other qualitative study, this study lacks the generalizability of results. But, the framework developed can act as a starting point toward the generalizability of the findings in future.

Practical implications – Decision elements identified in this study can act as a checklist for financial investors and top management to choose the elements that are relevant to the investment problem being dealt by them. Also, the study can act as a handy demonstration to practitioners for applying the framework using expert panel.

Social implications – A major challenge of the investment environment in emerging market is the non-availability of quality information on the potential investment opportunities. In this study, the authors suggest a framework to overcome this information asymmetry challenge and expect it to promote financial investments in emerging economies which in turn will improve the quality of life of people in these economies.

Originality/value – First study to present an approach to help financial investors to conduct profound evaluation and gain more in-depth insights into the future investment opportunity attractiveness of a particular industry in an emerging market.

Keywords Emerging markets, Delphi study, Ivory Coast, Cocoa industry, Financial investment

Paper type Research paper

1. Introduction

Emerging markets are attractive as their growth drivers are fundamentally embedded in global macro trends including a young workforce or a growing middle class (Rapoza, 2011; Khanna and Palepu, 2010). In the face of these vast growth opportunities, financial investors are presented with many interesting investment opportunities in emerging markets. They, however, are also confronted with the challenge of finding the most attractive markets as growth developments in emerging economies vary from industry to industry and are subject to numerous influencing factors. A major challenge of the investment environment in emerging markets is the struggle of investors to obtain quality information and detailed insights on their

potential investment opportunities. According to Khanna and Palepu (2010), emerging markets are not only emerging in their forecast potential or liberalizing investment environments but also in the institutional infrastructure needed to support their nascent market-oriented economies.

Financial investors in emerging markets can often not rely on the same insights and frameworks as investors in developed markets because the access to accurate information is limited through the lack of data and absence of reliable intermediaries (Khanna *et al.*, 2005; Bekaert and Harvey, 2002). Acknowledging the uniqueness of emerging markets, many researchers who have studied firms in emerging economies have argued for studying these firms using new theories as old theories are based on the analysis of advanced economy multinational companies (e.g. Guillén and García-Canal, 2009; Luo and Tung, 2007; Mathews, 2006). Another group of researchers argue that studying emerging economies helps in extending existing theories (Ramamurti, 2009; Cuervo-Cazurra, 2012; Ramamurti, 2012).

The high uncertainty and dynamic changes increase the importance of direct information gathering for financial investors in emerging markets forcing them to allocate a high amount of resources to the collection and processing of information (Hartman *et al.*, 1995). Due to this deficiency of quality information, decision makers often rely on statistics and historic information to estimate the potential of possible investments. The use of composite indices can also be perceived as problematic when used as a method to identify future investment opportunities in emerging markets. According to Khanna *et al.* (2005), composite index-based analyses do not enable a deeper differentiation of the market as they cannot display warning signals in the environment, and essentially conceal more than they reveal. These conclusions go in hand with McKenzie *et al.* (2009), who describe that important weak signals for future changes might be missed when inferring on data of the past and point out the importance of the inclusion of future-oriented information in the decision-making process, especially in fast-moving, dynamic, and unstable market environments such as emerging markets (McKenzie *et al.*, 2009; Gnatzy and Moser, 2011).

A rapidly evolving business environment, bolstered with the lack of historic data, presents challenges for information gathering efforts of companies operating in emerging economies (Bekaert and Harvey, 2002; Khanna and Palepu, 2010). A dynamically progressing environment differs to the relative stable conditions found in developed markets making it necessary to explore new business analysis approaches in order to adapt to increased uncertainty and dynamic developments. Bekaert and Harvey (2002) state that many current models are not able to account for this dynamic process in emerging markets and conclude that such markets provide a challenge to existing models and request for the creation of new models. Recently, Beugré (2015) calls for developing new techniques that are contextualized and embedded in emerging markets culture.

The objective of this paper is to address these gaps in literature by presenting a framework and an approach to help financial investors gain more in-depth insights into a particular industry in an emerging market that go beyond the analysis of statistics or industry reports and allow for an additional profound evaluation of the future attractiveness of specific investment opportunities in an industry. Therefore, through this study, following research questions (RQ) will be answered:

RQ1. What are the key factors that needs to be evaluated by financial investors for understanding the attractiveness of an industry in emerging market? How can these factors be grouped together to develop a framework that can guide the financial investors?

RQ2. How can this framework be effectively applied to gather maximum insights on both encouraging and discouraging aspects of investing in an industry in emerging market?

By answering these research questions, this paper will present a framework that enables the evaluation of the attractiveness of an industry in emerging market from a financial investor perspective. The framework developed will be applied to evaluate cocoa industry in Ivory Coast to gather insights on both its encouraging and discouraging aspects.

The remainder of this paper is structured as follows: Section 2 explains the decision-making framework developed based on literature and expert interviews for financial investors interested in emerging market. Section 3 explains the Delphi methodology which is adopted in this study. Section 4 provides the background details of the cocoa industry in Ivory Coast which is the case example chosen for testing the proposed framework. Section 5 documents and discusses the results obtained in the process of validating the framework by applying to cocoa industry in Ivory Coast using Delphi technique. Finally, Section 6 concludes the study by presenting the research and practitioner implications.

