Internationalization Strategies of African Firms

A Survey of 210 Food Processing Firms from Tanzania, Kenya and Zambia

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1. INTRODUCTION

The increasing integration of global markets creates opportunities, as well as challenges for developing countries. Even though the picture of Africa as a 'hopeless continent' (Economist, 2000) has changed to the 'next Asia' (Deloitte, 2016), poverty, unemployment and business failure rates remain high (Mol, Stadler, & Arino, 2017). More precisely, African firms have to cope with the difficult environment in their local economies, which are often dominated by institutional voids, corruption and market risks (Tvedten et al., 2015). At the same time, local companies face fierce competition by foreign companies entering their local markets due to the trade liberalization reforms that took place since the 1980s (Moini, Kuada, & Decker, 2016). These factors contribute to the poor performance of African companies, which is reflected by stagnating exports, particularly in the manufacturing sector (Söderbom & Teal, 2003).

However, international activities of firms trigger economic development, which is why African governments try to stimulate export activities of local firms (Bigsten et al., 2004). So-called *export-led-growth* can foster economic growth and contributes to industrialization in developing countries (Azam, Calmette, Loustalan, & Maurel, 2001; Greenaway, Morgan, & Wright, 2002; Ibeh, 2004; Ibeh, Wilson, & Chizema, 2012; Kuada, 2016; Rutashobya & Jaensson, 2004; Söderbom & Teal, 2003). Traditionally, African economies as well as other developing countries are mainly exporters of commodities and raw materials with limited and/ or unpredictable development outcomes (Azam et al., 2001; Ibeh et al., 2012). There is broad agreement that more diversified exports are needed in order to positively impact African economies (Azam et al., 2001).

Following Fukunishi (2004), labour intensive manufacturing industries have been proven to be an effective catalyst for growth and economic development in the East Asian countries. Amongst manufacturing activities in Africa, the food processing sector is of particular importance, as food processing firms are increasingly engaging in export activities (Henson & Cranfield, 2009; Jongwanich, 2009; Kuada & Sørensen, 1999; Rae & Josling, 2003; Wilkinson & Rocha, 2009) and contribute to economic development (Hansen, Langevang, Rutashobya, & Urassa, 2015; Henson & Cranfield, 2009; Rae & Josling, 2003). Given its importance for economic development, the food processing industry is at the focus of this paper. It has been argued that African firms did not manage to take full advantage of the international positive trends in the trade of processed foods (Athukorala & Sen, 1998). It is thus important to understand how African firms internationalize and what explains their internationalization, in order to boost economic growth by triggering international activities of African firms. In other words, a better understanding of international activities of African firms and their drivers are needed in order to design supportive policy measures. Therefore, this paper assesses *how* African companies internationalize based on the two-pronged research question:

What are the internationalization strategies of African firms and what explains their internationalization strategies?

The study will be based on a survey of 210 food processors in Kenya, Tanzania and Zambia conducted in 2014 and 2015. The survey was based on a questionnaire of more than 100 questions related to performance, strategies and internationalization of local African firms. The questionnaire was filled out through on-site interviews. All the surveyed firms were successful in the sense that they had existed for at least five years. The survey overwhelmingly includes SMEs, and only few micro enterprises and very large conglomerates are included. For more on the data collection for this paper, see Hansen et al, 2017.

1.2 Relevance and Contribution

This section describes how the paper contributes to existing literature and addresses research gaps. International Business (IB) literature was primarily developed in advanced economies and focused on multinational companies (e.g. Dunning, 1977; Johanson & Vahlne, 1977), as they were traditionally dominating the global economy. Moreover, IB was preoccupied by explaining FDI by these incumbent MNCs and has paid less attention to export based internationalization, even though this is the most common internationalization mode for early internationalizers. Among traditional theories, export activities are only discussed by the sociologically inspired internationalization process literature originally developed by Swedish economists from Uppsala (Johanson & Vahlne, 1990; Johanson & Wiedersheim-Paul, 1975). Hence, this paper will focus on the various internationalization modes, emphasizing the more extensive modes. In traditional IB theory, emerging Markets (EMs) and developing countries (DCs) were only considered as new target markets for incumbent firms (Khanna, Palepu, & Sinha, 2005; Meyer, Estrin, Bhaumik, & Peng, 2009).

More recently, scholars (Luo & Tung, 2007; Mathews, 2006; Ramamurti, 2012) have acknowledged the increasing international activities of latecomer firms from emerging markets. The theories and strategies discussed within this literature are, however, mostly limited to the internationalization of firms from the BRIC (Brazil, Russia, India and China) or East Asian Tiger states (Hong Kong, South Korea, Singapore and Taiwan). Hence, internationalization of African firms is not sufficiently covered in IB literature (Fukunishi, 2004; Ibeh et al., 2012; Kujala, 2015; Mol et al., 2017; Rutashobya & Jaensson, 2004; Tvedten, Hansen, & Jeppesen, 2014) and is only a nascent research area (Buckley, 2002; Cuervo-Cazurra & Genc, 2008). In their review 'The Internationalization of African Firms 1995–2011' Ibeh et al. (2012) provide a comprehensive overview of existing literature on the topic and demand for more research of African firm internationalization. We heed this call and seek answers to the characteristics and explanatory factors of international activities of African companies.

To date, there is no study about the internationalization strategy of African food processors which explores three dimensions of internationalization, i.e. target markets, commitment level and internationalization path. Hence, this paper addresses a gap in the African firm internationalization literature. More precisely, we assess whether African firms' internationalization strategies are unique or if they are mere copies of strategies discussed in literature.

Moreover, internationalization of African firms is widely discussed in terms of downstream internationalization, e.g. through exporting. In contrast, upstream internationalization strategies are rarely considered, despite being a relevant path (Kuada, 2006, 2007; Kuada & Sørensen, 1999; Sørensen & Kuada, 1998; Welch & Luostarinen, 1993). As the internationalization path includes both upstream and downstream internationalization, this paper substantially contributes to a better understanding of African firm internationalization.

Thereby, we proceed as follows: the next section reviews existing literature on African firm internationalization. Afterwards, the analytical framework is presented and hypotheses about the internationalization strategies and their explanatory factors are derived. Subsequently, the analytical procedure of the statistical analyses is presented. Section 5 analyses the research questions. Lastly, implications for both policy and literature are described and a conclusion is drawn.

2. LITERATURE ON AFRICAN FIRM INTERNATIONALIZATION

In IB literature, African firms received little consideration and studies on African firm internationalization are scarce (Che Senik, Scott-Ladd, Entrekin, & Adham, 2011; Demeke & Chiloane-Tsoka, 2015; Hansen et al., 2015; Ibeh et al., 2012; Kuada, 2006; Matenge, 2011; Rutashobya & Jaensson, 2004). Whilst theories and theoretical discussion on EM firms constitute an emerging literature stream, research on African firm internationalization is limited to a few exploratory studies[1] (Ibeh et al., 2012) and is lacking theoretical approaches and frameworks (Kuada, 2006). In the following, the literature's key findings on African firm internationalization and their internationalization process are summarized.

Firstly, internationalization is a strategic decision of African firms, as they proactively plan these activities (Crick, Kaganda, & Matlay, 2011; Ibeh, 2004; Ibeh, Ibrahim, & Ezepue, 2007). According to Williams (2008) "export initiation is a result of a planned systematic approach to international market rather than a mere response to fortuitous circumstances" (p.101). Exports of Nigerian firms, for instance, are mostly triggered by growth aspirations and proactive opportunity search (Ibeh et al., 2007). In addition, the nature of African domestic markets pushes firms to internationalize: Firstly,

[1] Please have a look at Ibeh, Wilson, and Chizema (2012) for a comprehensive review of these studies.

the small size of African markets forces local companies to either internationalize or diversify their products in order to obtain sufficient turnover (Kuada, 2006; Tvedten et al., 2014). Similarly, some African firms internationalize in order to escape the difficult local market environment (Azam et al., 2001; Ibeh et al., 2012).

In an African context, most internationalization studies focus on exporting (Ibeh et al., 2012). This is not surprising, as Vernon-Wortzel et al. (1988) found that DC firms' growth aspirations often do not go beyond exporting. Moreover, African firms prefer to export as it involves less resource commitment than other entry modes, which mitigates the risk and uncertainties of foreign market entry (Demeke & Chiloane-Tsoka, 2015; Rutashobya & Jaensson, 2004).

Even though exporting is the preferred entry mode of many African companies, they only have a low export intensity and Sub-Saharan Africa's share of global exports was decreasing in the past years (Bakunda, 2003; Ibeh et al., 2012; Seyoum, 2007). However, there are large differences between countries and industries: South African firms, for instance, export more than their Nigerian (Söderbom & Teal, 2003) or Tanzanian counterparts (Grenier, McKay, & Morrissey, 1999). Most studies on African firm internationalization focus on exporting (Ibeh et al., 2012), i.e. downstream internationalization. In contrast, upstream internationalization, such as importing of technology and inputs, have been barely considered (Kuada, 2006, 2007; Kuada & Sørensen, 1999; Sørensen & Kuada, 1998). In a DC context, this one-sided contemplation of internationalization is particularly misleading, as institutional voids on factor or labour markets (Khanna & Palepu, 1997) make it necessary to leverage resources from foreign markets (Kuada & Sørensen, 1999). The establishment of business activities with foreign suppliers provides African firms with information, which facilitates downstream internationalization (Kuada, 2006, 2007). "Upstream resource leveraging is [therefore] a necessary requirement for downstream international expansion" (Kuada, 2006, p.12). After having successfully established relations to foreign suppliers, African firms sometimes combine upstream and downstream internationalization by *sequential or concurrent activities* (Kuada, 2006, 2007). This is in line with research by Wangwe (1995) who identified four stages of internationalization, based on case studies of African firms (Bakunda, 2003): Firstly, African firms import products for the local market. Secondly, they import technology in order to set up local production plants. Only after this upstream internationalization, they engage in downstream activities by marketing products to the regional and subsequently global market (Wangwe, 1995). Hence, upstream and downstream activities are mutually reinforcing each other and can strengthen the internationalization process (Kuada & Sørensen, 1999). In contrast, internationalization by downstream activities only is rare amongst African firms and only possible if the companies fulfil one of the following conditions: Either "the production of uniquely designed ethnic products, inclusion in

global production networks by lead firms or taking advantage of government export development policies" (Kuada, 2006, p. 16).

