An Academic Route to Transnational Entrepreneurship: A Scandinavian-Tanzanian Safari[1]

Abstract

Can business school doctoral student-professor cooperation be leveraged to produce successful transnational business ventures? We investigate how business schools' social mission can be improved by promoting academic transnational entrepreneurship, and outline four routes to implementing such activities. We then explore the phenomena of academic transnational entrepreneurship involving a team of a Norwegian business school professor, a current PhD student from Sweden, and two graduated PhD students from Tanzania in a Scandinavian-Tanzania private equity venture which invests in Tanzanian firms. The longitudinal study focuses on the multi-year entrepreneurial discovery process leading up to venture founding and the first year of operations. We develop a theoretical foundation for transnational professor and doctoral student cooperation by presenting three enablers, or preconditions, that make such ventures possible: (1) transnational social capital, (2) transnational competencies, and (3) local social capital. Specifically, we identify three propositions that describe how student-professor cooperation can promote academic transnational entrepreneurship by: (1) enhanced entrepreneurial discoveries, (2) reduced transaction costs (of ongoing transfers) and (3) reduced agency costs of monitoring. We discuss implications for practice, policy, and future research.

Keywords: transnational entrepreneurship, PhD advising, trust-based networks, micro private equity, Tanzania

[1] "Safari" is the Swahili word for journey

INTRODUCTION

Western-based business school enroll an increasing number of foreign students (AACSB, 2011; Friga, Bettis, & Sullivan, 2003; Mitchell, 2007), and a significant share of these students return to their home countries. For example, 78% of African PhD students in Norway return to their home country (Olsen, 2013). For business schools, foreign students provide valuable income as they commonly pay full tuition (Hall & Sung, 2009) and internationalize classroom learning and extracurricular experiences (Rienties et al., 2015). One major benefit of foreign students that is not commonly acknowledged in the literature is that these students are excellent sources of knowledge and gateways to business opportunities abroad. This study focuses on the positive outcomes of professor and international PhD student interactions.

Business schools around the world struggle to produce social impact and to become more relevant to their communities. Indeed Nobel Laureate Muhammad Yunus's motivation to start a microfinance initiative stemmed from his disappointment with the disconnect between research and social impact:

> *"I began my career as an economics professor but became frustrated because the economic theories I taught in the classroom didn't have any meaning in the lives of poor people I saw all around me*" Yunus (2012).

Recent business school initiatives such as the newly created United Nations' PRME (Principles for Responsible Management Education) seek to fill this gap, as illustrated by the first principle: *"We will develop the capabilities of students to be future generators of sustainable value for business and society at large and to work for an inclusive and sustainable global economy"* (PRME, 2015). Business schools struggle to operationalize such demands and develop sustainable and impactful business models. We suggest a new model – academic transnational entrepreneurship which involves long-standing interactions among academics and their students to develop sustainable business enterprises. Academic

transnational entrepreneurship can generate sustainable value both for society at large and for individual students and faculty members. This new conceptual model comes at the intersection of academic entrepreneurship which has focused mostly on university spin-offs and technology transfer (e.g., Shane, 2004) and transnational entrepreneurship which describes "individuals that migrate from one country to another, concurrently maintaining business-related linkages with their former country of origin, and currently adopted countries and communities" (Drori, Honig, and Ginsberg, 2009: 1001). The academic entrepreneurship literature has thus far neglected the important relationships between PhD students and professors in terms of geographies.

The emerging transnational entrepreneurship literature (e.g., Carmichael, Drori, & Honig, 2010) focuses predominantly on individuals' business experiences and the emergence and maintenance of transnational entrepreneurship. Although certainly many immigrant and transnational entrepreneurs first came to their host countries for educational reasons (Wadhwa, Saxenian, Rissing, & Gereffi, 2007), there is little understanding of how these educational experiences might lead to new transnational entrepreneurial activity. The extant literature on transnational entrepreneurship focuses primarily on business immigrants (e.g., Portes, Guarnizo, & Haller, 2002). Moreover, the returnee entrepreneur literature (e.g., Filatotchev, Liu, Buck, and Wright, 2009) which sometimes includes transnational entrepreneurs, does not consider the academic ties.

Taken together, a conceptual model of academic transnational entrepreneurship acknowledges the importance of the relationships between PhD students and professors, and the long-lasting, cross-cultural business interactions that this makes possible. The issue of "inclusive and sustainable global economy", a phrase taking from PRME (2015) shown above, makes academic transnational entrepreneurship even more interesting, as a large number of Western-based students hail from emerging economies. Furthermore, most

international students intend to (or must due to visa restrictions) return to their home country, and when they return they can have significant impact their home countries.

Academic transnational entrepreneurship is particularly attractive due to the bleak long-term forecast for economic growth in the Western world, particularly Europe. Although emerging markets provide opportunities, it can be difficult for business school students (and professors) to actively participate in these opportunities. As one example, Sub-Sahara African countries' real GDP has grown 6-8% over the last decade (IMF, 2015); however, these markets face huge institutional challenges related to corruption (Transparency International, 2015) and shortages of talent and business skills (World Bank, 2014). Despite these challenges, foreign investors to Africa transfer significant funding—over $80 billion in 2014 as foreign direct investment and US$8 billion annually in private equity (*Economist*, 2015). To reduce barriers to business start-ups in emerging markets, we begin by highlighting four routes to academic transnational entrepreneurship.

FOUR ROUTES TO ACADEMIC TRANSNATIONAL ENTREPRENEURSHIP

Academic transnational entrepreneurship can take four different routes, and these routes can change over time, as shown in Table 1.[2] Conceptually we separate the involvement of professors (faculty members) and students on one dimension, and Western-based (Norway in our case) versus emerging market based (Tanzania in our case) on another dimension. The subsequent 2x2 matrix of interactions suggests four potential routes. The *transnational* element of such activity is the interaction of activities in the Western-based university and the emerging market counterpart. In this study we use the experience of MTI Investment as a conceptual illustration of academic transnational entrepreneurship. This activity, that later

[2] We focus on *transnational* entrepreneurship, but such entrepreneurial activity commonly takes place in a purely domestic context and particularly in relation to technology-oriented professor-student ventures.

became the company MTI Investment, was initiated by a Norwegian professor and two PhD students from Tanzania. The entrepreneurial venture was formalized when the PhD students moved back to their home country (Tanzania) and became faculty members themselves.