2. Literature review and expert interview – a decision-making framework

A decision-making framework for financial investors in emerging market was developed based on the literature and expert interviews (as shown in Figure 1) (Appendix 1 lists the financial investment expert interview template). The basis of this framework is primarily borrowed from the work published by Porter which identifies the forces that foster competitive advantages of nations and the attributes that impact an industry (Porter, 1990). Relevant factors were identified by Porter in the microeconomic sphere, macroeconomic sphere, and natural endowments. Porter defined the quality of the
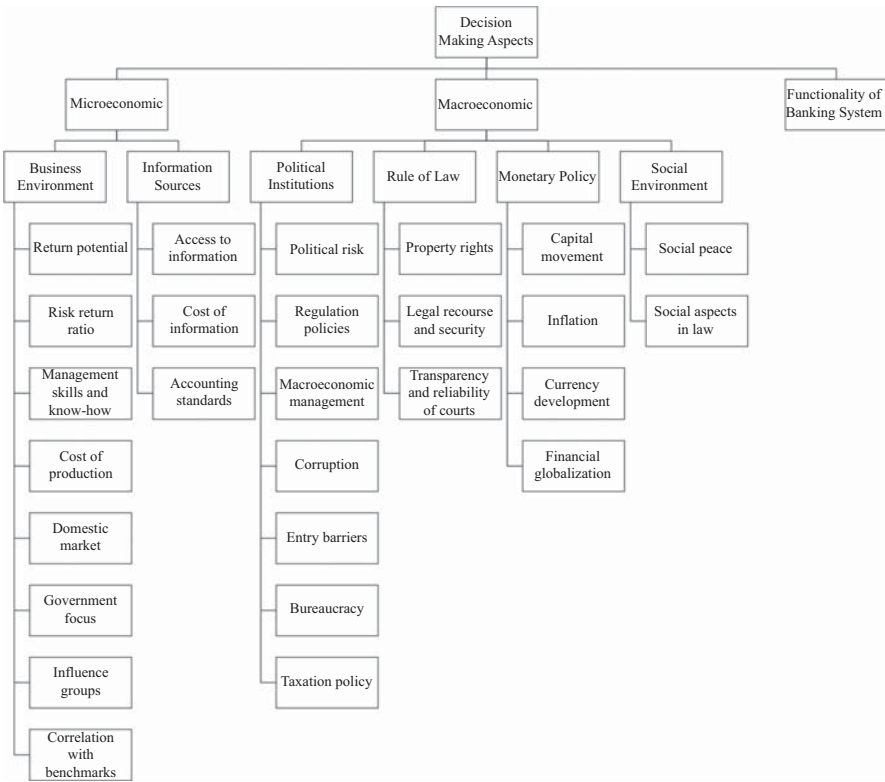

Figure 1.
Decision-making framework for financial investors in emerging markets

national business environment, the state of cluster development, and the sophistication of company operations and strategy as microeconomic competitiveness determinants. The macroeconomic factors considered were social infrastructure with its political institutions as well as macroeconomic policies (Porter, 2009).

Five experts with years of experience in emerging markets and financial segments were interviewed. Findings from these interviews were used to modify Porter's key aspects to develop an adapted framework by taking the financial investor's perspective for determining the attractiveness of an industry in emerging market. Based on the expert interviews, the relevant aspects for financial investors in emerging markets were broadly grouped into three categories namely microeconomic aspects, macroeconomic aspects, and aspects of the functionality of the local banking system. Two elements were identified within the microeconomic category; i.e. business environment and information sources. Political institutions, rule of law, monetary policy, and social environment were the four aspects identified within the macroeconomic category. These aspects are individually discussed in detail in the following subsections (tables in each of these subsections captures the insights obtained from the literature analysis and expert interview).

2.1 Microeconomic aspects

Microeconomic elements have a direct influence on the performance of industries and a country's labor force (Porter *et al.*, 2012). Concentrating solely on macroeconomic aspects would therefore not provide a complete picture as a stable macroeconomic setting does not in itself guarantee prosperity (Snowdon and Stonehouse, 2006). In the context of analyzing the industry-specific attractiveness in emerging markets, microeconomic aspects refer to all the aspects that have a direct effect on the industry under study. Elements within these aspects are identified and grouped under the business environment or information sources aspects based on their relevance.

Business environment. The business environment takes various microeconomic aspects into account that directly influence the industry and play an import role for financial investors in identifying investment opportunities. Investment decision elements within this aspect are return potential, risk-return ratio, management skills and know-how, cost of production, domestic market, government focus, influence groups, and correlation with benchmarks (as detailed in Table I).

Information sources. The availability of reliable information about a specific industry is a pivotal aspect for financial investors in emerging markets. High-quality information enables investors to efficiently and accurately assess attractiveness and risk of investment opportunities. An in-depth understanding of the environment in emerging markets reduces the perceived risk of an investment and makes it possible to distinguish the headline risk and the actual effects it has on the bottom line of an investment. This may result in emerging markets being less risky than generally perceived (Enelamah, 2012; EMPEA, 2011; Wilton, 2010). Table II summarizes the major investment decision elements in this context.

2.2 Macroeconomic aspects

Macroeconomic aspects set the context for a nation's entire economy (Porter *et al.*, 2012). The government has the important role in establishing macroeconomic stability and providing stable political, legal and social institutions (Snowdon and Stonehouse, 2006; Sutton *et al.*, 2015). Macroeconomic aspects were identified to be the political institutions, rule of law, monetary policy, and social environment.

Political institutions. The political institutions that frame the macroeconomic environment for investors can be seen as a prominent factor in the attractiveness of a country in general and an industry segment in particular. Several studies have proven the significant long-term correlation of a healthy state of institutions and overall prosperity

Decision element	Description
Return potential	The literature and expert interviews have identified the return potential as the most important element. The relatively high real rates of return are a significant investment incentive. Given the current environment of low-interest rates in combination with low growth expectations in developed countries, investors continue to seek investment opportunities in emerging markets to meet their return goals
Risk-return ratio	The higher expected rates of return must be assessed in relation to the respective risk level for financial investors in emerging markets
Management skills and know-how	The existing know-how at the investment target industry is an important decision-making element in emerging markets. The presence of highly skilled senior executives with local knowledge is an important criterion for investing in emerging markets and existing production and service know-how serve as relevant indicators to identify interesting industry segments in emerging markets
Cost of production	Historically, financial investors identify interesting industry segments by their ability to produce for export and/or the existence of clusters that produce for a particular market. For an export-oriented industry segment to appear interesting for investors, a low level of the cost of production is, therefore, crucial
Domestic market	Industry segments that produce for domestic consumption are getting increasingly important in the context of emerging markets. Investment consumption is primarily the current size and growth potential of the domestic market
Government focus	The government focus on a specific industry can be seen positive in terms of advantages such as subsidies or business-friendly policies. However, a too strong focus of the government may include the threat of nationalization, resulting in investors losing a great portion of their investment. Prior to investing, it must be determined if and to which extent the government has an interest in the industry
Influence groups	The effects of political instability are industry specific. Financial investors need to be aware of the power structure and the political ties within an industry since a change in a countries government can have a severe impact on this power structure and thereby influence the initial investment premise. Potential threats may range from unfavorable regulations to as far as compulsory expropriation by governments who are new to power and not as tied and supportive to the industry as the previous government
Correlation with benchmarks	The correlation of growth and return rates of an industry with national or global benchmarks is an important and influential element for financial investors. The relatively low correlation of emerging market returns with developed market returns is a primary incentive for investments in emerging markets