Whilst Kuada (2006, 2007) emphasizes asset augmentation through upstream activities, other scholars argue that African firms learn by exporting (Biggs, Shah, Srivastava, & Mundial, 1995; Boermans, 2010; Fafchamps, El Hamine, & Zeufack, 2008). According to the *learning-by-exporting hypothesis,* "firms acquire knowledge from their experience abroad and obtain foreign technology transfers which boost productivity" (Boermans, 2010, p.1). In an econometric study with data from Cameroon, Kenya, Ghana and Zimbabwe by Bigsten et al. (2004) support for the learning-by-exporting hypothesis is provided. Hence, firms with previous international experience are more likely start or keep up export activities (Söderbom & Teal, 2003) and tend to export more (Rankin, 2001). Thereby, the *export destination determines the learning outcome* and thereby shapes African companies: According to Boermans (2010) "firms that export outside Africa become more capital intensive" (p.1). In contrast, Granér and Isaksson (2002) and Mengistae and Pattillo (2004) find evidence that Kenyan firms also benefit from learning effects when exporting to other African markets. However, Kenyan firms learn more when trading goods outside Africa (Mengistae & Pattillo, 2004).

Other studies distinguish between *different types of experiential learning*: The ability of Moroccan firms to learn how to adapt products to the target market (*market learning*) rather than learning how to produce more cost effectively (*productivity learning*) facilitates their internationalization process (Fafchamps et al., 2008). Other scholars (Boermans, 2010; Mengistae & Pattillo, 2004; van Biesebroeck, 2003) argue for the self-selection rather than the learning-by-exporting hypothesis. According to this hypothesis, "relatively efficient firms self-select into exports activities" (Granér & Isaksson, 2002, p. 64).

Moreover, a number of studies (Bakunda, 2003; Bigsten et al., 2004; Chowdhury, 2006; Ibeh & Young, 2001; Mengistae & Pattillo, 2004; Obben & Magagula, 2003; Rankin, Soderbom, & Teal, 2006; Söderbom & Teal, 2003) explore firm-specific differences between exporting and non-exporting firms. With regard to *resources*, *large African firms* were found to be more engaged in exporting than small companies (Abor, Adjasi, & Hayford, 2008; Azam et al., 2001; Bigsten & Söderbom, 2006; Obben & Magagula, 2003; Rankin et al., 2006; van Biesebroeck, 2003) and that a certain minimum size has to be reached for international activities to take place (Teal, 1999). Moreover, evidence from South Africa suggests that firms with *access to capital* are more likely to export (Gumede & Rasmussen, 2002). Hence, these findings are in line with traditional IB theories which emphasized the role of firm-specific advantages. In contrast, African firm studies about the influence of *length of operation* on internationalization contradict the Western theories, as an inverse relationship between years of operation and exporting was identified. In a study on Moroccan firms, Fafchamps

et al. (2008) found that young firms are more engaged in exporting than older firms, which are unlikely to take on export activities. More precisely, new products by young firms are exported directly after their creation and the export intensity increases after 2 to 3 years of international activities, which indicates a learning process in internationalization (Fafchamps et al., 2008). Similarly, evidence from Ghana suggests that young firms have a higher export intensity (Abor et al., 2008).

In line with the learning-by-exporting argument, African manufacturing firms which export are more *productive* than their non-exporting counterparts (Mengistae & Pattillo, 2004; Söderbom & Teal, 2003; Teal, 1999; van Biesebroeck, 2003). Other *capabilities* characterizing African exporters are their ability to *access information* (Gumede & Rasmussen, 2002), as well as *innovation* (Robson & Freel, 2008). Moreover, *managerial factors and management support* plays an important role for African firm internationalization (Ibeh & Young, 2001). More precisely, level of education (Gumede & Rasmussen, 2002; Obben & Magagula, 2003) and language proficiency (Obben & Magagula, 2003) impact the success and export intensity of South African and Swazi firms. In addition, international experience and pre-internationalization business trips facilitate exporting amongst African firms (Bakunda, 2003; Kuada & Sørensen, 1999; Obben & Magagula, 2003).

Even though exporters have stronger resources and capabilities than non-exporters, African firms in general tend to lack ownership advantages, such as capital, technology, managerial capabilities (e.g. Craig & Douglas, 1997) or face a negative country of origin effect (Ibeh et al., 2007). Besides these internal constraints, external factors limit African firms' ability to internationalize, such as trade barriers (Clarke, 2005), high levels of bureaucracy (Bakunda, 2003), corruption (Hansen et al., 2015), weak institutions (Bakunda, 2003), poor telecommunication and transporting infrastructure, political instability (Fosu, 2003), or a generally high transaction cost environment (Fafchamps, 1999; Ibeh et al., 2012).

In order to overcome these internal and external barriers to internationalization, African firms often rely on *networks and business linkages* (Che Senik et al., 2011; Fafchamps, 1999; Ghauri, Lutz, & Tesfom, 2003; Gumede & Rasmussen, 2002; Ibeh et al., 2012; Kuada, 2006; Kujala, 2015; Rutashobya & Jaensson, 2004). Networks can create a competitive advantage for member firms, as they share resources, for instance information, about foreign markets, which the members can leverage (Kuada, 2006; Rutashobya & Jaensson, 2004). Hence, African firms can bridge their resource gap (Kuada, 2006) and overcome institutional voids (Biggs & Shah, 2006) through networks, which consequently facilitates their exporting activities. Even though the supporting role of networks to internationalization is also acknowledged in IB literature (Johanson & Vahlne, 2009), *ethnic networks* are particularly important in an African context (Biggs & Shah, 2006; Gaur & Kumar, 2010a; Hansen et al., 2015). In Sub-Saharan Africa, these community-based linkages replace more traditional and

formal, long-term business relationships (Biggs & Shah, 2006; Hansen et al., 2015), which are undermined by a weak institutional environment (Hoskisson, Eden, Lau, & Wright, 2000).

3. ANALYTICAL FRAMEWORK

This section describes the framework which is used to analyse the research question about the internationalization strategies of African companies and their explanatory factors. Firstly, we describe the strategic dimensions of African firm internationalization. Secondly, the strategy tripod is introduced as the analytical framework for the explanatory factors of African firm internationalization.

3.1 Strategic Dimensions of Firm Internationalization

The three dimensions of firm internationalization that are assessed in this paper, are commitment level, target market (regional vs. global) and path (upstream vs. downstream).

3.1.1 Commitment Level

We only consider non-equity modes of internationalization, as Vernon-Wortzel et al. (1988)) argue that DC firms' growth aspirations do not go beyond intensive export activities. Other studies on firm internationalization (Gao, Murray, Kotabe, & Lu, 2010; Verwaal & Donkers, 2002) assess the commitment level in terms of export intensity, i.e. the share of exports in total sales. Due to our focus on both internationalization paths, we understand the commitment level as the combination of export and import intensity of African firms. Following Crick et al. (2011) we consider a commitment level of more than 50 per cent as high, and a commitment level below 50 per cent as low.

Africa's share in global exports was decreasing in the past years (Bakunda, 2003; Ibeh et al., 2012; Seyoum, 2007) and they are not able to leverage the full potential of the increase of processed foods trade (Athukorala & Sen, 1998). In addition, Ssemogerere and La Kasekende (1994) found that Ugandan firms export on a small scale. Hence, we propose:

Hypothesis 1.1: *African firms have a low commitment level of internationalization.*

3.1.2 Target Market

This paper assesses whether African firms internationalize to regional, i.e. African, or global markets. This distinction is a valid approach as Kuada and Sørensen (1999) found that processed foods are primarily sold within Africa. Hence, the dimension of target market assesses whether or not African firms internationalize to markets outside the African continent.

A majority of DC firms is internationalizing to other DCs (Jormanainen & Koveshnikov, 2012), which have a similar institutional setting. In these markets, African firms can exploit their knowledge on

how to operate in a difficult economic environment (Cuervo-Cazurra & Genc, 2008) and offer similar products, which are adopted to DCs' needs (Ramamurti, 2008). Moreover, evidence from Africa (Wangwe, 1995) shows that Ghanaian firms mainly internationalize to other African markets (Kuada, 2006).

Hypothesis 1.2: *African firms internationalize to regional rather than global markets.*

3.1.3 Internationalization Paths

We understand internationalization as both downstream and upstream activities. The distinction between the two activities stems from Porter's (1985) Value Chain Model and refers to "a firm's activities before and after production respectively" (Kuada & Sørensen, 1999, p.8). In an international context, the upstream internationalization path describes the global sourcing of inputs, products or research (imports) and development, whereas the downstream internationalization path involves selling and marketing products abroad (exports) (Kuada & Sørensen, 1999; Naldi & Zahra, 2007). In an EM context, Mathews (2006) emphasizes the importance of leveraging resources from foreign markets, which is often done via upstream internationalization, e.g. through importing superior technology. Moreover, Kuada (2006, 2007) argues that upstream activities are a prerequisite for downstream activities, which is why we propose:

Hypothesis 1.3: *African firms engage in upstream rather than downstream path of internationalization.*

3.2 What explains internationalization strategy

In order to assess which factors explain African firm internationalization strategies, we apply Peng et al.'s (2009) strategic tripod, i.e. an industry-, resource- and institution-based view. This theoretical framework is relevant in the nascent international business context of EMs and DCs (Peng, Wang, & Jiang, 2008) and has been used by other scholars to analyse exports in emerging economies (Gao et al., 2010; Stucchi, 2013). Based on this framework, we hypothesize that African firms' internationalization strategies can be explained by firm internal, institutional and industry factors:

H2.1 – Industry factors determine African firms' internationalization strategy.