[Insert Table 1 here]

In this study we discuss one of the four routes to academic transnational entrepreneurship: via Western-based professors and doctoral students from emerging markets. However, the greatest potential for academic transnational entrepreneurship probably resides with student-to-student based ventures, and this could be stimulated by having cross-cultural teams of students exploring real life business cases in emerging markets – that could potentially be turned into businesses following graduation. Business schools could also stimulate such activities by facilitating access to funds – for example by business venture competitions where outside investors are invited to evaluate and potentially invest in companies.

We argue that emerging market students who spend multiple years in their adopted host country can potentially serve as bridge-builders across large institutional and cultural gaps. The policy implications of this study is that talented students [in our case, PhD students from Tanzania] can have long-lasting and value-adding implications for both the home country of the PhD student [in our case, Tanzania] and the host country [in our case, Norway]. Furthermore, we see the long-term relationship between students and professor(s) as an example of trust-based networks. Business school PhD programs typically involve a four year intensive residency that enables close and extended interaction between a professor and his/her student(s). This study highlights how doctoral student-professor relationships offer

largely untapped potential for transnational trust-based relationships and future entrepreneurial endeavors.

We acknowledge that the current rewards system for professors do not stimulate transnational entrepreneurship, as most professors probably lack the financial capital, motivation, time, and other resources to pursue such engagements. This could change if business school professors were actually rewarded for taking part in such activities, and if business school facilitated academic transnational entrepreneurship by providing venture funds, e.g., via a diverse set of stakeholders such as alumni and development agencies.

Three Unique Enablers of Transnational Entrepreneurial Activity

In this paper, we argue that there are several academic routes to transnational entrepreneurship. Based on participative observation of MTI Investment (in both Norway and Tanzania), we explore how the cross-country professor-doctoral student relationships can produce three unique enablers of entrepreneurial activity: (1) transnational social capital, (2) transnational competencies in bridging across international environments, and (3) local social capital. We argue that, over time, these three enablers facilitate three effects: (1) enhanced entrepreneurial discoveries, (2) reduced transaction costs (of ongoing transfers), and (3) alleviated agency costs of monitoring investments. These three effects can be formulated as propositions that enhance transnational entrepreneurship activities, as depicted in Figure 1 and further developed below.

[Insert Figure 1 about here]

Our first enabler, *transnational social capital*, is a natural bi-product of a successful long-term relationship between an advisor (professor) and his/her student (Ives & Rowley, 2005). This relationship is uniquely non-competitive as the student's success is closely related

to the professor's success. In fact, it is commonly observed that the relationship between an advising professor and his/her student is multiplex and can become a life-long relationship (Bowman, Hatley, & Bowman, 1995). This mutual friendship and appreciation is the foundation for other kinds of trust-based transactions beyond academic advising. One significant impediment to cross-country business in emerging markets is the institutionally weak environment, particularly with respect to contracting and establishing business relations (Khanna & Palepu, 2000; Khanna & Rivkin, 2001). Foreign investors face the "liability of foreignness" (Nachum, 2010); however, the professor-student relation can help by substituting weak institutions for trust-based social capital, such as access to unique networks and powerful decision-makers. The professor-doctoral student relationship produce two kinds of social capital effects: *transfer* of resources and capabilities between two countries, and *access* to already established social capital in the emerging country.

Our second enabler, *transnational competencies*, relates to the trans-territorial nature of the entrepreneurial ventures and emphasizes how transnational entrepreneurs have the unique ability to bridge business opportunities across countries (Özden & Schiff, 2005). Given that *"transnational entrepreneurs rely on diverse sets of resources - economic, social, cultural, and symbolic capital-to navigate multiple environments"* (Terjesen & Elam, 2009: 1093), we expect that the same underlying resources that enable new ventures to *navigate multiple environments* (Drori et al., 2009) are present in professor-student transnational relationship. Koehn and Rosenau (2002: 109) propose that transnational competence includes four key skills: analytical, emotional, creative/imaginative, and behavioral. Transnational analytic skills include the ability to analyze and comprehend different cultural behavior, and reliance on emotional skills to be genuinely interested and open to different behavior. An academic transnational entrepreneur's creative skills bridge various cultural differences to arrive at mutually beneficial agreements. Lastly, the behavioral part involves both the

communicative part of speaking the native language, and the functional part of maintaining and developing strong interpersonal relationships.

The third enabler is the existence of *local social capital* in both countries since the transnational entrepreneurial effort involves not only doing business in another country, but bridging the business environments of two countries. The implication of *local social capital* is that the entrepreneurial venture can access a network of friends and businesses to benefit the entrepreneurial effort.

These three enablers produce a number of preconditions that can increase the *potential* for transnational entrepreneurship. Specifically, we argue that that many returning students experience an entrepreneurial alertness, a state of mind that enhances their ability to recognize, develop and evaluate entrepreneurial opportunities. This phenomenon can be seen as a special case of the theory of entrepreneurial opportunity identification and development (Ardichivili, Cardozo, & Ray, 2003). We argue that this state of mind, of increased entrepreneurial awareness (EA), occurs for multiple reasons. First, returning students often face a reverse cultural shock when they return home (Ward, & Kennedy, 1993; Adler, 1981). Like the returning Osysseus did not recognize his homeland Ithaca after being away for many years, expressed "among what manner of people am I fallen" (Homer, 1900) so will also a returning doctoral student experience, a cultural shock which is different to that of a new comer or stranger (Scheutz, 1944). Many, returning students commonly experience academic problems, cultural identity conflicts, social withdrawal, depression, anxiety, and interpersonal difficulties (Gaw, 2000). Second, while the culture chock may be associated with negative emotions, it also implies that students will see their home country differently. For instance they might discover under-served product markets and successful business models that are *not* explored in their home country. These graduated doctoral students have been primed to see opportunities by being exposed to different business models in their host country. Doctoral

students witness these models firsthand in learning new ways of working and living in a new country, but also through classroom teaching about business models and sometimes also through qualitative research with businesses. Third, in their academic endeavors with their advisors, PhD students have also developed means of identifying 'new' areas of the literature in which to make contributions through their research. This new capability, which will differ from person to person, implies a new way of approaching problems and opportunities (Ardichivili et al. 2003). The PhD education process enhances the students´critical and analytical skills, and therefore we argue that they become better at perceiving a new and unique business opportunity. However, when doctoral students enter an academic life with stable but low economic compensation, their ability to act on these opportunities are severely hampered by resource constraints, such as time, lack of financial capital, and "hands on" business experience, implying that the entrepreneurial alertness that has been developed, needs continued support, or else will be lost.