Table I.
Investment decision elements within the "business environment" aspect

Decision element	Description
Access to information	It is crucial for financial investors to have sufficient information about the industry segments under analysis. In industry segments that are not well covered by analysts, it is difficult to get quality information. This increases the relevance of networks to gain access to relevant insights
Cost of information	The cost of access to information is generally higher in emerging markets than in developed economies. This requires financial investors to allocate more resources into gathering information. It in turn makes industry sectors with higher analyst coverage/transparency more attractive
Accounting standards	Financial statements, company reports and other documentation of firms are an important source of information for investors to be able to evaluate and compare investment opportunities. There exists, however, a lack of trust in the implementation of accounting rules and financial regulations in many emerging markets. This results in the less frequent use of accounting-based reports

Table II.
Investment decision elements within the "information sources" aspect

(Acemoglu *et al.*, 2001; Hall and Jones, 1999). Decision-making elements influencing the state of political institutions are political risk, regulation policies, macroeconomic management, corruption, entry barriers, bureaucracy, and taxation policies (as detailed in Table III).

Rule of law. Rule of law is a central aspect concerning investments in emerging markets. However, mutual trust between partners supersedes many legal agreements in emerging markets. Therefore, it is of high importance for financial investors to have an overview on how the law is actually practiced in the emerging market and even within the industry analyzed to understand the actual legal risks. Table IV lists the investment decision elements that are under the rule of law.

Monetary policy. Monetary policy aspect includes fiscal sustainability measures and inflation policies to handle changes in the economic activity (Porter *et al.*, 2012). Monetary policy

Decision element	Description
Political risk	The central question concerning political risk is whether political instability is linked to the transfer of capital. The influence of political risk, however, is relativized in matters of influence on the specific industry segment and whether the political risk has an influence on the break-even time of an investment
Regulation policies	It is essential for financial investors that regulation policies in emerging markets create an environment that encourages and promotes the inflow of investments
Macroeconomic management	The predictability of the government can be seen as an essential investment decision element and incentive for financial investors. This involves transparent communication of governmental goals and confidence in achieving them. The stability and predictability of governmental policies can be more effective in attracting investors than investment incentives such as short-term taxation policies
Corruption	Financial investors need to take the level of corruption in an economy into account before entering the market. Corruption in emerging markets not only negatively impacts the volume of foreign investment, it also affects the entry mode of investors
Entry barriers	Emerging markets, compared to developed economies, tend to have higher entry barriers for private investments. However, higher entry barriers may also result in higher returns for investors in these markets and therefore cannot be solely seen as a negative aspect to investors
Bureaucracy	A transparent and lean bureaucracy in emerging markets is an important investment element. The fewer bureaucracy investors have to comply with, the easier it is to do business in the economy and achieve a break-even result
Taxation policy	Taxation policies need to include tax incentives for investments in order to increase the attractiveness of an industry. Tax incentives can include subsidies, tax holidays or a low and easy taxation system

Table III.
Investment decision elements within the "political institutions" aspect

Decision element	Description
Property rights	Property rights protection regarding private ownership and guarantees against nationalization are of high relevance to financial investors as these elements have great influence on the attractiveness of an economy
Legal recourse and security	Legal recourse and legal security embrace elements from confidence in the local law, an independent legal system, the existence of proper bankruptcy laws, and the recognition of arbitration in other jurisdictions
Transparency and reliability of courts	Transparency and the reliability of courts is an important decision element to ensure the rule of law and together with consistency in applying and implementing laws, these elements are crucial to attracting financial investments in emerging markets

Table IV.
Investment decision elements within the "rule of law" aspect

aspects included in this paper are aspects that are of high relevance for financial investors and need to be taken into account when engaging with emerging markets. The most relevant decision-making elements under this aspect include restrictions on capital movement, inflation, currency development, and financial globalization (as detailed in Table V).

Social environment. Financial investors have to take into account the social aspects of the industry as well as the emerging market. First, social peace is a determinant of stability which is crucial for investments and second, social aspects of law are increasingly relevant for stakeholders and shareholders in the Western hemisphere (as detailed in Table VI).

2.3 Functionality of banking system

The characterization of endowments in Porter's original cluster framework is redefined in our study to describe the functionality aspect of the banking system in an emerging market. During the Asia crisis in the late 1990s, the critical importance of upholding both economic and financial stability in emerging markets was uncovered (Watanagase, 2006). As a reaction, key strategies for the financial sectors in emerging markets improved to regain long-term stability, efficiency and the competitiveness of emerging markets financial systems. Major actions involved are the issues of capacity limitations, strict regulations, and the increase of the competitiveness of local banks. However, the capacity of emerging market financial institutions needs to be still enhanced to meet the demands of a growing economy. Regulation and supervision frameworks for the financial system need to be further reinforced to endure external shocks (Zamani, 2006).

Compared to the emerging markets entry mode of financial investors 25 years ago, when only equity markets played a major role, investors today are faced with a wide range of

Decision element	Description
Capital movement	The possibility to move capital freely in and out of a country without the risk of government or the central bank imposing restrictions is an essential investment criterion
Inflation	A stable environment is a major element for financial investors. This includes the continuity and predictability of national bank policies. In this context, inflation targets are a crucial element to be considered
Currency development	Same as inflation, an unexpected development in exchange rates has a direct influence on investment returns. Financial investors need to understand whether and how the currency in the analyzed emerging market is free floating or tied to a lead currency, respectively, the target of the central bank concerning the future exchange rate
Financial globalization	The state of financial globalization is an important decision element that affects the attractiveness of an economy from a financial investor's perspective. The interconnectedness of the financial system of a country with global capital markets reduces transaction costs and increases the ability to invest globally

Table V.
Investment decision elements within the "monetary policy" aspect

Decision element	Description
Social peace	The level of social peace in a country indicates stability in an economy. This stability is influenced by many different factors. The education system and the demographics of a country count as investment criteria as well as important social dimensions. The inequalities of incomes and rural/urban migration have also an effect on investment strategies
Social aspects of law	Social aspects are not considered in the laws of many emerging markets. According to the interviewed experts, social dimensions have been less of an issue for financial investors in emerging markets until recently but are now becoming more important as ethical investment considerations receive more attention

Table VI.
Investment decision elements within the "social environment" aspect

possibilities to enter the market. The complex and sophisticated financial techniques of developed countries are getting adopted nearly simultaneously in emerging markets. However, financial infrastructure deficits and low market depth of the banking sector remain a constraint. As the majority of capital inflows toward emerging markets are intermediated by domestic banks, the importance of the functioning aspect of the banking system in an emerging market is crucial for financial investors (Nellor, 2008).

