

# Entrepreneurial change in government-led development: Ethiopian universities

Entrepreneurial  
change

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## Abstract

**Purpose** – The purpose of this paper is answer the research question to what extent Ethiopian universities can be considered to be entrepreneurial and explains possible differences among these universities.

**Design/methodology/approach** – The paper is inspired by a mixed methods study at nine universities in Ethiopia applying the entrepreneurial university framework of the European Commission/OECD: a content analysis of university policy and educational documents, a structured survey with 203 respondents, in particular staff and students, and in-depth interviews and focus group discussions with 223 people comprising university top-management, faculty, students and external stakeholders.

**Findings** – Findings indicate that entrepreneurial activities in Ethiopian universities are at their infant stage with limited differences among the universities. The universities are operating in a top-down, central governmental-led development that is not enabling entrepreneurial behaviour at the level of the individual institutions. The paper argues that within this context, leadership is the lever for an entrepreneurial turn at the universities.

**Social implications** – Entrepreneurship development is a priority in many African countries as an instrument for employability of the predominant young populations towards which universities are expected to contribute considerably. The study highlights the tension between a strong say of the government in university operations and creating an autonomous, integrated entrepreneurial culture.

**Originality/value** – The results of this study have relevance for the higher education community in terms of understanding the complexity of transforming institutions into more entrepreneurial organisations in Africa. To the best of the authors' knowledge, there is no previous study that examines entrepreneurial characteristics of several universities in Ethiopia.

**Keywords** Employment, Ethiopia

**Paper type** Research paper

## Introduction

Ethiopia is the second most populous country in Africa with about 100m people of which 64 per cent is below 25 years of age, with a net population growth of 2.89 per cent (CIA, 2016). Despite the firm economic growth (a GDP growth rate of 10.2 per cent in 2015 and 10.3 per cent in 2014) (CIA, 2016), Ethiopia is facing high unemployment among its young population, in particular in urban areas (Broussar and Tekleselassie, 2012). The official national unemployment rate in 2015 was 16.8 per cent (Trading Economics, 2016).

The Government of Ethiopia wants to improve access to higher education institutions, but has no capacity to absorb all the people who graduate from the institutions (Federal Democratic Republic of Ethiopia, 2015). It expects graduates to create employment opportunities for themselves. In this context, higher education institutions started offering



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entrepreneurship courses in limited programmes including business studies and educational management as a way to develop the entrepreneurial mind-set of graduates. However, making students more entrepreneurial requires also an entrepreneurial university (Röpke, 1998; Kirby, 2006; IPB, 2012; Fayolle and Redford, 2014). This paper therefore focusses on the research question:

*RQ1.* To what extent universities in Ethiopia can be considered to be entrepreneurial?

Literature reveals no information on entrepreneurial universities in Ethiopia except one. Habtamu (2016) concludes that the entrepreneurial behaviour at Addis Ababa University was weak. The few related publications focus on entrepreneurship education, or the development of entrepreneurial mind-sets of students (Bereket and Wasihun, 2015). This research gap was the basis for a study by Mudde *et al.* (2015) to understand how Ethiopian universities can strengthen their entrepreneurial policy and activities. In this study, the assessment framework for European entrepreneurial Higher Education Institutions named HEInnovate (European Commission and OECD, 2013) is applied and Gibb's definition of Entrepreneurial Universities has been used (2013). It refers to an academic organisation that is designed for staff and students to "demonstrate enterprise, innovation and creativity", which creates public value, partners with local, regional, national and international stakeholders, and is able to effectively operate in a dynamic context.

This paper first reviews literature on entrepreneurial universities, and describes the research methodology used. Next, it presents the main findings and ends with a discussion and conclusions.

### Literature review

There is wide agreement among scholars and policy makers about the importance of knowledgeable, experienced and skilled entrepreneurs for innovation, employment creation and economic growth. Entrepreneurship development is directly linked with regional and national economic development and industry policies (Röpke, 1998; Naudé *et al.*, 2011). Fostering entrepreneurship and entrepreneurship education have become topics of high priority in public policy in the industrially developed and developing world (Luthje and Franke, 2003; Mitra and Matlay, 2004).

The notion that an entrepreneurial university is conducive for making students more entrepreneurial is widely supported. In 1998, Röpke stated that a university itself needs to become entrepreneurial for faculty, students, and employees to turn into entrepreneurs. An important feature of an entrepreneurial university is that the organisation is designed to encourage and support individual entrepreneurial behaviour (Clark, 2004; Coyle *et al.*, 2013; Aranha and Garcia, 2014). In fact, the concept of entrepreneurial university defines the functioning of an institution through entrepreneurial attributes. Thus, an entrepreneurial university is an institution that is designed for and demonstrates attributes like intuitive decision making, the capacity to make things happen autonomously, networking, initiative taking, opportunity identification, creative problem solving, innovative, future – and achievement orientation, willingness to take reasonable risks and perseverance (Coyle *et al.*, 2013; Morar, 2013). Kirby (2006) is focussing more on the cultural entrepreneurial aspects of the institute in combination with the individual mind-set and skills as a precondition for entrepreneurial behaviour. He states that for an individual to act entrepreneurial, there needs to be a setting with a "favourable attitude" towards entrepreneurship, the belief that he or she is able to act entrepreneurial, and the "belief that entrepreneurship is intrinsically rewarding".