Taking together the above, we suggest that;

Proposition 1a: There is a positive association between close doctoral student-professor cooperation and the ability to recognize an entrepreneurial opportunity.

Proposition 1b: There is a positive association between close doctoral student-professor cooperation and the ability to exploit an entrepreneurial opportunity.

One of the global drivers of foreign direct investment is the apparent transaction cost when firms transfer resources across countries (Dunning, 2003). Hierarchies of multinational companies such as that between a parent company and its host-country subsidiary reduce these transaction costs. In our model, we view the professor-student relationship as a potential vehicle for business activities that reduces transaction costs. These reduced transaction costs are due to the closer supervision and strong bonds that develop between a doctoral students

and his/her advisor, which will significantly lower the asymmetric information in a business formation setting. The close bonds between a PhD student and his/her supervising professor are often manifested in the opening acknowledgements of PhD dissertations which frequently thank the faculty advisor(s) for providing substantial professional but also personal guidance, and sometimes use language about being a co-pilot on an academic journey, for example.. We argue that this creates a condition for efficient transferring of ideas, capital and competencies (as oppose to transfers in larger MNEs). In fact this phenomenon is observed in the globalization of business education:

> *"…globalization of management education is a key enabler of globalization in many other fields. Increased connectivity across countries has facilitated the transfer of ideas and collaborative development of innovations in fields.."* (AASCB, 2011, p.5).

Based on the above discussion, we offer the following proposition:

> *Proposition 2: There is a positive association between close doctoral student-professor cooperation and subsequent business ventures' ability to limit transaction cost related to cross-country transfer of capital and competencies.*

In this study we link the entrepreneurial discovery and reduced transaction costs by highlighting the *"connectivity"* that transcends the transfer of *ideas* and *capital*. However, cross-country business activity is not only based on the ongoing transfer of resources, but also about developing routines and creating well functioning interactions, including frequent visits and frequent skype-conversations, especially because of the long distance. Importantly is also the creating of routines to monitor investments already made and the evaluation of new investments. The monitoring of such assets is commonly very expensive, as the legal and institutional environment is unfamiliar to the Western-based capital providers. We argue that the trust-based relationship between professor and student provides an excellent basis for reduced agency cost in order to monitor such investments. Another attractive feature of the

professor-student relationship is the general lack of fixed costs. Furthermore, the professor and student have well-developed routines for working through problems and resolving them in an efficient and productive matter. When a multinational company, or a foreign-based fund or investor, seek investment in unfamiliar environments, this commonly involves a significant minimum activity – such as a full-time expatriate employee and a permanent office. Based on the professor-student relationship, this can be based on domestic wages, and could also involve part-time employment. Based on the above discussion, we propose:

> *Proposition 3: There is a positive association between close doctoral student-professor cooperation and subsequent business ventures' ability to reduce monitoring cost of transnational investments.*

FROM THEORY TO PRACTICE

The start-up MTI Investment Ltd. in Tanzania, and its Norwegian parent company MTI Investment AS (www.mti-investment.com), illustrates how the theoretical framework presented above can be applied to generate a new business venture based on academic transnational entrepreneurship. We also highlight that academic transnational entrepreneurship was instrumental in redefining the business model and corporate governance structure, from private equity to *micro* private equity, inspired by the banking vs. microbanking analogy (see Table 2). We emphasize that the actual entrepreneurial process leading up to the establishment of the company in 2014 (Table 3) was developed in tandem with the conceptual model (Table 4) by the participating actors.

The entrepreneur capabilities that the professor-student relationship produced, was put to "use" in relation to the high growth private equity industry in East Africa (*Economist*, 2015). We argue that the founders choice of industry was secondary, as the "enablers" and the

corresponding "promoters" (shown in terms of the three propositions) could have been applied in multiple industries.

The lack of organizational innovations in the private equity industry in Tanzania the team's experience in finance made it attractive to the entrepreneurial- oriented professor-student team to pursue the private equity industry. Since the start, the private equity industry is gradually attracting more larger players such as the USD 200 million Mkoba Private Equity Fund in 2015 (Mulupi, 2015). It was the team members' assessment that the current private equity industry in East Africa was not sufficient adapted to the local institutional environment and that most private equity funds operated out of Nairobi in Kenya or Johannesburg in South Africa. In fact the observed common business practices were rather similar to the established practices in high cost developed markets, with highly paid professionals (a large share of expatriates) and lengthy due diligence processes before investing. The use of locally trained managers was one of the innovations in the microfinance industry. We see that the micro private equity equivalent could achieve the similar advantages by using more local based staff, and thus substantially reduce cost. However, this demands a trust-based network, where the transnational academic network is a key feature. As shown in Table 2, the micro private equity could potentially include organizations with a dual mission, of pursuing both for-profit (or at least financial sustainability) and social impact, similar to what is commonly observed in the microfinance industry (Mersland and Strøm, 2010).

[Insert Table 2 about here]

The redefined micro equity business model was also driven by a need to make the cost structure/level appropriate to the new kinds of private equity clients, the SMEs. This is similar to the business model innovation that Yunus and his Grameen Bank developed to provide

microfinance to poor customers, in order for such clients to be “bankable”. MTI’s argument is that the professor-student based cooperation facilitates funds to SMEs who otherwise would not have access to private equity through established actor and business models. Specifically, this alternative private equity model is supported by lower cost of monitoring, lower transaction costs, and better access to entrepreneurial opportunities. Even as the typical funding is substantially smaller than that required by regular micro private equity firms, this income disadvantage is compensated by lower staff costs and swifter decision times, thus producing an attractive financial return to private equity fund providers.