H2.2 – Internal factors determine African firms' internationalization strategy.

H2.3 – Institutional factors determine African firms' internationalization strategy.

In DCs, which are characterized by weak formal institutions (Khanna & Palepu, 1997), the institutional perspective is particularly important (Wright, Filatotchev, Hoskisson, & Peng, 2005; Xu & Meyer, 2013), as institutions are most visible when not supporting business activities effectively (McMillan, 2007).

H2 – Institutional factors have a stronger impact on African firm internationalization than industry and internal factors.

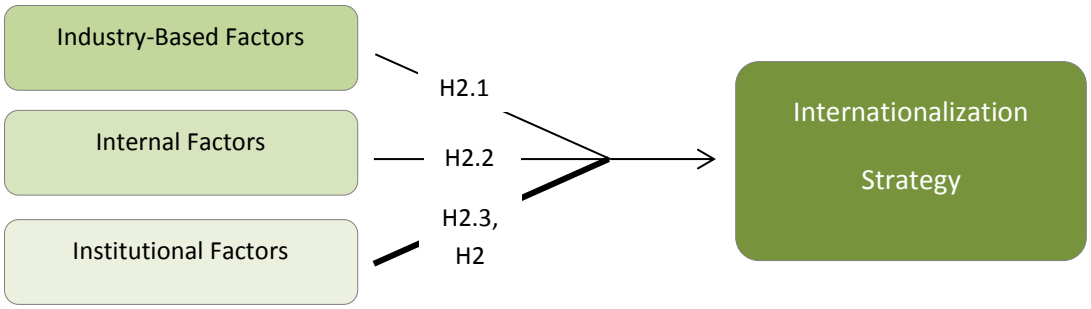

Figure 1: Analytical Framework. Own creation after Peng et al's (2009) Strategic Tripod

Hence, these hypotheses assess whether the strategy tripod is a valid framework for African firm internationalization. In the following, more precise hypotheses about the impact of each strategy factor on the internationalization dimensions are derived.

3.2.1 Industry Perspective

The industry-based view, which was introduced by Porter (1979; 1980) holds that external, industry-related forces determine the firms' strategies and performance (Gao et al., 2010; Peng et al., 2009; Yamakawa, Peng, & Deeds, 2008). Based on the analysis of these competitive forces, firms strategically position themselves in the industry.

In a DC context, scholars found that competition influences the internationalization of local firms (Gaur & Kumar, 2010b; Luo & Tung, 2007; Yiu, Lau, & Bruton, 2007). Competition in DCs is generally said to be low in most industries (Gaur & Kumar, 2010b; Hansen et al., 2015), which limits local firms' incentives to expand to other markets (Yamakawa et al., 2008). However, as a consequence of trade liberalization policies, competition, especially by foreign firms, is increasingly intensifying (Henson & Cranfield, 2009; Luo & Tung, 2007). High levels of competition on their domestic market may push African firms to increasingly engage in international activities (Azam et al., 2001; Das, 1994; Dawar & Frost, 1999; Yamakawa et al., 2008, p. 65). Hence, we hypothesize:

H2.1.1 – Fierce competition on their domestic market increases African firms' commitment level to internationalization.

Moreover, low labour costs can provide a competitive advantage to African food processors which export their products (Dawar & Frost, 1999; Henson & Cranfield, 2009; Yamakawa et al., 2008). Consequently, African firms rely on an extensive use of cheap labour (Ibeh et al., 2012) when trying to enter foreign markets.

H2.1.2 – *High labour intensity facilitates downstream internationalization strategies of African companies.*

3.2.2 Resource-Based View

The resource based view (RBV) holds that valuable, rare, inimitable, and non-substitutable resources and capabilities determine firms' competitive advantages (Barney, 1991) and thereby shape their strategy. Firms in DCs tend to have weak resources and capabilities, with regard to technology, capital and marketing and managerial capabilities (Biggs et al., 1995; Biggs & Shah, 2006; Ibeh, 2004; Mathews, 2006). However, there are differences between firms with and without international activities, where the former possess more human and financial resources (Bigsten & Söderbom, 2006; Brush, Edelman, & Manolova, 2015; Ibeh et al., 2012; Rankin et al., 2006; Söderbom & Teal, 2003; van Biesebroeck, 2003) and are more productive (van Biesebroeck, 2003).

Consequently, resources seem to positively influence the internationalization of African firms (Fosu, 2003; Ibeh et al., 2012; Kuada, 2006). Similarly, larger African firms were found to be more engaged in exporting (Demeke & Chiloane-Tsoka, 2015; Grenier et al., 1999; Kuada & Sørensen, 1999; Rankin et al., 2006; Söderbom & Teal, 2003; Teal, 1999; van Biesebroeck, 2003; Verwaal & Donkers, 2002). Based on the findings on internal factors of international African firms and the assumptions of the stages model, we hypothesize:

H2.2.1 – Resources and capabilities positively impact the commitment level of African companies' internationalization.

With regard to the target market decision, Kuada and Sørensen (1999) found that small Ghanaian firms choose geographically close, i.e. regional markets, in order to compensate for disadvantages they have vis-à-vis international competitors. Moreover, the size of Kenyan firms (Granér & Isaksson, 2002) and capital intensity (Boermans, 2010) positively impacts the export activities outside Africa.

H2.2.2 – African firms' resources and capabilities have a positive effect on the internationalization to global markets.

3.2.3 Institutional Perspective

Institutions are defined as "the rules of the game" (North, 1990) and include a formal (e.g. laws, regulation and rules) as well as an informal (e.g. norms, values and culture) dimension. The influence of institutions on firm strategy is particularly important in a DC context (Xu & Meyer, 2013), as "institutions are almost invisible" (McMillan, 2007, p.2) when markets work smoothly, such as in developed countries. In contrast, DCs are characterized by "the absence of specialized intermediaries, regulatory systems, and contract-enforcing mechanisms" (Khanna & Palepu, 2010, p.62). These so-called institutional voids, are present in product, capital and labour markets,

government regulations and contract enforcement (Khanna & Palepu, 1997). In practice, institutional voids, such as corruption, poor infrastructure, lack of finance and technology, as well as excessive bureaucracy, increase the transaction costs of doing business and the insecurity in the African business environment (Bakunda, 2003; Fukunishi, 2004; Hansen et al., 2015; Khanna & Palepu, 1997; Söderbom & Teal, 2003).

With regard to African firm internationalization, this high transaction cost environment was found to be a reason for the low export involvement of local firms (Bigsten & Söderbom, 2006; Fosu, 2003; Fukunishi, 2004; Ibeh, 2004; Ibeh et al., 2012,; Teal, 1999).

H2.3.1 – A perceived difficult institutional setting characterized by corruption and weak infrastructure negatively impacts the commitment level of African firm internationalization.

Whilst certain institutional factors are detrimental to the general internationalization strategy, institutional voids in other areas can push African firms to internationalize. Due to the scarcity or low standards of local resources and products, they acquire these resources on other markets (Guillén & García-Canal, 2009; Hansen et al., 2015; Kuada, 2006). Hence, African firms import inputs and technologies, which are of poor quality or not available in their domestic market.

H2.3.2 – African firms engage in upstream internationalization strategies in order to compensate for the institutional voids in the domestic market.

Besides providing an incentive to engage in upstream internationalization, DC firms can also benefit from their experience with difficult institutional environments. A difficult institutional home market is generally detrimental to firm internationalization, especially when targeting developed markets. However, Cuervo-Cazurra and Genc (2008) found that this disadvantage becomes an advantage when entering other developing countries. African firms can rely on their experience with detrimental institutional environments, which constitutes a competitive advantage vis-à-vis companies from developed markets (Cuervo-Cazurra & Genc, 2008; Gaur & Kumar, 2010a; Ramamurti, 2008,; Wright et al., 2005). As African firms only have this advantage in foreign markets with similar institutional settings, we hypothesize:

H2.3.3 – African companies experiencing difficult institutional settings in their domestic market internationalize to regional markets with similar institutional settings.

Even though African countries are often characterized by a weak institutional setting, the markets are increasingly stabilizing and improving their institutional environments. In the scope of trade liberalization in African countries, tariffs and trade barriers were reduced and some governments introduced trade incentives (Söderbom & Teal, 2003). These trade incentives can have a positive

impact on the export activities of African firms (Demeke & Chiloane-Tsoka, 2015; Kuada & Sørensen, 1999; Matenge, 2011; Söderbom & Teal, 2003).

H2.3.4 – African companies engage in downstream internationalization in an opportunistic manner based on trade incentives.

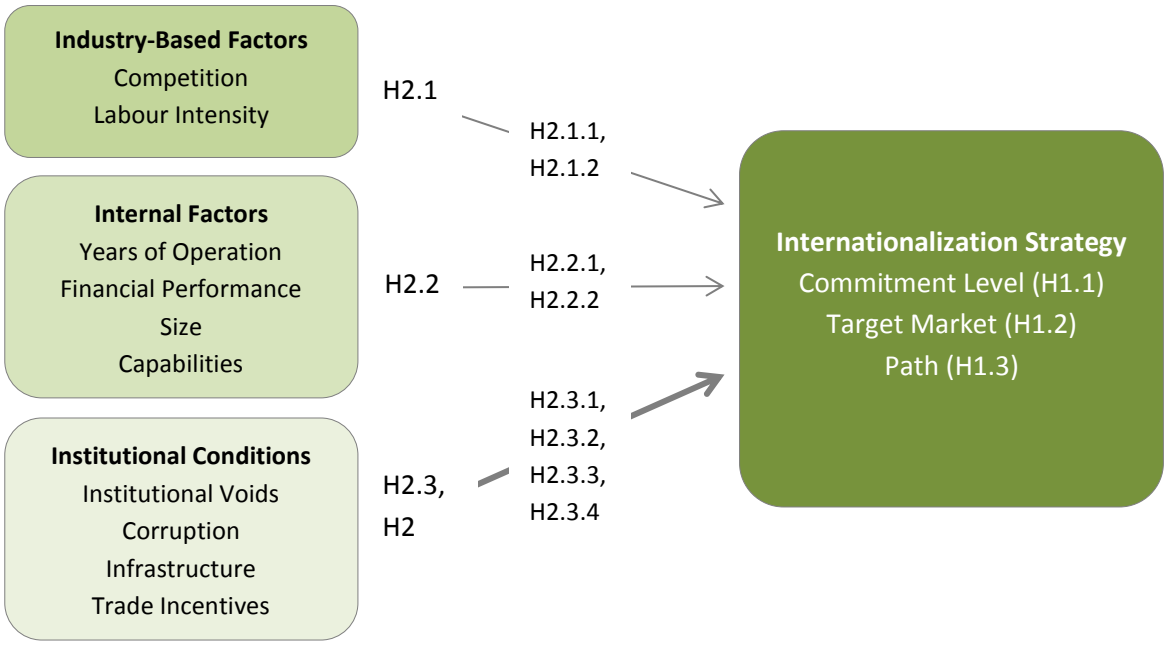

Figure 2: Summary of Analytical Framework

4. Analytical Procedure

After having developed hypotheses about the internationalization dimensions of African firms and about their explanatory factors, the following section describes the analytical procedure.