But an entrepreneurial university is more than geared towards stimulating individual entrepreneurship. It is considered to be an answer to many challenges faced by higher education institutions, in particular the growing number of students *vis-à-vis* limited

resources, the demand for contributing to economic growth with innovation and knowledge generation, the information and communication technology revolution, and globalisation (Gibb *et al.*, 2009, updated 2012; European Commission and OECD, 2012; Coyle *et al.*, 2013; Gibb, 2013). The entrepreneurial university is perceived to be able to cope with these challenges by innovation in research, knowledge exchange, teaching and learning, governance and external relations (European Commission and OECD, 2012).

Literature reveals different frameworks for the entrepreneurial university (Clark, 1998, 2004; Etzkowitz, 2004; Kirby, 2006; Rothaermel *et al.*, 2007), highlighting a variety of factors that affect entrepreneurial transformation. An essential driver of a long-term transformation process that is mentioned by many is an entrepreneurial strategic intent (Clark, 1998, 2004; Vorley and Nelles, 2009; European Commission and OECD, 2012; Foss and Gibson, 2015). Besides the importance of strategy, Vorley and Nelles (2009) identify four other internal, interacting factors that shape an entrepreneurial university. These factors are: structures, like technology transfer offices, incubators, technology parks and business portals; systems, which facilitate the communication and configuration of linkages between structures; leadership of most influential persons including administrators, board of directors, department heads and “star scientists”; and the university culture with its institutional, departmental and individual attitudes and norms.

The importance of leadership as one of the crucial dimensions that shape the entrepreneurial agendas of universities is widely stressed and reflected in most of the frameworks (Vorley and Nelles, 2009; European Commission and OECD, 2012; Coyle *et al.*, 2013; Gibb, 2013). Foss and Gibson (2015, p. 254) stress the importance of the “combination of exceptional leaders” and “an initial impetus for change” derived from the university context. Clark (1998) refers to “a strong central steering core” to embrace management groups and academics. Leih and Teece (2016) identify entrepreneurial leadership through three types of capabilities, sensing, seizing and transforming. Sensing is about recognising opportunities, identifying (global) trends, and “recognizing threats that impact student enrolment, faculty retention and the quality of services”. Seizing captures capabilities needed for ensuring the implementation of timely and good execution of the best initiatives. Last, transforming capable university leaders are able to change the campus culture, build unconventional partnerships, and “shut down poorly performing programs and departments”. In their search for what entrepreneurial means for university leadership, they stress the “ability to connect the university externally and internally, and to do what is necessary to unite the campus around new mandates and exigencies”. Rothaermel *et al.* (2007) come to a similar view, describing entrepreneurial universities being managed in such a way that they become capable of responding flexibly, strategically and yet coherently to opportunities in the environment.

Three other factors of importance for entrepreneurial transformation of universities are funding, engagement with society and discretion. Globally, public funding of higher education becomes increasingly constrained, with the same amount or less money available for more students and more, bigger institutions. This leads to an immediate pressure on universities to act more entrepreneurially. Universities have to raise their revenues and cut on costs (Clark, 2004; European Commission and OECD, 2013). Another important factor is the degree of engagement with society. Etzkowitz (2004) indicates that the real lever towards becoming an entrepreneurial university is the interaction with industry (and government). He coined the triple helix model (Etzkowitz and Leydesdorff, 2000) that describes the interaction among university–industry–government at various levels: local, regional, national and multi-national. A strong “interdependence”, the interrelation with industry and government, is a key phenomenon of entrepreneurial universities (Etzkowitz, 2004; Clark, 2004). Third, literature stresses the need for – a certain degree of – autonomy to educational institutions and for individual staff to become

entrepreneurial (Clark, 1998, 2004; European Commission and OECD, 2014). Universities have to be able to take decisions on matters such as academic innovation, financial investment and organisational adaptation. They need to be agile to meet the ever changing demand in society (Gibb, 2012). While universities are more interacting with society, they need to become more independent in decision making (Etzkowitz, 2004; Etzkowitz *et al.*, 2017).

In 2013, the OECD Local Economic and Employment Development Programme together with the European Commission's Directorate General for Education and Culture launched an online self-assessment tool for European entrepreneurial higher education institutions named HEInnovate (European Commission and OECD, 2013). This framework, updated in 2015, is operationalised in seven categories of statements that are considered to be characteristic for an entrepreneurial university: leadership and governance; organisational capacity; entrepreneurial teaching and learning; preparing and supporting entrepreneurs; knowledge exchange and collaboration; internationalisation; and measuring impact (see Box 1). The authors state that HEInnovate is grounded on "an interwoven and beyond-business concept of entrepreneurship, innovation and institutional change" (European Commission and OECD, 2014). HEInnovate reflects to a large extent the areas that Gibb (2013) considers to be strategic for moving a university to an entrepreneurial model, hence can be considered as an operationalization of his definition of an entrepreneurial university. These areas are: governance, leadership and organisation structures that are made in response to pressures and opportunities; enterprise and entrepreneurship education; research, knowledge transfer and exchange processes; international competition and cooperation; and stakeholder relationships (Gibb, 2013). The factors as indicated above can also be identified in this holistic framework, however little attention is given to university culture.