3. Delphi methodology: expert panel technique

An expert panel (Delphi) technique is used to validate the framework developed from literature and expert interviews. An information gathering tool that is well applicable in uncertain and dynamic environments is the Delphi method as it is especially effective when accessible data are both limited and diverse (Ziglio, 1996; Gnatzy and Moser, 2011; Winkler et al., 2015). Literature support for adopting the Delphi technique in similar premises for forecasting and predicting is found in many prior studies. For instance Mitchell (1992) mentions that the Delphi technique has been used many times as a method of forecasting the future of established industries and also demonstrated the usage of this technique to understand the future of a new industry. Its potential is also shown in forecasting future events, exposing problem dimensions and exploring relevant strategic actions (Keeney et al., 2001; Nielson and Thangadurai, 2007; Boulkedid et al., 2011; Nowack et al., 2011; Heiko, 2012; Winkler and Moser, 2016).

The Delphi approach applied in this study is structured along three steps that enable the sharing of information within a group of experts (a guide for understanding the Delphi methodology is given in Appendix 2). First, a thesis, problem or issue such as the investment decision in an emerging market is identified. Various industry experts then contribute their perspectives and assumptions on the topic and share their experience and knowledge with the group. The study is completed with the convergence of these inputs and a summary of the level of consensus or dissent within the study group (Nielson and Thangadurai, 2007). The execution of a Delphi study has proven to be efficient when using outcome-oriented projections that are structured around an applicable framework. Through this method, the expert input is gathered in a structured way that supports the participating experts as well as the Delphi organizers (cf. Moser et al., 2010; cf. Gnatzy and Moser, 2011).

4. Case example: cocoa industry in Ivory Coast

To illustrate the application of the framework, we have chosen the cocoa industry in Ivory Coast. The African continent has been chosen due to its rapid development in recent years and the still relatively high information intransparency and poor institutional quality for financial investors from abroad (Papadopoulos and Hamzaoui-Essoussi, 2015). In early 2013, the *Economist* in its special report on the rise of Africa referred Africa to be the world's fastest-growing continent and highlighted its encouraging economic, social and political developments, especially in the Sub-Saharan region (*Economist*, 2013). The growth in Sub-Saharan Africa (SSA) is mainly driven by natural resources that represent the main vehicle for financial investors to enter the African market. The Ivory Coast is the world's number one cocoa producer and part of the SSA transformation.

According to the executive brief published by Agritrade in October 2012, international cocoa trade has a global market value of over US$5 billion, with around 72 percent of global cocoa supplies originating in African, Caribbean and Pacific (ACP) group countries. As per the 2015-16 Quarterly bulletin of statistics published by International Cocoa Organization (ICCO), Ivory Coast (known as Côte d'Ivoire) is the largest producer of cocoa beans in comparison to all the other countries in the world (Table VII). Cocoa is Ivory Coast's largest export, worth $2bn in 2013, accounting for 17 percent of all its exports. As shown in Table VII, Ivory Coast produces twice the amount of cocoa beans produced by Ghana, which is the second largest producer in world.

Region	2013/2014	Estimates 2014/2015	Forecasts 2015/2016
Africa	3,199 (73.1%)	3,073 (72.5%)	2,942 (73.8%)
Ivory Coast (Côte d'Ivoire)	1,746	1,796	1,570
Ghana	897	740	820
Nigeria	248	195	190
Cameroon	211	232	250
Others	97	109	112
America	727 (16.6%)	763 (18.0%)	639 (16.0%)
Brazil	228	230	135
Ecuador	234	250	230
Others	265	283	274
Asia and Oceania	447 (10.2%)	400 (9.4%)	408 (10.2%)
Indonesia	375	325	330
Papua New Guinea	36	36	36
Others	36	39	42
World total	4,373 (100.0%)	4,236 (100.0%)	3,988 (100.0%)

Note: Totals may differ from sum of constituents due to rounding
Source: ICCO (2015/2016)

Table VII.
Production of cocoa beans across the world (in thousand tonnes)

With the increase in demand from emerging markets such as India, China and Eastern Europe, global demand for cocoa is expected to exceed 4.5 million tonnes by 2020 (Ha, 2013). On the other hand, the supply of cocoa is expected to decline as the number of cocoa farmers are replacing cocoa production to more lucrative crop such as rubber due to decreasing selling prices of their cocoa produce and inability to negotiate for higher prices (Ha, 2013). Many of the cocoa farmers in Ivory Coast and Ghana earn lesser than $1 per day and live in severe poverty (Fountain and Hütz-Adams, 2015). Cocoa prices as the percent of the value of a chocolate bar continues to decrease from 50 percent in 1970s to 16 percent in 1980s and to just 6 percent in 2010s (Douglas, 2014). According to Douglas (2014), 70 percent of the value is captured by cocoa and chocolate companies, 17 percent by retailers, and 7 percent by intermediaries. According to the 2014 World Cocoa Conference report published by ICCO, the farmers' share is even lower at between three and five percent of the value of a chocolate bar. Chocolate giants such as Hershey and Mars also agree that by 2020 the growing demand for cocoa will be unsustainable (Ha, 2013). Other possible reasons identified supporting the reduction of cocoa production are ageing cocoa trees and sustained under-investment at farm level. While the predictions above foresee production stagnating or falling leading to a global shortage of cocoa, the ICCO is more optimistic and forecasts that production will broadly keep pace with demand (Pipitone, 2015). According to ICCO Statement on Reports of a Cocoa Supply Deficit in 2020, ICCO confirms supply deficits as much as 232,000 tonnes in 2012/2013 and forecasts further deficits until 2018. But it claims that these deficits were cushioned by cocoa stocks held in consuming countries which is at 1.6 million tonnes in 2014, and seen as sufficient for the next five years by when production is expected to pick up. Such polar opposite predictions and lack of quality data makes the investment opportunity in cocoa industry in Ivory Coast much more uncertain and complex to evaluate. The difficulties in predicting the market are further illustrated by the unexpected production surplus in 2013/2014 (Aboa, 2015) and unexpected shortage in 2014/2015 (Reuters, 2015). These difficulties are attributed to a range of factors including the spread of black pod fungal disease, government's failure to supply adequate fungicides and fertilizers, remunerative farmer prices, requirement of certifications, sustainable production practices, child labor, and the climate change (Fairtrade Foundation, 2016).