4.1 Analysing the Internationalization Dimensions of African Firms

The hypotheses about the three internationalization dimensions, namely commitment level, target market and path are assessed answer the first part of the research question, i.e. the internationalization strategies of African firms. We use descriptive statistics in order to explore the internationalization strategies and complement the findings with a cluster analysis.

We conduct a *cluster analysis* based on the dimensions of internationalization, which allows identifying groups of companies within the sample which pursue similar internationalization strategies. More precisely, we use import intensity and export intensity[2] in order to assess the commitment level, and dummy variables for upstream internationalization, downstream internationalization, as well as regional and global target markets. Following Punj and Stewart (1983) a *two-stage cluster analysis* is conducted. Firstly, we apply Ward's Procedure in order to identify the

[2] For more details about the variables, please see Table 1

right number of clusters. In a second step, we use K-means clustering method in order to identify groups of companies with differing internationalization dimensions. Consequently, different internationalization strategies of African firms are identified.

4.2 Analysing the Explanatory Factors behind African Firm Internationalization

Based on the strategic tripod framework, we conduct regression analyses in order to assess the explanatory factors of African firm internationalization (RQ2). Table 1 provides an overview of the dependent (commitment level, regional and. global target market, and downstream and upstream paths) and independent (industry, internal and institutional factors) variables used, as well as a brief explanation and their scale.

	Variable	Measured as	Scale
Dependent Variables	Commitment Level	Sum of Export Intensity and Import Intensity	Ratio
	Global Target Market	Percentage of Sales to Global Market	Ratio
	Regional Target Market	Percentage of Sales to Regional Market	Ratio
	Downstream Path	Export Intensity	Ratio
	Upstream Path	Import Intensity	Ratio
Industry	Competition	Experienced Unfair or Restricted Competition	Dummy
	Labour Intensity	Total Wage Bill as percentage of Turnover	Ratio
Internal	Years of Operation	Number of Years of Operation	Ratio
	Financial Performance	Comparison of financial performance of past years to industry level	Interval (1-5)
	Size	Number of Permanent Employees	Ratio
	Capabilities	Amount of Managerial Capabilities, Marketing Excellence, Flexibility and Adaptability as Most Important Organizational Strength	Interval (0-3)
Institutional	Institutional Voids	Amount of Lack of Capital, Skilled Labour and Inputs as Barrier to Growth	Interval (0-3)
	Weak Infrastructure	Infrastructure as Barrier to Growth	Dummy
	Corruption	Corruption as Barrier to Growth	Dummy
	Trade Incentives	Trade Incentives Granted	Dummy

Table 1: Overview of Variables

In order to assess the impact of the analytical framework of the strategy tripod (H2, H2.1, H2.2, H2.3) on African firm internationalization, we follow Lebreton, Ployhart, and Ladd (2004) and adopt a two-step approach. Firstly, we determine the contribution of each independent factor (i.e. industry, internal and institutional), while controlling for the other factors. Secondly, we evaluate the total effect of the whole model including the variables of all three factors combined. Hence, the total as well as the partial effect of the independent variables on internationalization is revealed. The regression models for this procedure are as follows:

Step 1:

Industry-Based Factors: $Int = \alpha_0 + I\alpha_1 + \varepsilon$

Internal Factors: $Int = \alpha_0 + F\alpha_2 + \varepsilon$

Institutional Factors: $Int = \alpha_0 + E\alpha_3 + \varepsilon$

Step 2:

Strategy Tripod Factors: $Int = \alpha_0 + I\alpha_1 + F\alpha_2 + E\alpha_3 + \varepsilon$

Int are the different dependent variable Internationalization as described in Table 1, i.e. commitment level, global target market, regional target market, downstream path and upstream path. I,F and E the industry-based (I), internal (F) and institutional (E) factors respectively. These factors include the variables listed in Table 1. For all regression models, ε is the error term and α the regression coefficients, which are estimated. In order to assess the explanatory power of each influencing factor and the strategic tripod (H2, H2.1, H2.2, H2.3), we compare the Adjusted R-squared values of each regression.

After assessing the explanatory power of the strategy tripod, the second part of the research question about the explanatory factors of African firm internationalization is tested. More precisely, one regression model is formulated for each dependent variable, i.e. commitment level, global and regional target market, and upstream and downstream path. Subsequently, the regression models are as follows:

Dependent Variable and Dimension	Combination of Hypotheses	Regression Model
Commitment Level	H2.1.1, H2.2.1, H2.3.1	$C = \alpha_0 + I\alpha_1 + F\alpha_2 + E\alpha_3 + \varepsilon$
Global Target Market	H2.2.2	$G = \alpha_0 + I\alpha_1 + F\alpha_2 + E\alpha_3 + \varepsilon$
Regional Target Market	H2.2.3	$R = \alpha_0 + I\alpha_1 + F\alpha_2 + E\alpha_3 + \varepsilon$
Downstream Path	H2.1.2, H2.3.4	$D = \alpha_0 + I\alpha_1 + F\alpha_2 + E\alpha_3 + \varepsilon$
Upstream Path	H2.3.1	$U = \alpha_0 + I\alpha_1 + F\alpha_2 + E\alpha_3 + \varepsilon$

Table 2: Regressions Analyses for Explanatory Factors

5. Analysis and Findings

5.1 Internationalization Strategies of African Firms

This section explores the internationalization strategies of African firms with regard to the commitment level, target market and paths (RQ1). More precisely, the hypotheses about African firm internationalization are analysed by descriptive statistics and a cluster analysis.

5.1.1 African Firms' Internationalization Dimensions

In the sample, 51 per cent of companies do not import any products, whilst 86 per cent do not engage in exporting (Figure 3). Amongst the companies with international activities, the majority only

imports (28.1 per cent) or sells (9.5 per cent) 1-25 per cent of their inputs or products (Figure 3). Given that the great majority of companies does not operate internationally and the ones with international activities sell less than one quarter of their products abroad, the commitment level of African food processors is low. There are, however, differences between import and export intensity. Whilst export intensity of most companies is low or even zero, a total of 14 per cent of companies import more than half of their inputs (Figure 3), indicating a very high international commitment in terms of upstream activities.

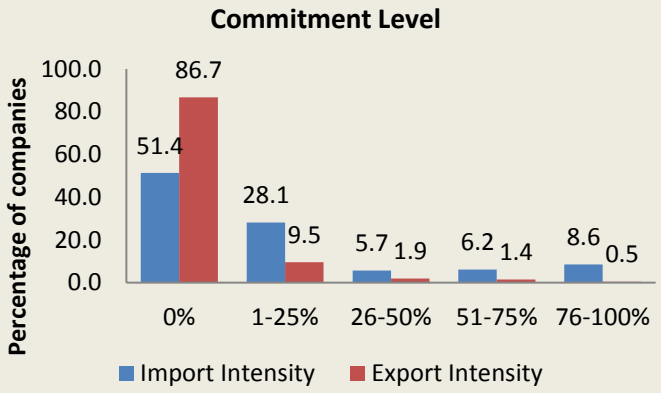

Figure 3: Commitment Level of Sample

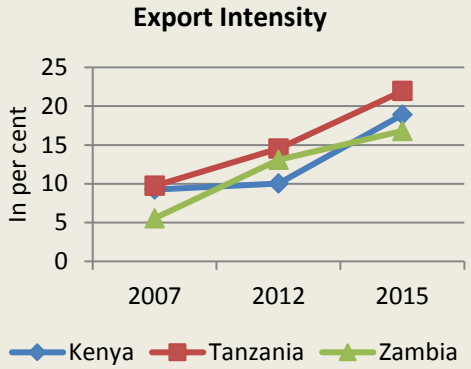

Figure 4: Development of Export Intensity (2007- 2015)