Table 3 summarizes the multi-year process that eventually led to the start of the micro private equity venture – MTI Investment. The table highlights how the key actors, one professor and three PhD students, took part in the multi-year process. In 2008 two Tanzanian nationals, Neema Mori and Gibson Munisi, came to the University of Agder in Kristiansand, Norway, to undertake a PhD in International Management. Both students had university education and business experience from Tanzania. Their PhD advisor became Professor Trond Randøy who served over a decade as a board member of a Norwegian-based NGO working in the area of microfinance, gaining a familiarity with East Africa. When the third PhD student, Pontus Engström became part of team, also supervised by Professor Trond Randøy, this further expanded the skill set and faciliated to the necessary critical mass in order to get the business started.

[Insert Table 3 about here]

Pre-venture and pre-supervision phase

The first phase of the venture creation was based on the unique competencies that the professor, as well as the PhD students, possessed prior to entering into to the professor-student

relationship. Both Tanzanian students had business knowledge and experience that made it easier for them to quickly launch the MTI private equity business.

Doctoral supervision phase

The supervisory phase of the focal professor-student relationship started in 2008, without the professor or the students having any prior contact or knowledge of each other. A common interest in economic development and entrepreneurship, and especially in the context of East Africa, was instrumental in bringing the professor and the PhD students closer together. The close social relationship between professor and students was evident in the numerous informal visits by the two Tanzanian students together with their children, to the professor's home for informal dinners. The friendly, close relationship led them to plan a joint trip to Tanzania in 2010, in which the professor's wife and children took part. The visit to Tanzania included a personal element (visits to the PhD student's parents), academic elements (visiting and guest lecturing at the University of Dar es Salaam), and business elements (visiting entrepreneurs and financial institutions). Based on the experience of this visit, they agreed to explore the possibility of developing a shared investment activity. This moved the professor-student relationship from purely an advising relationship, to one of mutual friendship– and ultimately to one that also included entrepreneurial discovery and a business partnership. In 2012 Pontus Engström, a Swedish national, became a PhD student of Professor Randøy. Engström's extensive experience as a CFO and portfolio manager helped the team to access capital providers in the Scandinavian market. Engström had also experienced Tanzania, including the practice of microfinance in Tanzania, and had a similar research interest as Professor Randøy and the two Tanzanian PhD students.

Entrepreneurial discovery phase

This entrepreneurial discovery phase was finalized in early 2014 when the professor, the two Tanzanian PhD students (the first one graduating in November, 2012 and the second January 2014), and the new Swedish PhD student decided that MTI Investment should be established. The co-founders named the company MTI as 'mti' is the Swahili (an official language of Tanzania and East Africa) word for tree. The name MTI symbolizes the company's focus on investing in growing companies, with the potential to bear fruit from the long-term efforts of investing, coaching, mentoring, and monitoring the portfolio companies (www.mti-investment.com). Furthermore, the MTI "tree" in the company logo symbolize environmentally friendly investments.

Business assessment phase

The business assessment phase (from 2010-2013) revealed a number of investment opportunities, but also a number of institutional impediments such as the cost of establishing a business, and uncertainty about legal issues and the secure transfer of money. MTI Investment AS was established in Norway 2014, and simultaneously MTI Investment Ltd. Tanzania was established as a subsidiary, with Dr. Mori and Dr. Munisi as minority shareholders. MTI's business mission is to provide capital and mentoring to small and medium sized firms (SMEs) in Tanzania. Specifically, MTI seeks well-run SMEs that possess the willingness to allow a foreign investor to become a co-owner and the potential to become national champions in their respective industries. During the first year of establishment, the first investments were made in two Tanzania-based firms: a dairy (Shambani Milk in Morogoro region of Eastern Tanzania) and a meat processing company (Chobo Investments, in Mwanza region of Western Tanzania). Both firms had positive cash flow at the time of MTI's investment, but needed capital to expand to larger national markets. MTI's third investment came in Spring 2015— a

construction firm based in Dar es Salaam which wanted to expand into locally produced build material.

With a business model that utilizes local staff (including the original PhD students from Tanzania) and long-term value creation, MTI attempts to take the cost effectiveness of microfinance to the private equity market. As of mid-2015, MTI has raised approximately US$ 2 million, and invested this amount in three Tanzania firms: a dairy processing, a meat processing plant, and a construction company. This implies that MTI can profitably invest in firms early on, with a capital commitment of typically US$ 200,000 to US$ 2 million, whereas other private equity firms commonly start at US$ 3-5 million, but prefer the US$ 10+ million deals (World Bank, 2014).

MTI's unique approach in identifying and working with Tanzanian companies is based on the professor-doctoral student relationship that was built over years. This relationship was expanded to include other actors through all four partners' university-based networks. The university-based approach to investing is observed by the fact that MTI seeks businesses that are run by highly competent, university-educated managers and owners. In seeking such investments, MTI capitalizes on its university-based networks, and the social capital and competencies of the founding team. By being university-based, MTI is able to be at the forefront of knowledge creation and entrepreneurship in East Africa.

[Insert Table 4 about here]

Evolution of the professor-doctoral student relationship

As shown earlier in Table 3, the conceptual foundation for the evolution of the professor-doctoral student relationship and the subsequent establishment of MTI Investment hinges on specific skills. Specifically, we highlight one enabler prior to establishing the firm: *transnational competencies* in business and academia relevant to East Africa. We argue that

this enabler was present before the professor-student relationship was established (prior to 2008), but that these competencies were significantly strengthened during the period from 2008-2013.

The second enabler is *transnational social capital* that facilitate the transfer of knowledge – or capital in efficient way. Professor Randøy worked closely with the two Tanzania students who successfully defended their PhDs in 2012 and 2014 respectively. The professor and the doctoral students developed rich social capital on the basis of this close cooperation, and subsequently co-authored several academic articles based on this cooperation (e.g., Mori et al., 2015; Munisi et. al., 2014). In the case of MTI, the ability to transfer large amounts (to individuals) without a well-developed corporate infrastructure (but relatively small in private equity terms) provides MTI with a low cost solution. In the MTI case, the two former PhD students, now Dr. Mori and Dr. Munisi, had in-depth knowledge of the local financial market which is the third enabler – access to *local social capital*. Local social capital is vital, and complements the legal contracts signed with businesses. Without this enabler, we argue that international businesses run a larger risk of failure.