Lack of information transparency on the processing costs of cocoa, manufacturing chocolate and retailing is considered to be one of the significant reasons for wide disparity in pay for

farmers and in turn reduces the predictability of the market (Fairtrade Foundation, 2016). Pipitone (2015) in the ICCO conference presentation listed three main factors that influence cocoa production and farm profitability: business environment, agronomic, and economic factors. Ease of doing business, regulations and taxation, infrastructures, qualified labor availability and cost, and policy support to the cocoa sector were the five sub-factors listed under the business environment factor. Under agronomic factor, eight sub-factors identified were farming system used (from agroforestry model to intensive, productivity-orientated model, often without shade of any kind (full-sun), level of farm crop diversity, variety of the cocoa used (yield, resistance to pests and diseases, quality traits), age of the trees, level of husbandry (good agricultural practices), use of inputs (labor, use of phytosanitary products and fertilizers), weather condition, and presence of pests and diseases. Finally, two sub-factors identified within economic factor were price of cocoa beans and cost of inputs.

Based on the above description of cocoa industry in Ivory Coast, it is clear that deciding on making an investment in this industry needs the consideration of several aspects including the microeconomic and macroeconomic aspects. This provides the right context for applying and demonstrating the decision-making framework developed in this study to understand the encouraging and discouraging aspects of investing in cocoa industry in Ivory Coast.

Decision elements most relevant for the cocoa industry of the Ivory Coast were selected from microeconomic and macroeconomic aspects by the industry experts (highlighted in Figure 2). Choice of these elements is highly contextual and problem specific. Practitioners who apply this framework in future can use this study as a demonstration rather than directly proceeding with only the elements chosen for this study. We expect the
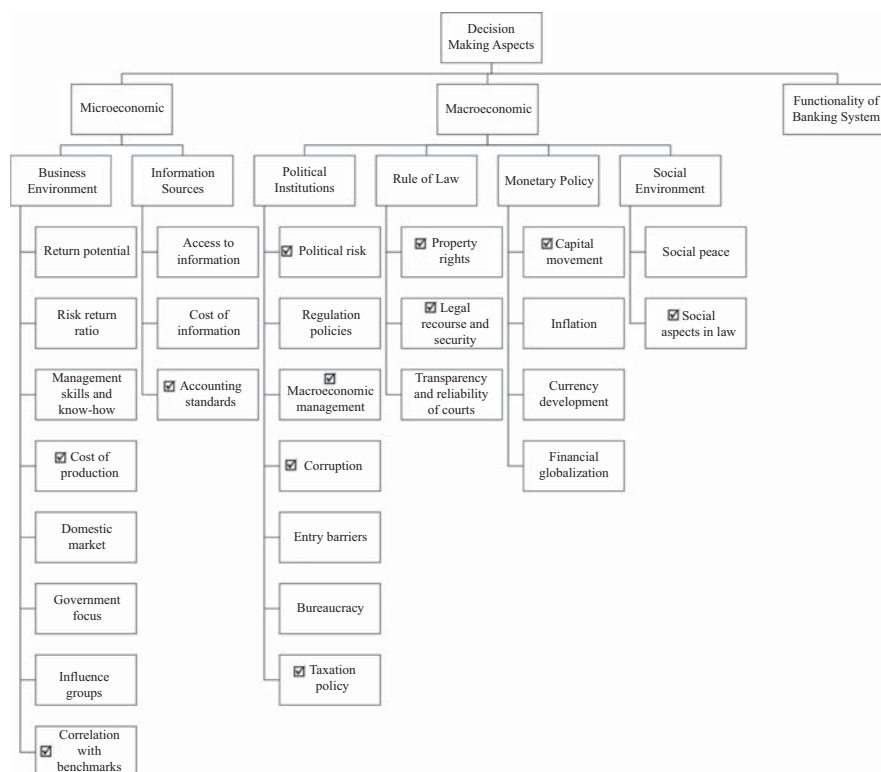

Figure 2.
Framework for financial investors: selection of decision-making elements for Ivory Coast case example

complete list of elements provided in Figure 1 to act as a checklist for financial investors to choose elements that are relevant to the problem being addressed by them. Nine industry experts participated in the study providing their assessment of the probability of the projections and their comments on why they assessed a projection as low or high. We only included nine experts in the study due to the limited number of people with in-depth insights and the concerns of several potential experts to contribute to a study that evaluates the attractiveness of the future of an industry in a country that represents almost 50 percent of the world production.

5. Results and discussion
Projections based on the proposed decision-making framework were developed and evaluated by conducting the Delphi study to assess the attractiveness of the cocoa industry from a financial investor's perspective. Each of the projections and their evaluations are discussed in the subsections below.

5.1 Microeconomic aspects
The cost of production and correlation with benchmarks under the business environment aspect and the accounting standard under the information sources aspect were the decision elements chosen after a preliminary discussion with experts on their relevance in the cocoa industry of the Ivory Coast. Table VIII lists the projections of three chosen microeconomic decision elements as well as their probability and consensus level.

Cost of production. The participating experts agreed that it is unlikely for the production costs in the Ivory Coast cocoa sector to be substantially below the global average and provided several arguments based on various factors to support their assessment. The list of cost drivers provided by the experts includes high labor costs for expatriates and other professionals, the increasing costs of cocoa raw materials due to rising global demand, and increasing pest and disease pressures. Other factors mentioned are growing tracing, quality control, financing, and procurement costs. Additionally, the continuous efforts of the Ivory Coast government to maintain and increase a significant guaranteed percentage of revenues to the growers prevents production costs from falling below the global average. Weak position of cocoa farmers in the supply chain leaves them without any choice of negotiation for higher prices. A typical farm in Ivory Coast consists of two to four hectares with yields of 300-400 kilograms per hectare. At this yield level, the current market price can barely provide an income for an average household of six people. Farmers with one major harvest a year have to stringently budget for the rest of the year and often end up taking expensive loans.