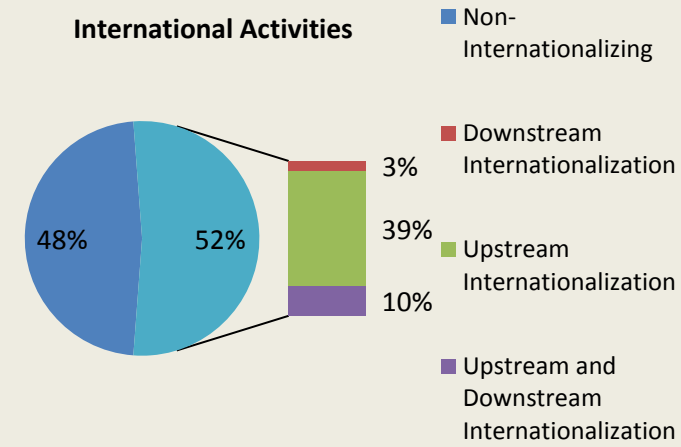

Figure 5: International Activities of Sample

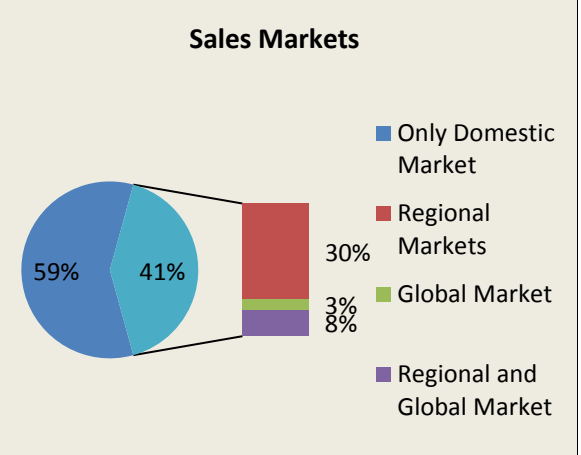

Figure 6: Sales Markets of Sample

Box 1: Internationalization Dimensions – Descriptives

Amongst the 41 per cent of companies, which sell their products to foreign markets, 30 per cent export to regional markets, 3 per cent to global markets and 8 per cent to both regional and global markets (Figure 6). Between 2007 and 2015, the average export intensity to the regional market increased from 5 to 13 per cent and from 2 to 6 per cent with regard to the global market (Figure 4). This could either indicate, that African firms have an advantage when entering markets with a similar

institutional setting (Cuervo-Cazurra, 2012; Ramamurti, 2008) or that they chose neighbouring countries due to their psychic proximity (Johanson & Vahlne, 2009).

As mentioned above, 52 per cent of the companies engage in either upstream or downstream internationalization. More precisely, 3 per cent engage in downstream internationalization only, 39 per cent in upstream internationalization only and 10 per cent take both internationalization paths simultaneously (Figure 5). This pattern provides support for Kuada's (2006) argument that downstream internationalization is rare and that most African companies engage in upstream internationalization first. As Figure 3 shows, not only more African firms engage in upstream than in downstream internationalization, but they also do this with a higher intensity.

5.1.2 Three Clusters of African Firm Internationalization

The cluster analysis shows that African firms can be group into three clusters with regard to their internationalization activities. A majority of 148 companies are part of cluster 1 (Table 3), what we will label "Early internationalizers". In this cluster, there are only limited international activities. More precisely, the average commitment level to imports (5.0 per cent) and exports (3.51 per cent) are very low, which supports the findings of the descriptive analysis that the commitment level is generally low. The low commitment level (H1.1) of internationalization reflects that African countries are lagging behind in the international trade of processed foods (Athukorala & Sen, 1998). Nevertheless, the data reveals that the commitment level of African firms is steadily increasing, as the export intensity more than doubled between 2007 and 2015 (Figure 4). In addition, cluster 1 supports that more companies engage in upstream (0.34) than in downstream (0.08) internationalization. Downstream internationalization is rare amongst African firms (Kuada, 2006), as only 12.85 per cent of the sample have substantial international downstream activities (cluster 3).

Internationalization Dimension	Clusters	1. Low internationalizers	2. Upstream internationalizers	3.Broad based internationalizers
Commitment Level	Import Intensity**	5	76	8
	Export Intensity[3]**	3.51	15.03	64.22
Target Market	Regional Target Market Dummy**	0.26	0.57	0.81

[3] Measured as the sum of regional and global sales

	Global Target Market Dummy**	0.03	0.11	0.59
Paths	Upstream Dummy**	0.34	1.00	0.63
	Downstream Dummy**	0.08	0.20	0.33
** is significant for p≤0.05				
	Amount of Cluster members	148	35	27

Table 3: Final Cluster Centres

Hence, there is support for hypothesis H1.3. In line with Kuada (2006, 2007), it shows that upstream activities are the primary route of African firm internationalization and that only a few companies combine both internationalization paths. At the same time, the commitment level to upstream internationalization is much higher than to downstream internationalization (Figure 3). The emphasis on upstream internationalization supports Mathews (2006) argument that EM firms augment their assets in their internationalization process by leveraging resources from foreign markets.

Moreover, African firms mainly internationalize to other African markets (hypothesis 1.2). This reflects an incremental internationalization process (Johanson & Vahlne, 1977), as companies initially enter markets which are similar to their domestic market in terms of psychic distance. Hence, Kuada's (2006) finding that Ghanaian firms mostly enter regional markets can be extended to the Kenyan, Tanzanian and Zambian context.

In contrast to cluster 1 companies, there are, two other subgroups within the sample with more international activities: Cluster 2, which consists of 35 companies, is primarily internationalizing through upstream internationalization with high import intensity. These we will label "Upstream internationalizers". More precisely, cluster 2 companies import, on average, 76 per cent of their inputs. Besides the upstream internationalization path, some of the companies also engage in downstream internationalization. However, they only export about 15.03 per cent of their sales. Thereby, they mainly operate in regional markets (0.57) and only very little on global markets (0.11).

In comparison to the other clusters, the 27 cluster 3 companies are relatively highly involved in downstream internationalization. These we will label "Downstream internationalizers". Even though more cluster 3 companies engage in upstream than downstream internationalization (0.63 compared to 0.33), the commitment level to downstream internationalization is much higher. More precisely,

the centre of cluster 3 is only at 8.0 per cent import intensity, but 64.22 per cent export intensity. This shows that concurrent upstream and downstream internationalization (Kuada, 2006) is also possible for African firms. In addition, cluster 3 companies also mainly internationalize to the regional market. Nevertheless, their propensity to the global market is much higher than that of cluster 2 companies, as more than half (0.59) are operation globally.

5.2 Explanatory Factors of African Firm Internationalization

This section assesses the explanatory factors of the internationalization dimensions identified in the previous and tests the second and third set of hypotheses. Firstly, we assess whether the strategy tripod can significantly explain African firm internationalization and which factors in the Tripod are most important. Secondly, the specific relations between the industry, internal and institutional explanatory factors and the three internationalization dimensions are analysed.

5.2.1 Factors explaining African Firm Internationalization

Table 4 shows the explanatory power for each internationalization dimension based on the significance level and adjusted R-squared values.

Dependent Variables		Commitment Level	Global Target Market	Regional Target Market	Downstream Path	Upstream Path
Explanatory Power	Industry	0.014*	0.015*	0.054**	0.079**	0.021*
	Internal	0.101**	0.036**	0.028*	0.03**	0.051**
	Institutional	0.055**	0.012	0.008	0.029*	0.055**
	Strategic Tripod	0.124**	0.057**	0.071**	0.138**	0.079**
The Table shows the Adj. R-Squared of the Regressions ** is significant for p≤0.05; * is significant for p≤0.1						

Table 4: Explanatory Power of Strategic Tripod Framework

The results indicate support for hypotheses H2.1 and H2.2, as industry- and internal factors can significantly explain all internationalization dimensions (see significance in Table 4). Institutional factors, however, can only significantly explain the commitment level and internationalization paths of African firms. Hence, H2.3 is only party supported, as the target market cannot be explained. In contrast to institutional conditions in the target market (Meyer et al., 2009; Meyer & Tran, 2004), the local institutional environment does not impact the market entry decision of African firms. Nevertheless, the strategy tripod is a relevant framework for African firm internationalization strategies, as it can significantly explain all internationalization dimensions, in particular commitment level and downstream internationalization, with 12.4 and 13.8 per cent of variation, respectively. Moreover, Table 4 shows that institutional factors have the strongest explanatory power for upstream internationalization, as the adjusted R squared (0.055) is larger than for industry (0.021) and internal (0.051) factors. This indicates that the weak institutional setting pushes African firms to

engage in upstream internationalization. Institutional voids on the product market (Khanna & Palepu, 1997), for instance, trigger imports of inputs from foreign markets. Another reason for that might be that the import regulations in Kenya, Tanzania and Zambia are sufficiently facilitating upstream internationalization.

In contrast, neither industry nor internal factors can explain larger shares of variation of the other internationalization dimensions. Hence, H2 is only partly supported. Institutions indeed have an impact on African firm internationalization, but are not always more important than other factors as suggested by literature (Khanna & Palepu, 1997; Wright et al., 2005; Xu & Meyer, 2013). As mentioned above, one explanation might be that the institutions in the target market impact the international activities (Meyer et al., 2009; Meyer & Tran, 2004), whereas the model only includes domestic institutional conditions. Moreover, the institutional conditions in the model measured through four factors only (Table 2).

5.2.2 Explaining African Firm's Internationalization Strategies

This section tests hypotheses H2.1.1- H2.3.4 and thereby analyses, which factors can explain the commitment level, target market, and internationalization paths of African firms. Table 5 shows the results of the regression analyses with the internationalization dimensions (commitment level, target market, internationalization path) as dependent, and the strategic tripod factors as independent variables.

Firstly, there is support for H2.1.1, as experienced competition on the domestic market increases African firms' *commitment level* to internationalization by 11 per cent (Table 5). Even though competition is generally low on African markets (Gaur & Kumar, 2010b; Hansen et al., 2015), the food industry is shaped by intensifying competition (Henson & Cranfield, 2009), which triggers internationalization of African firms (Azam et al., 2001; Das, 1994; Dawar & Frost, 1999; Yamakawa et al., 2008). Besides the commitment level of African firms, the competition also impacts *upstream internationalization*. This indicates that African firms are dependent on foreign technology and inputs in order to be able to compete on their domestic market. Hence, African firms do not exploit existing capabilities when internationalizing, but rather pursue asset augmentation strategies (Mathews, 2006) on global markets.