Thanks to the social network and trust which exists between the former PhD students and their local business network, MTI is able to quickly identify and assess unique investment opportunities in Tanzania. In line with proposition 1, we observe that the student-professor relationship was instrumental in making entrepreneurial discoveries in Tanzania.

[Insert Figure 2 about here]

Tanzania's capital market is small and with few visible actors, which is also partly true for all of East Africa (Hearn & Piesse, *Forthcoming*). This implies that professional investment activities are rather underdeveloped, and this exposes new investors to big risks.

The lack of access to equity funding among the "missing middle" of Sub-Sahara firms, Tanzania included, is rather evident as it was relatively easy for MTI to find a large pool of investment candidates, however, their quality varied greatly. Figure 3 shows the key steps and activities in the investment process. In the first year of MTI operations, the Tanzanian colleagues screened approximately 100 firms which they learned about through the networks of the Tanzanian team members, particularly their university (University of Dar Es Salaam) contacts and familiarity with business promoting non-governmental organizations East Africa Challenge Fund (http://www.aecfafrica.org/).. They subsequently developed a shorter list of 20 firms based on financial screening, quality of the business concept, ROA, growth prospects, and ethical conduct. The entire Tanzanian and Scandinavian firm evaluated ten firms via company visits, scrutiny of top management, and a visual inspection of production cite. Finally, following a signed memo of understanding (MoU) and due diligence, MTI signed a contract and invested in three firms. MTI invested convertible debt, which gave MTI the option to convert the dispersed loan into an equity position after a few years.

The cooperation between MTI and the local invested firm (in which MTI commonly takes an equity option of 25-60%) is spelled out in a signed cooperative agreement. This is a legal document, but it also communicates a common vision and intentions, emphasizing the trust-based nature of the relationship. Unlike other providers of capital (typically banks), MTI does not require property as collateral from its investees. When MTI provides capital the assets that this provides are used as collateral. This is attractive to investees since Tanzanian banks commonly require at least 125% collateral in property order to fund an enterprise. This imply a very limited access to debt funding for SMEs in Tanzania, and equity funding is practically non-existant for these firms.

The elements of the business model that MTI uses have been successful in the microfinance industry where a combination of simple legal contracts and trust-based relations

reduces the need for more costly banking methods. Based on the strong social capital of the local team (Dr. Mori and Dr. Munisi) and the trust-based relationship between the former PhD students and the foreign professor, MTI is able to keep the transaction costs associated with transfer of capital and knowledge lower than the alternative capital providers, such as local banks, multinational firms, or foreign private equity providers.

Monitoring a foreign investment is a costly activity for a foreign capital provider. Such agency costs can be substantial due to the involvement of high-paid expatriates and costly and reputable law and auditing firms. MTI uses its local staff, the graduated PhD students, as corporate board members in the invested firms, and they are also more cautious when considering the involvement of high-paid law and audit professionals.

DISCUSSION

This paper outlines four conceptual routes for academic transnational entrepreneurship. We make a conceptual model of how such entrepreneurial activity can come about. We focus our discussion on one such conceptual route to academic transnational entrepreneurship, specifically the unique relationship between emerging market PhD student(s) and their Western-based professor(s). We argue that this has been the basis for the establishment of MTI Investment - a Scandinavian-Tanzanian investment company engaged in “micro” private equity firm.

We argue that three factors enable the cross-country professor-student team to establish a viable emerging market business: (1) competencies that helped to bridge two very different business environments, (2) access to transnational social capital (both within the host country and between the home and the host country), and (3) local social capital within the business

community. The access to transnational social capital was based on the life-long relation that the PhD student had gained through extended family, friendship, fellow students, and former business relations.

Our longitudinal study of the entrepreneurial process, leading up to the establishment of MTI Investment, illustrates how the multi-year (2008-2015) student-professor relationship facilitated the entrepreneurial discovery of the student-professor team. Their long-term relationship made it possible to actively develop and discover entrepreneurial opportunities between 2010 and 2013, and at the same time limit significant cost expenditures, and then implement the business idea fully in 2014. This low cost approach to transnational entrepreneurship makes *academic* transnational entrepreneurship a particularly attractive and feasible business model.

The ability to transfer competencies and capital between Scandinavia and Tanzania was particularly facilitated by the fact that the Tanzania PhD students had experience with Western-based business models, and that they could help to implement and adapt this in Tanzania. Based on their unique trust-based networks within Tanzania, and between Tanzania and the parent company in Norway, this facilitated lower transaction cost of transfer of capital than in a typical arms-length transaction. This was particularly important when establishing a relative small sized private equity actor, where start-ups costs and fixed costs must be kept at a minimum. With relatively small sized private equity investment (between US$200,000 and US$2 million) it was important that the ongoing monitoring costs were kept at a minimum. This organizational set-up allowed agency costs to be kept lower than in typical private equity firms, as the use of local staff members (including the PhD students) as board members in the invested firms facilitated lower monitoring costs, but still involved highly competent individuals.

We acknowledge that professor-student transnational entrepreneurship appears to be rare; however, we see two avenues to stimulate such activities. Business school could help to facilitate funds for such activities. We believe that business school alumni could take great interest in such activity, and potentially also development agency.

Before concluding, we acknowledge some limitations of our study. First, we use only one case to illustrate academic transnational entrepreneurship, and this experience might not generalizable to other institutional environments without considerable adaptation. Although there is a great potential for *academic transnational entrepreneurship* (given the number of PhD students from emerging economies), the willingness and interest for such entrepreneurship might be limited on both the student side and the professor side. Second, although action research is important, we must consider the role that we played in our research, as three of the four co-authors of this paper have been actively involved in establishing MTI Investment. We argue that this research shows that "it is possible" to do *academic transnational entrepreneurship*, just like going to the moon proves that it is *possible* to do so, but the explanations for the relationships we propose might not be valid to other cases.