However, a few experts also provide arguments for below-average production costs such as the low labor costs for unskilled workers. One expert even argues that despite various

Decision element	Projection	Probability assessment	Consensus level
Cost of production	In 2017, the production costs in the Ivory Coast cocoa industry are substantially lower than the global average	26% Very unlikely	15 Strong consensus
Correlation with benchmarks	In 2017, return rates of the Ivory Coast cocoa industry have a substantially lower correlation with global benchmarks than at present state	44% Unlikely	16 Strong consensus
Accounting standards	In 2017, accounting rules and their implementation in the Ivory Coast cocoa industry match European standards	41% Unlikely	21 Moderate consensus

Table VIII.
Results for the projections of the microeconomic investment decision elements

sustainability programs, the income of cocoa farmers will not increase dramatically. Finally, subsidies in the form of discounts for raw materials, low coal costs and the availability of energy, as well as companies investment in productivity are expected to lower the average costs. Access to credit for purchasing fertilizers and pesticides to combat pests and disease, and training support on fermenting and drying techniques can increase the yield and quality of the crop. In addition, independently working small-scale cocoa farmers are planning to establish co-operatives or other farmer organizations to pool their resources to reduce costs and benefit from economies of scale. These co-operatives are expected to deliver other non-financial benefits such as social cohesion and group dynamics that promote community development.

Correlation with benchmarks. The major reason for the correlation of the Ivory Coast cocoa industry return rates to remain steady with global benchmarks is the dependence of the sector on exports and consequently global economic developments. As Ivory Coast is the most important production country for cocoa in the world, it cannot be seen independent from global influences and, with ambitious government policies, this top-ranked status is likely to be maintained over the next five year period. An additional factor mentioned by the experts that would lead to an increased interdependency of the Ivory Coast cocoa sector to worldwide developments is the stopping or lowering of the government subsidy regime.

Accounting standards. For some experts, the past developments in the Ivory Coast result in a low probability for local accounting standards to match European standards in the future. The Ivory Coast continues to have local rules and as the cocoa business in Ivory Coast is fundamentally different from other industries in Europe, accounting standards are unlikely to be adopted. Experts who perceive the prediction as likely argue that global players in the Ivory Coast cocoa industry are already using international US or EU-based standards which will possibly have an impact on the overall industry. Additionally, the significance of Europe for the Ivory Coast is too important to that the development of a standard to meet up with European standards is inevitable.

5.2 Macroeconomic aspects
Political risk, macroeconomic management, corruption and taxation policy were the decision elements selected within the political institution aspect. Property rights and legal recourse and security were the elements chosen from the rule of law aspect. Capital movement and social aspects of law were the elements chosen from the monetary policy aspect and social environment aspect respectively. Similar to the microeconomics category, these elements were also chosen after a preliminary discussion with the involved experts for their relevance in the cocoa industry of the Ivory Coast. Table IX lists the projection of these chosen macroeconomic decision elements.

Political risk. The arguments of the Delphi study experts basically agree on the perception that the Ivory Coast cocoa industry will not be independent of government interference. As cocoa is the major resource for Ivory Coast, it is not relevant to think that the government will let the cocoa industry operate independently. The cocoa industry and politics are too entangled in one another and an independent cocoa sector would threaten the existence of the Ivory Coast government as the cocoa rent captured by the state remains a necessity for a proper state funding due to a low level of economic diversification. Ivory Coast's volatile domestic politics has a huge impact on the world cocoa industry. In 2002, a failed coup to oust President Lauren Gbagbo led to civil war resulting in cocoa supplies disruption which trebled their prices to a 16-year high of $2,335 per tonne. Similarly, in 2010, civil war due to President Gbagbo's refusal to relinquish power to rival Alassane Ouattara following the disputed November election lead to a ban on cocoa exports resulting in nearly half a million tonnes of cocoa held up at the country's ports. This political incident pushed cocoa prices to a

Decision element	Projection	Probability assessment	Consensus level
Political risk	In 2017, the Ivory Coast cocoa industry is operating completely independent from government interference than at present state	17% Unlikely	19 Strong consensus
Macroeconomic management	In 2017, the decision-making process of the Ivory Coast government matches European standards	39% Unlikely	23 Moderate consensus
Corruption	In 2017, corruption in Ivory Coast has no influence at all on foreign investments	32% Unlikely	28 Moderate dissent
Taxation policy	In 2017, tax policies in Ivory Coast attract foreign investors in large numbers	39% Unlikely	24 Moderate consensus
Property rights	In 2017, property rights protection in Ivory Coast is on par with European standards	33% Unlikely	42 Strong dissent
Legal recourse and security	In 2017, law enforcement in Ivory Coast is on par with European standards	31% Unlikely	33 Strong dissent
Capital movement	In 2017, there is no risk of the Ivory Coast government imposing restrictions on capital movement, including repatriation of investments and transfer of dividends	36% Unlikely	23 Moderate consensus
Social aspects of law	In 2017, CSR standards of companies operating in the Ivory Coast cocoa industry are at par with European standards	55% Likely	33 Strong dissent

Table IX.
Results for the projections of the macroeconomic investment decision elements

32-year high of $3,775 per tonne and prices became normal only after the arrest of Gbagbo's in April 2011. Therefore, it is clear that the Ivory Coast government will continue to influence the industry through cocoa prices and support infrastructure such as local grinding facilities. Moreover, import/export taxes are and will remain highly important.