	Internationalization Dimension	Commitment Level	Target Market		Internationalization Path	
	Dependent Variable	Commitment Level	Global Target Market	Regional Target Market	Downstream Path	Upstream Path
	Testing for Hypotheses	H2.1.1, H2.2.1, H2.3.1	H2.2.2	H2.3.3	H2.1.2, H2.3.4	H2.3.2

	Adj. R squared	0.124**	0.057**	0.071**	0.138**	0.079**
Industry	Competition	**11.126****	-0,707	-0,304	-1,011	8,839**
	Labour Intensity	0.136	0,217**	0,282**	**0,498****	0,108
Internal	Years of Operation	**0.413***	**-0,132**	-0,124	-0,255	0,405*
	Financial Performance	**1.937**	**1,160**	4,617**	5,777**	0,798
	Size	**0.015****	**0,004**	-0,002	0,002	0,007
	Capabilities	**-4.681**	**-3,326***	-0,414	-3,740	-3,056
Institutional	Institutional Voids	6.439*	2,274	**1,185**	3,459	**3,297**
	Weak Infrastructure	**-5.606**	1,521	**-1,312**	0,209	**-11,182****
	Corruption	**8.928**	-2,057	**1,812**	-0,245	**7,866**
	Trade Incentives	0.756	4,423	1,586	**6,009***	-0,148
	** is significant for p≤0.05; * is significant for p≤0.1 The values in **bold** indicate the hypothesized explanatory factors.					

Table 5: Regression Results for Explanatory Factors

This is also supported by the internal factors, as capabilities, as well as financial performance cannot significantly explain the *commitment level* of African firms (Table 5). H2.2.1 can nevertheless be partly supported, as both the years of operation and size of companies have a positive impact on their commitment level. This supports the incremental internationalization process (Johanson & Vahlne, 1977) and the finding that a minimum size is needed for African firms to internationalize (Teal, 1999). However, both factors only have a weak impact on the commitment level. Hence, even relatively young and small African companies are operating internationally which is in line with findings from literature on African firms (Abor et al., 2008; Fafchamps et al., 2008; Kuada & Sørensen, 1999), born globals (Bell, McNaughton, Young, & Crick, 2003) and accelerated internationalization (Bonaglia, Goldstein, & Mathews, 2007; Luo & Tung, 2007; Mathews, 2006). Besides the *commitment level*, the years of operation of African food processors also positively impacts their upstream internationalization path.

In addition to industry-related and internal factors, institutions impact the *commitment level* of African firm internationalization. H2.3.1, which suggests that weak infrastructure and corruption push African companies to higher commitment levels of internationalization, is not supported by the data. However, another institutional variable, namely institutional voids, significantly influences the

commitment level of African firms. More precisely, there is a positive relation, indicating that firms escape from the institutional voids on their domestic market by internationalization (Azam et al., 2001). Institutional voids on the product or labour market, for instance, trigger the imports of machineries with high technological standards.

Secondly, the *target market* of African firm internationalization is influenced by industry-related and internal factors: With regard to the internationalization to global markets, internal factors do not have a positive impact. Hence, H2.2.2 is not supported. More precisely, the years of operation, financial performance and size cannot significantly explain African firms' entry on *global markets*. In contrast, capabilities have a significant influence, but impact global market entry negatively. This indicates that African firms enter global markets due to the lack of capabilities. Hence, they try to augment their assets by leveraging resources from abroad (Bonaglia et al., 2007; Mathews, 2006). According to Cuervo-Cazurra and Genc (2008) and Ramamurti (2008) EM firms have adversity advantages when entering markets with similar institutional condition due to "their ability to function effectively in the difficult conditions of emerging markets" (Ramamurti, 2008, p.7). Hence, this view holds that based on the experience with detrimental local institutions, EM firms chose to enter regional markets with similar institutions. However, the data reveals that the *regional target market* is not impacted by institutional factors (Table 5). Hence, there is no evidence in the data that African companies have an advantage when entering similar African markets.

Furthermore, the financial performance has a positive impact on both, the *regional target market and downstream internationalization*. This indicates, that African companies, which mainly export to regional target markets need financial resources to initiate their downstream activities. As access to capital is very limited in many African countries, this can potentially be a major obstacle to exporting.

In addition to financial performance as an internal factor, industry-related and institutional factors impact *downstream internationalization* of African firms. Labour intensity has a positive impact on the export intensity; hence, there is support for H2.1.2. This indicates that African food processors make use of the cheap labour in their home countries in order to be able to export products at a low price (Dawar & Frost, 1999; Henson & Cranfield, 2009; Yamakawa et al., 2008). Thereby, African firms obtain a competitive advantage on both *regional and global target markets*, as labour intensity has a positive impact on both target market regression models.

In terms of institutional factors, *downstream internationalization* is triggered by trade incentives, indicating that African food processors internationalize in an opportunistic manner (H2.3.4). This shows that the trade liberalization practices of African governments indeed promote international activities of local companies.

Lastly, H2.3.2 that African companies engage in *upstream internationalization* in order to compensate for institutional voids is not supported. However, another institutional factor, i.e.

infrastructure, impacts the import intensity. More precisely, the lack of infrastructure increases the distribution costs and thereby increases the costs of imports. Hence, African firms' propensity to import input and machinery on a frequent basis is lowered by a weak infrastructure.

Commitment Level

Cluster 1:
Low

Cluster 2:
Low (Downstream), High (Upstream)

Cluster 3:
Low (Upstream), High (Downstream)

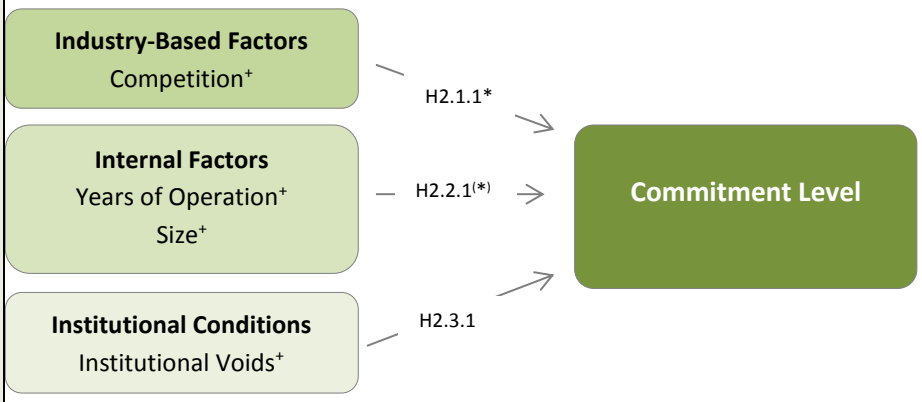

Figure 7: Explanatory Factors of Commitment Level

Target Market

Cluster 1:
Regional

Cluster 2:
Regional

Cluster 3:
Regional & Global

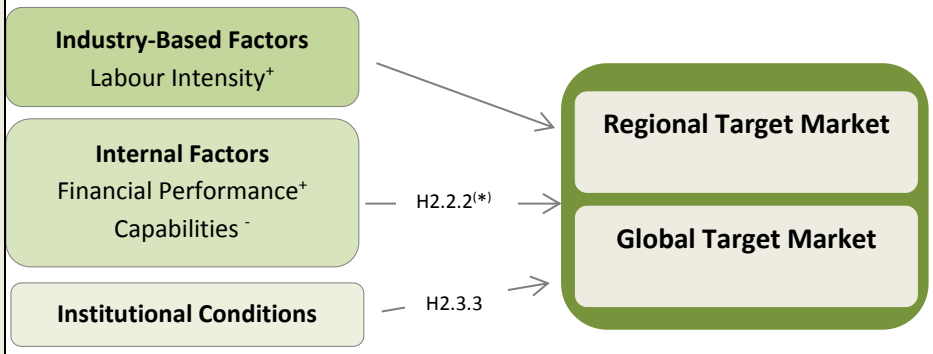

Figure 8: Explanatory Factors of Target Market

Internationalization Path

Cluster 1:
Upstream

Cluster 2:
Upstream & Some Downstream

Cluster 3:
Upstream & Downstream

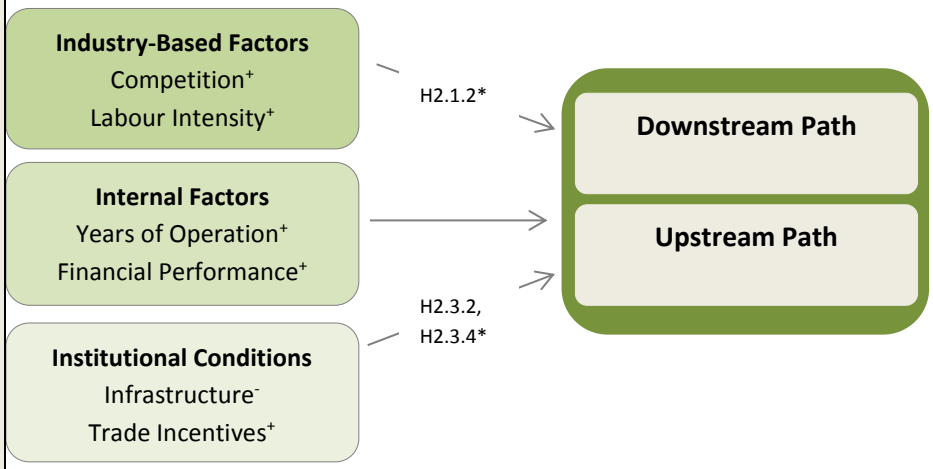

Figure 9: Explanatory Factors of Internationalization Path

* indicates support for the Hypothesis, (*) indicates partly support for the Hypotehsis

Box 2: Summary of Results

6. IMPLICATIONS

6.1 Research Implications

This paper contributes to research in various ways and points out promising agendas for future research. Firstly, we propose a *three-dimensional conceptualization of African firm internationalization,* consisting of commitment level, target market and internationalization path, which we use to explore the internationalization strategies of African firms. These internationalization dimensions provide a basis for future research, as they promise an extensive understanding of the international activities. This paper particularly emphasizes the importance of the *upstream internationalization path*, which paved the path for future research in this underexplored internationalization dimension (Kuada & Sørensen, 1999; Naldi & Zahra, 2007).