CONCLUSION AND FUTURE RESEARCH DIRECTIONS

Around the world, there is growing appreciation of the role that entrepreneurship plays in stimulating economic growth and development. Using the new concept of academic transnational entrepreneurship, we use the Scandinavian-Tanzania venture of MTI Investment to illustrate how faculty and doctoral students can create sustainable enterprises that cross national borders.

In this study we argue that academic transnational entrepreneurship can take place in many industries, but it can be particularly appropriate when there is a potential for substantially changes in an industry (and thus demand a high degree of intellectual and analytical capacity). This study presents an interesting parallel between the global microfinance industry and the new micro private equity model. Nobel Laureate Muhammad Yunus was an economics professor who developed an alternative banking model that allowed banking for the poor. In a parallel fashion, MTI's concept of *micro* private equity try to combine the trust-based business model of microfinance with the monitoring, mentoring and resource provision of private equity, and highlight that academic networks provide a good vehicle for such an alternative business model.

We believe that the phenomenon of an *academic* route to transnational entrepreneurship is ripe for future research, and offer three general directions for future researchers. First, we highlight that the expanded social mission of Business Schools around the world should push business researcher to address how academia can enhance entrepreneurship – at all levels of education (not only with respect to PhDs as is the focus of this study). Second, we see a need for more research on the how academic influence can transform industries, such as the private equity industry in emerging markets. Third, we see a need to further research investment processes in various investment vehicles (private equity funds, government support schemes etc.) or investment companies. Forth, we see a need to research the extent and drivers of cross-country academic networks to be vehicle of transfer of ideas – typically between Western-based institutions/professors and their counterpart in emerging markets.

References

AACSB 2011. Globalization of Management Education: Changing International Structures,Adaptive Strategies, and the Impact on Institutions. (http://www.aacsb.edu/~/media/AACSB/Publications/research-reports/AACSB%20Globalization%20Of%20Management%20Education%20Task%20Force%20Report%20-%202011.ashx accessed 26 February, 2015.

Bowman, V. E., Hatley, L. D., & Bowman, R. L. (1995). Faculty- student relationships: The dual role controversy. *Counselor Education and Supervision*, *34*(3), 232-242.

Adler, N. J. (1981). Re-entry: Managing cross-cultural transitions. *Group & Organization Management*, 6(3), 341-356.

Ardichvili, A., Cardozo, R., & Ray, S. (2003). A theory of entrepreneurial opportunity identification and development. *Journal of Business venturing*,18(1), 105-123.

Brush, C. G., Duhaime, I. M., Gartner, W. B., Stewart, A., Katz, J. A., Hitt, M. A., ... & Venkataraman, S. (2003). Doctoral education in the field of entrepreneurship. *Journal of Management*, *29*(3), 309-331.

Carmichael, B. A., Drori, I., & Honig, B. (Eds.). (2010). *Transnational and immigrant entrepreneurship in a globalized world*. University of Toronto Press.

Drori, I., Honig, B., & Wright, M. (2009). Transnational entrepreneurship: An emergent field of study. *Entrepreneurship Theory and Practice*, *33*(5), 1001-1022.

Dunning, J.H. 2003. Some antecedents of internalization theory. *Journal of International Business Studies 34* (2), 108-115.

Economist, 2015, Private equity in Africa. Unblocking the pipes. Jan. 24th issue.

Filatotchev, I., Liu, X., Buck, T., & Wright, M. (2009). The export orientation and export performance of high-technology SMEs in emerging markets: The effects of knowledge transfer by returnee entrepreneurs. *Journal of International Business Studies*, *40*(6), 1005-1021.

Friga, P., Bettis, R., & Sullivan, R. 2003. Changes in graduate management education and new business school strategies for the 21st century. *Academy of Management Learning and Education*, 2*: 233-249.*

Gaw, K. F. (2000). Reverse culture shock in students returning from overseas. International Journal of Intercultural Relations, 24(1), 83-104. doi: http://dx.doi.org/10.1016/S0147-1767(99)00024-3.

Green, S. G., & Bauer, T. N. (1995). Supervisory mentoring by advisers: Relationships with doctoral student potential, productivity, and commitment. *Personnel Psychology*, *48*(3), 537-562.

Grey, C. (2004). Reinventing business schools: The contribution of critical management education. *Academy of Management Learning & Education*, *3*(2), 178-186.

Hall, G., & Wai-Ching Sung, T. (2009). Mind the gap? A case-study of the differing perceptions of international students and their lecturers on postgraduate business programmes. *International Journal of Management Education*, *8*(1), 53-62.Hearn, B., & Piesse, J. Forthcoming, The Impact of Firm Size and Liquidity on the Cost of External Finance in Africa. *South African Journal of Economics*, DOI: 10.1111/saje.12062

Homer. (1900). The Odyssey. Retrieved April 28, 2015, from http://www.perseus.tufts.edu/hopper/text?doc=Perseus:text:1999.01.0218:book=13:card=5

IMF. 2015. World Economic Outlook.

Ives, G., & Rowley, G. (2005). Supervisor selection or allocation and continuity of supervision: PhD students' progress and outcomes. *Studies in Higher Education*, *30*(5), 535-555.