An argument for less political influence on the cocoa sector in the future is the increasing number of international companies operating in the Ivory Coast. These multinationals companies are running more and more the local industry and, with the additional impact of international donor programs, exert influence on the Ivory Coast cocoa industry. Recently, several companies have joined with government to establish sustainability initiatives. For example, in May 2014, an initiative named "Cocoa Action" was steered by the World Cocoa Foundation where 11 leading cocoa and chocolate companies joined to bring together the leading global players in chocolate and cocoa industry to achieve a new level of collaboration and coordination to advance interventions on a non-competitive and voluntary basis to promote sustainability through best practices. Another example is of the European Committee for Standardization (CEN) and the International Organization for Standardization (ISO) which have set up the CEN/ISO cocoa process to create a voluntary framework for sustainable cocoa production by aligning the industry efforts. These initiatives are in addition to that of companies such as Plan Ferrero's commitment to sustainable cocoa, Mars' Sustainable Cocoa Initiative, Mondelez's Cocoa Life, Nestle's Cocoa Plan, etc.

Macroeconomic management. The arguments of the experts to support a low probability of the projection on macroeconomic management element are based on the unwillingness or inability of the Ivory Coast government to adapt to European decision-making standards and to continue to use local standards. The country is coming from a civil war and normality has to be reinstated first. The country is still fighting to recover from the war situation before thinking about European standards. The current president also wants to protect local farmers which require a more controlled cocoa policy finally resulting in the old cocoa board system.

Alternatively, some participating experts argue that the Ivory Coast government has no alternatives as to strive for European standards. As a result, the Ivory Coast might aim to meet European standards, but the actual implementation will stay behind.

Corruption. Experts arguing for a low probability of the projection state that the corruption element in Ivory Coast is perceived to be a part of the culture and will continue to be dis-incentivizing for foreign investors. From another perspective, some experts point out that it is difficult to evaluate the actual impact of the level of corruption on foreign investors because this seems also dependent on the degree of corruption in neighboring countries.

Taxation policy. For a few experts, it is simply hard to believe that the usage of attractive tax policies for foreign investors by the Ivory Coast government will become true. Others state that the Ivory Coast has so far given a lot of tax incentives but are more and more seeing the downside of it. Given its strong competitive advantage in the cocoa sector, the Ivory Coast will not play on further tax advantages to attract investors. Moreover, the Ivory Coast government is likely to use all means to exploit their current cocoa assets (soil and climate, expertise) and increasingly tax the rising number of foreign investors. In addition, organizations such as the International Monetary Fund continuously promote industrialization policies but due to the potential loss of low-skill jobs, the local government has no incentive to foster them. Nevertheless, experts also mention that the local government is trying hard to attract foreign investors and might implement attractive tax policies for foreigners as long as local producers are not negatively affected.

Property rights. The experts argue either that there is still a long way to go, that no progress can be seen in the near future, or that an improvement of property rights protection for the cocoa industry is impossible as the current situation of property rights is awfully complicated. Moreover, property rights are and will remain non-officially managed -traditions and the verbal transmission of assets and wealth continue to be the drivers as properties belong to families, tribes, and ethnic groups.

Legal recourse and security. The participants of the study who argue for a low probability point out that this is not possible to achieve in this short period of time as cocoa sector is linked too much with politics. There is also still little enforcement against the use or counterfeit of non-registered fertilizers and pesticides and the situation is unlikely to improve. However, some experts mention that the local people will soon realize the importance of law enforcement for supporting the prediction to come into effect in the long run.

Capital movement. The risk that the Ivory Coast government imposes restrictions on capital movement is perceived to be relatively low. The experts arguing for a low probability of the projection lay out that so far the government has shown to be inconsistent in its behavior. Furthermore, political instability can change the landscape rather quickly and there are no guarantees given. An argument supporting the projection is the present effort of the Ivory Coast government to be in line with unrestricted capital movement standards.

Social aspects of law. The key argument provided for a low probability of CSR standards in Ivory Coast being at par with European standards is simply the inability of domestic companies to integrate such an objective into their activities. However, all international companies operating in the Ivory Coast have CSR standards in place and are reporting on these aspects. Additionally, certifications play a major role in the cocoa industry which will eventually lead to higher CSR standards also in the cocoa industry in the Ivory Coast. Child labor has been widely deployed in hazardous conditions (described as worst forms of child labor) for cocoa production in Ivory Coast and the count has been estimated by the US Department of State to be 109,000 children. Harkin-Engel protocol and a series of certification schemes and industry programs including the International Cocoa Initiative have been started to address the child labor issue. Industry investments have to be initiated to improve productivity and social infrastructure to ensure safe working conditions. To begin

with, most major chocolate manufacturers have committed to use 100 percent sustainable and/ or certified cocoa by 2020. According to Cocoa Barometer 2015 reports, certified chocolate production will continue to increase globally from two percent in 2009 to almost 16 percent of global chocolate sales in 2013 (MVO Platform, 2015). "Cocoa Action" initiative mentioned above is also a step in the direction of industry investment for a sustainable cocoa industry by focusing on farmer training, access to inputs, and community empowerment.

5.3 Functionality of banking system in Ivory Coast
The banking sector in Ivory Coast was heavily affected by the post-electoral crisis of 2010/2011. Foreign banks closed down during a military offensive that aimed at capturing and forcing the former President to step down. Meanwhile, the health of the Ivory Coast banking sector is continuously increasing. Banks have begun to expand their network of branches across the country. Also, short and long-term loans are offered to the industry on rational criteria. The Ivory Coast Bureau of Economics and Business Affairs, however, also states that it remains to be difficult and expensive to obtain loans intended for business expansion investments.

6. Conclusion
A major challenge of investing in emerging markets is the struggle to obtain quality information and detailed insights on the investment opportunities. To mitigate this information asymmetry and uncertainty and to provide a structured framework and procedure for investment decisions in emerging markets, the study identified relevant aspects and concerns of financial investors by reviewing past literature and by conducting expert interviews. The identified aspects and concerns were grouped to develop a decision-making framework for financial investors. The aspects were broadly grouped into three, namely, microeconomic aspects, macroeconomic aspects, and aspects of functionality of the local banking system. Business environment and information sources were the two aspects identified within the microeconomic aspects category. Political institutions, rule of law, monetary policy, and social environment were the four aspects identified within the macroeconomic aspects category. Decision elements under each of these aspects were further identified to provide detailed insights and guide the information gathering efforts on the decision-making framework. Functionality aspect of the local banking system was not associated with any decision elements and hence was individually discussed to gather inferences.