Moreover, it is shown that African firms internationalize with *distinct strategies*, which are differ from the approaches discussed in existing literature. Thereby, this paper adds insights to the nascent research area of African firm internationalization. The analysis reveals that upstream and downstream internationalization of African firms differ substantially with regard to the commitment level, as well as their explanatory factors. Whilst African companies have low export intensity, import intensity is often high. Hence, it is crucial that literature acknowledges the importance of studying import activities. Especially in a DC context, upstream internationalization is highly important for local firms in order to access high quality technology. Given that food processing machinery is rarely available on African markets, upstream internationalization is a prerequisite for African food processors' operations. Moreover, African firms seem to internationalize through upstream paths in order to strengthen their position on the domestic market (Ramamurti, 2012).

Whereas almost half of African food processors import technology and inputs, only 13 per cent export their products which reflects that they have not been able to take advantage of the increasing global trade of processed foods (Athukorala & Sen, 1998).

Moreover, the *strategic tripod framework* seems to be suitable for explaining the internationalization dimensions of African firms. Hence, future research on (African) firm internationalization should also consider industry-related, internal and institutional factors. However, the strategic tripod framework as operationalized in this paper, has a *low explanatory power*. This indicates that the proxies used for the regression analyses are inadequate to fully explain African firm internationalization. Future research should, therefore, include other industry-related, internal or institutional factors, such as African firms' core competences or more specific institutional voids.

6.2 Policy Implications

From a policy perspective, the low level of export orientation of the African food processors is concerning, as exports can serve as a key engine of economic development job creation in DCs (Azam et al., 2001; Bigsten et al., 2004; Söderbom & Teal, 2003). The study points to several things that can

be done to enhance exports of African food processors: As the analysis shows, trade incentives have a positive influence on both internationalization paths. Hence, they seem to be suitable measures to trigger internationalization of African firms. Governments in Kenya, Tanzania and Zambia should therefore extend their trade incentive practices in order to promote local companies' integration into the world economy thereby contributing positively to the economic development in these countries (Azam et al., 2001; Greenaway et al., 2002; Ibeh, 2004; Ibeh et al., 2012; Kuada, 2016; Rutashobya & Jaensson, 2004; Söderbom & Teal, 2003).

Furthermore, policy makers should not undermine the importance of African firms' upstream internationalization paths through import tariffs on capital goods and disincentives for linkages to foreign firms. African food processing industries remain protected in spite of liberalization efforts over the past decades (Binswanger & Lutz, 2003; Díaz-Bonilla & Reca, 2000, p. 224; Rodrik, 1998). African governments have to find a better balance of protecting local companies from foreign competition and enabling local companies to augment their assets by accessing foreign technologies. Finally, the *lack of infrastructure* seems particularly detrimental to international activities of African food processors. Consequently, the government should invest in infrastructure in order to facilitate the internationalization of local companies and thereby promote economic development. However, isolated investments in infrastructure cannot increase regional trade, as companies' exporting activities strongly depend on neighbouring countries' infrastructure. Hence, in order to make a smooth transport of goods between countries possible, the East African governments should collaborate in order to improve the infrastructure within the whole region.

In general, it is crucial that governments acknowledge the great potential that trade of processed foods holds for economic development and therefore introduce programmes to support the sector. Otherwise, African companies might not manage to keep up with the competition in the global trade of processed foods.

7. CONCLUSION

The paper reveals that African firms' internationalization strategies are unique and adapted to the DC context: Most African firms internationalize with a low commitment, to regional markets and through upstream internationalization paths (cluster 1: Low internationalizers). However, the commitment level differs by internationalization paths: Whilst African firms have a high commitment level to upstream internationalization, export intensity is low. Besides this dominant pattern of African firm internationalization strategy, there are, however, some companies which have a high commitment to upstream internationalization (cluster 2: Upstream internationalizers) or comparably high export intensity and activities on global markets (cluster 3: Downstream internationalizers).

In addition, is has suggested the strategic tripod framework is a suitable analytical perspective for assessing the internationalization strategies of African firms. More precisely, industry-related, internal and institutional factors combined can significantly explain the commitment level, target market and paths of African firm internationalization. However, the model was underspecified and future research should explore other strategic tripod factors which can explain African firm internationalization. The findings have important policy implications: African governments should support both, upstream and downstream internationalization by providing reliable and stable laws and trade regulations. Moreover, investments in infrastructure are needed in order to mitigate logistic obstacles to African firms' international activities.

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9. APPENDICES

Appendix I: IBM SPSS Statistics – Cluster Analysis Outputs

Ward Linkage

Agglomeration Schedule

Stage	Cluster Combined Cluster 1	Cluster Combined Cluster 2	Coefficients	Stage Cluster First Appears Cluster 1	Stage Cluster First Appears Cluster 2	Next Stage
1	207	210	,000	0	0	3
2	154	208	,000	0	0	41
3	6	207	,000	0	1	80
4	202	205	,000	0	0	6
5	201	204	,000	0	0	7
6	101	202	,000	0	4	9
7	2	201	,000	0	5	10
8	198	200	,000	0	0	10
9	101	199	,000	6	0	129
10	2	198	,000	7	8	15
11	17	197	,000	0	0	166
12	193	196	,000	0	0	15
13	190	195	,000	0	0	18
14	71	194	,000	0	0	80
15	2	193	,000	10	12	17
16	191	192	,000	0	0	17
17	2	191	,000	15	16	20
18	179	190	,000	0	13	21
19	187	188	,000	0	0	20
20	2	187	,000	17	19	23
21	179	186	,000	18	0	136
22	183	184	,000	0	0	23
23	2	183	,000	20	22	25
24	181	182	,000	0	0	25
25	2	181	,000	23	24	27
26	177	178	,000	0	0	27
27	2	177	,000	25	26	30
28	109	176	,000	0	0	119
29	173	174	,000	0	0	30
30	2	173	,000	27	29	32
31	171	172	,000	0	0	32
32	2	171	,000	30	31	34
33	167	170	,000	0	0	34
34	2	167	,000	32	33	38
35	142	165	,000	0	0	125
36	119	164	,000	0	0	126
37	162	163	,000	0	0	38
38	2	162	,000	34	37	40
39	159	160	,000	0	0	40
40	2	159	,000	38	39	47
41	89	154	,000	0	2	174
42	106	153	,000	0	0	151
43	113	148	,000	0	0	143
44	108	147	,000	0	0	65
45	140	145	,000	0	0	153
46	141	143	,000	0	0	47
47	2	141	,000	40	46	49
48	138	139	,000	0	0	49
49	2	138	,000	47	48	52
50	132	137	,000	0	0	52
51	116	133	,000	0	0	163
52	2	132	,000	49	50	54
53	130	131	,000	0	0	54
54	2	130	,000	52	53	56
55	128	129	,000	0	0	56

56	2	128	,000	54	55	58
57	124	127	,000	0	0	58
58	2	124	,000	56	57	61
59	84	123	,000	0	0	76
60	118	120	,000	0	0	61
61	2	118	,000	58	60	64
62	110	112	,000	0	0	64
63	93	111	,000	0	0	162
64	2	110	,000	61	62	68
65	13	108	,000	0	44	154
66	91	107	,000	0	0	71
67	102	103	,000	0	0	68
68	2	102	,000	64	67	72
69	59	95	,000	0	0	120
70	88	92	,000	0	0	72
71	18	91	,000	0	66	74
72	2	88	,000	68	70	75
73	85	87	,000	0	0	75
74	18	86	,000	71	0	187
75	2	85	,000	72	73	78
76	5	84	,000	0	59	99
77	80	81	,000	0	0	78
78	2	80	,000	75	77	81
79	70	75	,000	0	0	81
80	6	71	,000	3	14	89
81	2	70	,000	78	79	83
82	68	69	,000	0	0	83
83	2	68	,000	81	82	85
84	66	67	,000	0	0	85
85	2	66	,000	83	84	88
86	53	58	,000	0	0	88
87	32	54	,000	0	0	99
88	2	53	,000	85	86	91
89	6	52	,000	80	0	121
90	49	51	,000	0	0	91
91	2	49	,000	88	90	93
92	41	48	,000	0	0	93
93	2	41	,000	91	92	95
94	38	40	,000	0	0	95
95	2	38	,000	93	94	97
96	36	37	,000	0	0	97
97	2	36	,000	95	96	100
98	30	34	,000	0	0	100
99	5	32	,000	76	87	138
100	2	30	,000	97	98	102
101	28	29	,000	0	0	102
102	2	28	,000	100	101	104
103	23	25	,000	0	0	104
104	2	23	,000	102	103	106
105	20	21	,000	0	0	106
106	2	20	,000	104	105	108
107	14	19	,000	0	0	108
108	2	14	,000	106	107	110
109	10	12	,000	0	0	110
110	2	10	,000	108	109	112
111	7	8	,000	0	0	112
112	2	7	,000	110	111	113
113	2	3	,000	112	0	141
114	56	206	,500	0	0	150
115	157	189	1,000	0	0	172
116	9	146	1,500	0	0	139
117	15	77	2,000	0	0	135
118	16	73	2,500	0	0	125
119	33	109	3,167	0	28	135
120	57	59	3,833	0	69	141
121	6	203	4,690	89	0	124
122	26	161	5,690	0	0	144
123	61	79	6,690	0	0	152