Khanna, T., Rivkin, J. W., 2001. Estimating the performance effects of business groups in emerging markets. Strategic Management Journal 22: 45-74.
Khanna, T., Palepu, K., 2000. Is group affiliation profitable in emerging markets? An analysis of diversified Indian business groups. Journal of Finance 55(2): 867-891
Kickul, J., Terjesen, S., Bacq, S., & Griffiths, M. (2012). Social business education: An interview with Nobel Laureate Muhammad Yunus. *Academy of Management Learning & Education*, *11*(3), 453-462.
Koehn, P. H., & Rosenau, J. N. (2002). Transnational competence in an emergent epoch. *International Studies Perspectives*, *3*(2), 105-127.
Mitchell, T. 2007. The academic life: Realistic changes needed for business school students and faculty. *Academy of Management Learning and Education*, 6: 236-251.
Mori, N., Golesorkhi, S., Randøy, T., & Hermes, N. 2015. Board composition and outreach performance of microfinance institutions. *Strategic Change*, 24, 1-2.
Munisi, G., Hermes, N., and Randøy, T. (2014). Corporate boards and ownership structure: Evidence from Sub-Saharan African countries. *International Business Review*.
Nachum, L. 2010. When is foreignness an asset or a liability? Explaining the performance differential between foreign and local firms. *Journal of Management* 36, 714-739.
Mitchell, T. 2007. The academic life: Realistic changes needed for business school students and faculty. *Academy of Management Learning and Education*, 6: 236-251.
Mulupi, D. (2015, February 26). Private equity firm wants to propel Tanzanian businesses to greater heights. *How We Made It in Africa*.
Nyland, C., Forbes-Mewett, H., & Härtel, C. E. (2013). Governing the international student experience: Lessons from the Australian international education model. *Academy of Management Learning & Education*, *12*(4), 656-673.
Olsen, T. B. (2013). Utlendinger med norsk doktorgrad – hvor blir de av? En undersøkelse basert på registerdata. Rapport 17. NIFU, Oslo.
Özden, Ç., & Schiff, M., 2005. International migration, remittances and the brain drain. Washington, DC: The World Bank.
Portes, A., Guarnizo, L. E., & Haller, W. J. (2002). Transnational entrepreneurs: An alternative form of immigrant economic adaptation. *American Sociological Review*, 278-298.
PRME. Principles for Responsible Management Education. (2015). http://www.unprme.org/about-prme/the-six-principles.php Accessed April 24, 2015.
Shane, S. A. (2004). *Academic entrepreneurship: University spinoffs and wealth creation*. Edward Elgar Publishing.
Terjesen, S., & Elam, A. (2009). Transnational entrepreneurs' venture internationalization strategies: A practice theory approach. *Entrepreneurship Theory and Practice*, *33*(5), 1093-1120.
Transparancy International. 2015. Corruption perception index. http://www.transparency.org/research/cpi/ Accessed February 26, 2015.
Wadhwa, V., Saxenian, A., Rissing, B. A., & Gereffi, G. (2007). America's new Immigrant entrepreneurs: Part I. *Duke Science, Technology & Innovation Paper*, (23).
Ward, C., & Kennedy, A. (1993). Psychological and Socio-cultural Adjustment during Cross-cultural Transitions: A Comparison of Secondary Students Overseas and at Home. International Journal of Psychology, 28(2), 129-147. doi: 10.1080/00207599308247181

World Bank. 2014. Meeting Africa's demand for skills: the role of regional centers of excellence (English), report #85806.

Wright, A., Murray, J. P., & Geale, P. (2007). A phenomenographic study of what it means to supervise doctoral students. *Academy of Management Learning & Education*, *6*(4), 458-474.

Yunus, M. (2012, September 10). A Global Conversation to Join. Huffington Post. Retrieved April 28, 2015, from http://www.huffingtonpost.com/muhammad-yunus/a-global-conversation-to-_b_1951292.html

Figure 1: The relation between doctoral student-professor cooperation and transnational entrepreneurship

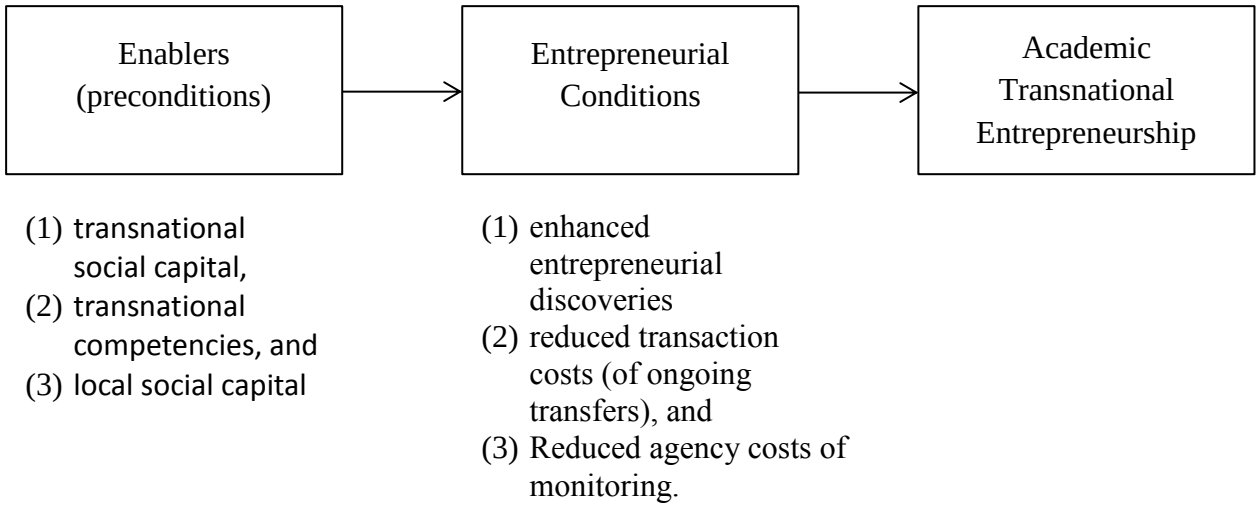

Figure 2: The Investment process – filtering out the potential market leaders

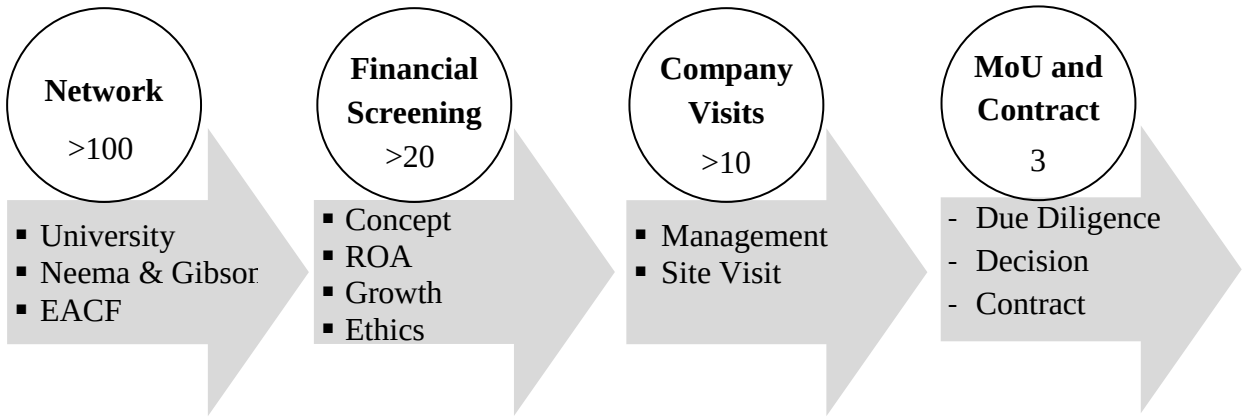

Table 1: Four Academic Routes to Academic Transnational Entrepreneurship

		Advanced Economy	
		Professors	**Students**
Emerging Economy	**Professors**	*(1) Advanced economy* professors with *Emerging economy* professors (the case of MTI today)	*(2) Advanced economy* students with *Emerging economy* professor
	Students	*(3) Advanced economy* professors with *Emerging economy* students (this is where MTI started)	*(4) Advanced economy* students with *Emerging economy* students