The application of the decision-making framework for financial investors was demonstrated for the cocoa industry in the Ivory Coast using a Delphi methodology. In total, 11 decision-making elements were selected from the microeconomic and macroeconomic aspects to be part of the case study. These elements were chosen after a preliminary discussion about their relevance in the cocoa industry of the Ivory Coast with local experts. Nine industry experts participated in the study providing their assessment of the probability of the projections and their comments on why they assessed a projection as low or high. The Delphi study inferences indicated that the cocoa industry in Ivory Coast is less attractive for financial investors at this moment. The case example tabulated the probability and consensus of the projections for the individual decision elements thereby providing insights into both encouraging and discouraging aspects rather than providing a single composite index.

6.1 Research implications
Current study is a contribution towards several recent call for research papers to develop techniques that are embedded in emerging markets culture. This study is unique in presenting an approach to help financial investors gain more in-depth insights into a

particular industry in an emerging market. Approach developed allows for an additional profound evaluation of the future attractiveness of specific investment opportunities in an industry. Although the applicability of the proposed framework was shown in the case example, limitations and future work certainly exist. Decision-making framework can be improved by considering the correlation and overlap between the projections as it cannot be excluded that some of the projections are interdependent. For instance, a negative aspect can be accounted for in more than one projection causing an inaccurate picture of the industry under study. The current study is also missing the incorporation of weights for the decision elements. Framework presented can be tested for generalizability across the industry in emerging markets in future by adopting survey methodology.

6.2 Practitioner implications
A major challenge of the investment environment in emerging markets is the struggle of investors to obtain quality information and detailed insights on their potential investment opportunities. Difficulty exists in capturing the inherent details that plays a key role in deciding the outcome of an investment in emerging market. The current study presented both a decision-making framework helping financial investors to evaluate the future attractiveness of the investment opportunities in emerging markets as well as a method to collect future-oriented insights from local industry experts to assess the relevant investment aspects. Decision elements identified in this study can act as a checklist for financial investors and top management to choose the elements that are relevant to the investment problem being dealt with. The methodology demonstrated along with the decision-making framework structurally guides investors to comprehensively gather and process information to improve the market understanding from a financial investor perspective. The case example demonstrated the practicability of the framework and validated its application in an emerging market environment. This study is an attempt to overcome the information asymmetry faced by financial investors and thereby is expected to promote financial investments in such emerging economies.

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Appendix 1. Financial investor expert interview template

(1) General:

- What are in your opinion the three most important investment criteria for investments in emerging markets?

- How do the criteria of investment decisions in emerging markets differ to investment decisions in developed markets?

(2) Political:

- What effect does the political climate have on your investment decisions in emerging markets?

- What are in your opinion the three most important investment incentives in emerging markets and how will they look in the future?

- What kinds of government regulations hinder investment in emerging markets?

- What kinds of government regulations foster investment in emerging markets?

(3) Economical:

- How do you identify interesting industry (segments) in an emerging market?

- How do you evaluate the "profit margin opportunities" of the different players along the value chain of an industry?

- How much do your judgments rely on the experience of the analysts – what kind of other info do you use?

(4) Social:

- What are in your opinion the most relevant and important social dimensions that investors need to take into account when investing in emerging markets?

- What are in your opinion the three most important trends in society that affect investments and how will they look like in the future?

(5) Technological:

- What are in your opinion the most important soft (knowledge) technologies concerning investing in emerging markets and how will they look like in the future?

- What are in your opinion the most important hard (infrastructure) technologies concerning investing in emerging markets and how will they look like in the future?

(6) Legal:

- What are in your opinion the three most important legal aspects regarding investing in emerging markets and how will they look like in the future?

Appendix 2. A guide to understand Delphi study methodology and its quantitative results

Delphi method is suitable for the collection of both qualitative and quantitative data on projections for possible future developments and had gained a solid reputation for collecting disputed expert opinions. Capturing disputed judgments as well as interpreting qualitative data were imperative for this study's character: it explores the unknown. The application of the Delphi method in this study was structured in three main phases:

(1) Identify relevant topics and issues of an industry and formulation of specific projections.

(2) Sharing of perspectives for each projection based upon each participating expert's experiences.

(3) Analysis and synthesis of the shared knowledge and perspectives.

An extensive desk research was first completed to identify relevant topics. Second, the topics identified were further evaluated and modified during interviews with several industry experts and managers. The Delphi tool used in the study allowed the participating industry experts to assess the projections, shared their reasoning with other experts, reviewed the other expert's arguments, and reconsidered their own assessments. The experts rated the projections regarding the probability of occurrence (0-100 percent) and underlined their assessment with individual statements. All projections were finally evaluated based on both the experts' quantitative and qualitative assessment.

The results of Delphi studies contained both quantitative data (experts' assessments on probabilities) and qualitative data (arguments of the experts why there is a high/low probability). While the evaluation of the qualitative data were based on the content analysis of the written expert statements, the evaluation of the quantitative data required some additional information in order to interpret the figures on probability correctly. Projections, where all participating industry experts agreed on high or low probabilities, was easy to interpret and use, but they, unfortunately, did not result in an opportunity to gain insights that might lead to future competitive advantages. Projections that were clear with respect to their probabilities can be considered common knowledge in the industry. It was, therefore, more important to understand the relative distribution of the expert judgments between 0 and 100 percent probability and to understand the arguments of experts who either tended toward a 10 or 90 percent probability. This was the reason why the probability and the degree of consensus among the experts were examined as a first indicator for how an average 10 or 90 percent probability can be interpreted. Given a high degree of consensus for a specific probability among the experts, it was quite useful to look at their qualitative arguments to understand why they uniformly believed in a probability. Given a high degree of dissent among the experts, the analysis unveiled whether the dissent is due to a "flat" distribution of the probability opinions between 0 and 100 percent, or whether there were, for example, two culminations around 10 percent probability and around 90 percent probability. Then, it was particularly useful to evaluate which specific arguments the two groups of experts used to justify their rather low or high probability assessment.

The Delphi technique attempts to achieve consensual validity among raters/experts by providing them with feedback regarding other raters/experts responses along with their background reasons. Delphi method is basically a communication device that is used for achieving consensus on a complex problem among raters/experts. Delphi technique's main objective is to provide a structured approach for collecting data in situations where the only available alternative may be an anecdotal or an entirely subjective approach.

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