124	6	125	7,833	121	0	171
125	16	142	9,083	118	35	185
126	72	119	10,417	0	36	142
127	83	144	11,917	0	0	158
128	50	122	13,417	0	0	169
129	94	101	15,017	0	9	163
130	65	209	17,017	0	0	140
131	24	74	19,017	0	0	139
132	166	168	21,517	0	0	152
133	64	82	24,017	0	0	140
134	22	31	26,517	0	0	153
135	15	33	29,350	117	119	142
136	179	185	32,550	21	0	171
137	46	62	37,050	0	0	161
138	1	5	42,050	0	99	191
139	9	24	48,300	116	131	175
140	64	65	57,550	133	130	161
141	2	57	68,483	113	120	177
142	15	72	79,525	135	126	177
143	4	113	90,858	0	43	155
144	26	158	102,525	122	0	195
145	105	151	115,025	0	0	167
146	55	60	127,525	0	0	176
147	135	169	140,525	0	0	173
148	45	63	153,525	0	0	168
149	90	175	168,025	0	0	184
150	56	121	184,858	114	0	180
151	11	106	202,192	0	42	157
152	61	166	219,942	123	132	182
153	22	140	238,192	134	45	181
154	13	39	256,942	65	0	166
155	4	180	277,108	143	0	193
156	42	44	297,608	0	0	164
157	11	78	318,775	151	0	188
158	83	134	342,608	127	0	201
159	115	126	369,108	0	0	179
160	35	136	396,108	0	0	175
161	46	64	426,858	137	140	185
162	76	93	460,858	0	63	169
163	94	116	496,687	129	51	180
164	42	149	537,520	156	0	183
165	99	100	587,520	0	0	186
166	13	17	639,604	154	11	190
167	105	114	693,770	145	0	178
168	45	98	750,770	148	0	176
169	50	76	810,070	128	162	188
170	97	156	873,570	0	0	192
171	6	179	938,678	124	136	194
172	43	157	1006,845	0	115	182
173	27	135	1079,178	0	147	181
174	89	150	1172,928	41	0	183
175	9	35	1268,011	139	160	184
176	45	55	1363,511	168	146	191
177	2	15	1460,999	141	142	198
178	96	105	1566,082	0	167	192
179	115	155	1679,582	159	0	187
180	56	94	1826,520	150	163	190
181	22	27	1983,865	153	173	197
182	43	61	2147,377	172	152	193
183	42	89	2329,151	164	174	200
184	9	90	2531,568	175	149	195
185	16	46	2753,118	125	161	194
186	99	152	3015,784	165	0	197
187	18	115	3304,927	74	179	202
188	11	50	3608,961	157	169	199
189	47	104	3921,961	0	0	196
190	13	56	4335,552	166	180	205
191	1	45	4759,279	138	176	199

192	96	97	5197,363	178	170	204
193	4	43	5700,980	155	182	200
194	6	16	6244,633	171	185	198
195	9	26	6944,398	184	144	203
196	47	117	7649,398	189	0	204
197	22	99	8594,503	181	186	201
198	2	6	9796,831	177	194	207
199	1	11	11324,621	191	188	202
200	4	42	12870,774	193	183	205
201	22	83	14639,625	197	158	203
202	1	18	17601,225	199	187	206
203	9	22	21424,825	195	201	208
204	47	96	25553,714	196	192	206
205	4	13	31467,445	200	190	207
206	1	47	40161,130	202	204	209
207	2	4	52446,307	198	205	208
208	2	9	135237,764	207	203	209
209	1	2	280882,791	206	208	0

K-Means Clustering

Initial Cluster Centers

	Cluster		
	1	2	3
Import Intensity	100	0	0
Export Intensity	20,00	,00	100,00
Regional Market	,00	,00	,00
Global Market	1,00	,00	1,00
Upstream Dummy	1,00	,00	,00
Downstream Dummy	,00	,00	1,00

Iteration History[a]

	Change in Cluster Centers		
Iteration	1	2	3
1	24,365	7,492	28,650
2	,000	1,503	6,915
3	,000	,256	1,268
4	,000	,000	,000

Final Cluster Centers

	Cluster		
	1	2	3
Import Intensity	76	5	8
Export Intensity	15,03	3,51	64,22
Regional Market	,57	,26	,81
Global Market	,11	,03	,59
Upstream Dummy	1,00	,34	,63
Downstream Dummy	,20	,08	,33

ANOVA

	Cluster		Error			
	Mean Square	df	Mean Square	df	F	Sig.
Import Intensity	72892,700	2	107,306	207	679,299	,000
Export Intensity	42155,468	2	137,327	207	306,972	,000
Regional Market	4,318	2	,198	207	21,858	,000
Global Market	3,652	2	,067	207	54,177	,000
Upstream Dummy	6,379	2	,192	207	33,245	,000
Downstream Dummy	,820	2	,109	207	7,500	,001

Distances between Final Cluster Centers

Cluster	1	2	3
1		72,035	84,070
2	72,035		60,793
3	84,070	60,793	

Number of Cases in each Cluster

Cluster	1	35,000
	2	148,000
	3	27,000
Valid		210,000
Missing		,000

Appendix II: IBM SPSS Statistics – Regression Analysis Output

Commitment Level

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,426[a]	,182	,124	28,73909

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	26223,833	10	2622,383	3,175	,001[b]
	Residual	118108,766	143	825,935		
	Total	144332,599	153			

Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
(Constant)	-1,328	13,087		-,101	,919		
Competition	11,126	4,681	,195	2,377	,019	,848	1,179
Labour Intensity	,136	,191	,057	,714	,476	,909	1,100
Years of Operation	,413	,223	,153	1,851	,066	,833	1,200
Financial Performance	1,937	2,695	,060	,719	,473	,816	1,226
Size	,015	,007	,196	2,300	,023	,788	1,269
Capabilities Dummy	-4,681	3,339	-,112	-1,402	,163	,892	1,121
Institutional Void Dummy	6,439	3,617	,144	1,780	,077	,878	1,139
Weak Infrastructure Dummy	-5,606	5,665	-,080	-,989	,324	,869	1,151
Corruption Dummy	8,928	5,666	,129	1,576	,117	,855	1,169
Trade Incentives Dummy	,756	5,198	,011	,145	,885	,915	1,093

a. Dependent Variable: Commitment Level

Global Target Market

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,344[a]	,118	,057	14,916

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4268,073	10	426,807	1,918	,047[b]
	Residual	31817,778	143	222,502		
	Total	36085,851	153			

Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	-1,133	6,793		-,167	,868		
Competition	-,707	2,429	-,025	-,291	,772	,848	1,179
Labour Intensity	,217	,099	,180	2,190	,030	,909	1,100
Years of Operation	-,132	,116	-,098	-1,135	,258	,833	1,200
Financial Performance	1,160	1,399	,072	,829	,408	,816	1,226
Size	,004	,003	,111	1,257	,211	,788	1,269
Capabilities Dummy	-3,326	1,733	-,160	-1,919	,057	,892	1,121
Institutional Void Dummy	2,274	1,877	,101	1,211	,228	,878	1,139
Weak Infrastructure Dummy	1,521	2,941	,044	,517	,606	,869	1,151
Corruption Dummy	-2,057	2,941	-,059	-,700	,485	,855	1,169
Trade Incentives Dummy	4,423	2,698	,135	1,639	,103	,915	1,093

a. Dependent Variable: Global Target Market

Regional Target Market

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,363[a]	,132	,071	15,166

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4996,413	10	499,641	2,172	,023[b]
	Residual	32889,198	143	229,994		
	Total	37885,610	153			

Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	-11,286	6,906		-1,634	,104		
Competition	-,304	2,470	-,010	-,123	,902	,848	1,179
Labour Intensity	,282	,101	,229	2,802	,006	,909	1,100
Years of Operation	-,124	,118	-,090	-1,049	,296	,833	1,200
Financial Performance	4,617	1,422	,280	3,247	,001	,816	1,226
Size	-,002	,004	-,060	-,684	,495	,788	1,269
Capabilities Dummy	-,414	1,762	-,019	-,235	,815	,892	1,121
Institutional Void Dummy	1,185	1,909	,052	,621	,536	,878	1,139
Weak Infrastructure Dummy	-1,312	2,990	-,037	-,439	,661	,869	1,151
Corruption Dummy	1,812	2,990	,051	,606	,545	,855	1,169
Trade Incentives Dummy	1,586	2,743	,047	,578	,564	,915	1,093

a. Dependent Variable: Regional Target Market

Downstream Path

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,441[a]	,194	,138	20,77561

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14886,299	10	1488,630	3,449	,000[b]
	Residual	61722,538	143	431,626		
	Total	76608,838	153			

Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
(Constant)	-12,419	9,461		-1,313	,191		
Competition	-1,011	3,384	-,024	-,299	,766	,848	1,179
Labour Intensity	,498	,138	,285	3,618	,000	,909	1,100
Years of Operation	-,255	,161	-,130	-1,580	,116	,833	1,200
Financial Performance	5,777	1,948	,246	2,966	,004	,816	1,226
Size	,002	,005	,034	,403	,687	,788	1,269
Capabilities Dummy	-3,740	2,414	-,123	-1,549	,124	,892	1,121
Institutional Void Dummy	3,459	2,615	,106	1,323	,188	,878	1,139
Weak Infrastructure Dummy	,209	4,096	,004	,051	,959	,869	1,151
Corruption Dummy	-,245	4,096	-,005	-,060	,952	,855	1,169
Trade Incentives Dummy	6,009	3,757	,125	1,599	,092	,915	1,093

a. Dependent Variable: Downstream Path

Upstream Path

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,374[a]	,140	,079	27,105

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	17041,414	10	1704,141	2,320	,015[b]
	Residual	105061,995	143	734,699		
	Total	122103,409	153			

Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
(Constant)	5,026	12,343		,407	,684		
Competition	8,839	4,415	,169	2,002	,047	,848	1,179
Labour Intensity	,108	,180	,049	,600	,550	,909	1,100
Years of Operation	,405	,211	,164	1,924	,056	,833	1,200
Financial Performance	,798	2,541	,027	,314	,754	,816	1,226
Size	,007	,006	,102	1,170	,244	,788	1,269
Capabilities Dummy	-3,056	3,150	-,080	-,970	,333	,892	1,121
Institutional Void Dummy	3,297	3,412	,080	,966	,336	,878	1,139
Weak Infrastructure Dummy	-11,182	5,343	-,174	-2,093	,038	,869	1,151
Corruption Dummy	7,866	5,344	,123	1,472	,143	,855	1,169
Trade Incentives Dummy	-,148	4,902	-,002	-,030	,976	,915	1,093

a. Dependent Variable: Upstream Path