Table 2: What Micro Private Equity can Learn from Microfinance

	Banking		**Private Equity**	
Corporate Governance	**Traditional banking**	**Micro-finance**	**Traditional Private Equity**	**Micro Private Equity**
Ownership type	For-profit	Both for-profit and non-profit	For profit	For profit & Impact investors
Staffing	Expats, or highly educated nationals	National, medium level of education	Expats & highly educated nationals	National, highly educated
Degree of importance of trust-based networks	Low	High	Low/Medium	High/Medium
Outcomes & key features				
Profitability	High	Medium	High	High
Cost of funds provided to customers (Tanzania used as a case)	19-25%	25-40%	20-30% *requirement*	*20-30% return requirement*
Decision speed	Long: weeks/ months	Short: days	Long: months/year	Medium: Months
Minimum loan/equity amount (Tanzania)	10,000 USD	100 USD	5 million USD	100,000 USD

Sources: Armendáriz, B., & Morduch, J. (2010). *The economics of microfinance* (2nd ed.). Cambridge: MIT Press. Authors' collection of data.

Table 3: Evolution of the professor-student relationship: the empirical basis

	Pre-venture& supervision phase (before 2008): important preconditions	Supervisory phase (2008-2012)	Entrepreneurial discovery phase (2010-2013)	Business start-up and operating phase (2013 and beyond) with the assignment of formal roles:
Professor Trond Randøy	i) Experience as co-founder of several business in Norway and the US. ii) Ten years of exposure to East Africa as a board member of microfinance NGO	i) Ongoing supervisory relationship with the three students. ii) Visit students' si home countries (Tanzania and Sweden).	i) The visit to Tanzania is revealed big opportunities, but also great business challenges.	i) Board chair of both MTI Investment Ltd Tanzania and MTI investment AS in Norway ii) Raise funds
PhD-student Neema Mori (2008-2012)	i) Experience as university teacher and consultant, with a focus on microfinance, in East Africa. ii) Four years experience of running a small business	i) Ongoing supervisory relationship	i) A business exploring visit to Tanzania in 2010. ii) From 2012 on started to systematically look for investment opportunities. iii) Re-familiarize herself with the Business environment in Tanzania	i) CEO of MTI Investment Ltd, Tanzania ii) Familiarize with legal, regulatory and tax environment for businesses iii) Identify businesses and conduct initial due diligences
PhD-student Gibson Munisi (2008-2013)	i) Experience as controller in a large internationally owned firm in Tanzania ii) Six years experience as an auditor in one of the four largest global auditing firms	ii) Ongoing supervisory relationship	i) From 2013, Munisi systematically looked for investment opportunities.	i) CFO of MTI Investment Ltd, Tanzania
PhD-student Pontus Engström (2012-2015)	i) Experience as portfolio managers in Sweden and investment banking in the UK, ii) Experience as CFO of an NGO investing in microfinance in Africa.	i) Attracted to University of Agder based on research in microfinance and emerging market finance	Visits and interaction with advisors and co-investors in Sweden 2013 and beyond.	i) CEO of MTI Investment AS, Norway and board member of MTI Investment Ltd Tanzania ii) Raise funds

Table 4: Evolution of the professor-student relationship: the conceptual foundation

	Pre-venture phase (before 2008): important preconditions	**Build-up of professor-student relationship (2008-2012)**	**Entrepreneurial discovery phase (2010-2013)**	**Business start-up and operating phase (2013 and beyond)**
Supervisor Professor Trond Randøy	**Transnational competencies** in business and academia relevant to East Africa	Simultaneous build-up of enablers: **Transnational competencies** and **transnational social capital** (student-professor) shown by informal build-up of friendship between professor and students.	**Entrepreneurial discovery**: the business model of "micro private equity" was being developed in close interaction with students.	Capitalizes on **reduced transaction costs** of resource transfers, as well as **alleviated agency cost of monitoring** investments. Capitalizes on social capital to raise capital.
PhD-student Neema Mori (2008-2012)	**Transnational competencies** in entrepreneurship and academia relevant to East Africa **and local social capital** (from life-long relations)	Simultaneous build-up of enablers: **Transnational competencies** and **transnational social capital**(student-professor)	**Entrepreneurial discovery**: the business model of "micro private equity" was being developed in close cooperation with professor.	Capitalizes on **reduced transaction costs** of resource transfers, as well as **alleviated agency cost of monitoring** investments
PhD-student Gibson Munisi (2008-2013)	**Transnational competencies** in business relevant to East Africa **and local social capital** (from life-long relations)	Simultaneous build-up of enablers: **Transnational ompetencies** and **transnational social capital**(student-professor)	**Entrepreneurial discovery**: the business model of "micro private equity" was being developed in close cooperation with professor.	Capitalizes on **reduced transaction costs** of resource transfers, as well as **alleviated agency cost of monitoring** investments
PhD-student Pontus Engström (2012-2015)	**Transnational competencies** in business and finance – relevant when getting access to funding	Simultaneous build-up of enablers: **Transnational ompetencies** and **transnational social capital**(student-professor)	Was recruited after the initial entrepreneurial discovery phase. Was instrumental in developing the business concept from an equity fund to an investment company & micro private equity	Capitalizes on **alleviated agency cost of monitoring and attracting** investments. Capitalizes on social capital to raise capital.