**Box 1. The seven categories of the European Commission/OECD self-assessment framework for entrepreneurial universities**

1. Leadership and governance: this category groups aspects such as the institutional mission, vision, and strategy, the role of top-management, institutional-wide coordination, the degree to which innovative activities are stimulated and the strategic role the institution plays in local development.
2. Organisational capacity: funding, people and incentives: under this heading resources, in terms of money and people, are grouped. They are needed to fulfil the entrepreneurial mission and strategy. An important aspect is the degree to which entrepreneurial behaviour of staff is incentivised.
3. Entrepreneurial teaching and learning: this category is a cluster of variables dealing with the entrepreneurial mind-set. Is this stimulated in education, both through content as well as approach?
4. Preparing and supporting entrepreneurs: this category deals with the programmes and facilities the institution has in place for supporting those students, staff and alumni that want to start-up a business, including giving access to finance, networks and incubation.
5. Knowledge exchange and collaboration: this category concerns how the institution organises and stimulates knowledge creation with and for the benefit of the social, cultural and economic development of society.
6. The internationalised institution: internationalisation is important for an entrepreneurial institution seeking innovation. This category focusses on staff and student mobility and the importance of international research and partnerships.
7. Measuring the impact: what does the institution do to measure the results of its entrepreneurial strategy and activities?

Source: Adapted from [www.heinnovate.eu](http://www.heinnovate.eu), accessed in 2013, 2014, 2015

Little information is available on key factors explaining differences between entrepreneurial universities. The emphasis is on the diversity of approaches and on identifying common denominators within this diversity (Clark, 1998, 2004; European Commission and OECD, 2012). Differentiating factors that are mentioned are: first, the size of the institutions, measured in number of students. Clark (1998, 2004) indicates that this is a factor of potential relevance, explaining that in larger institutions (more than 13,000 students), creating an institution-wide entrepreneurial culture may be more complex. The second factor is presence of industry. In line with Etzkowitz's (2004) view on the importance of interaction with industry, limited availability of industry automatically limits the possibilities of interactions with universities. Third, the academic profile of the higher education institution. Being a comprehensive university or a technical university, could also explain differences. More entrepreneurial possibilities through industry linkages and more funding opportunities are expected for science and technology based universities (Clark, 1998). Fourth, the funding base of the institution is considered as an important imperative for change towards a more entrepreneurial university (Clark, 2004; European Commission and OECD, 2014). In this respect, the main difference in the educational sector is public vs private funding. A fifth factor from the literature is the economic strength of the country in which the university operates. In a high growth context, there will be a strong incentive to become more entrepreneurial.

#### *Entrepreneurial universities in Africa*

The majority of the literature concerns universities located in high income countries with some studies on universities in Asia (Wong *et al.*, 2007; Reyes, 2017; Mudde *et al.*, 2017). Little is known about entrepreneurial university transformation in Africa. In general terms, authors have indicated the importance for African universities to become more entrepreneurial. Nafukho and Wawire (2004) call for entrepreneurship as a reform agenda for universities in Africa, focussing on income generation. Beugré (2016), in his book on building entrepreneurial ecosystems in Sub-Sahara Africa, contends that universities need to become more entrepreneurial in teaching, research and community service. They need to promote entrepreneurship as an engine of economic development and growth.

Court (1999) describes the case of the University of Makerere in Uganda that managed to come out of a deep crisis through entrepreneurial actions. In the late 1980, University of Makerere was in a devastating state after two decades of tyranny in the country: the infrastructure was destroyed, supplies were absent, student numbers were low and resources were not enough to pay wages. The situation turned around when the University Council allowed teaching to private sponsored students and invested the new income streams wisely for university development. Clark (2004) analyses that the University of Makerere successfully managed to change into a more entrepreneurial university due to entrepreneurial initiatives of the faculty itself ("stimulated academic heartland"), diversification of funding, new leadership and endorsing management decisions and structures ("a strong central steering core"). From a fully state-depended university, University of Makerere had managed to transform in a more autonomous institution with an entrepreneurial culture. He argues that this case is relevant for universities in Africa in general, because "it shows that expansion and the maintenance of quality can be achieved simultaneously in a context of reduced state funding [...] It dramatizes the point that a supportive political and economic environment is a prerequisite for institutional reform" (Clark, 2004, pp. 107-108). Last, Clark points at the strong will to change ("institutional volition") that manifested at Makere ("it tried harder than numerous other universities in a roughly similar situation to push for change"). This institutional volition is a pertinent aspect underlying any institutional transformation.

Concluding, not much is known about the entrepreneurial status of African universities. It leaves unanswered the question about the situation in a low income developing country like Ethiopia. This research gap leads to the major research question of this study:

*RQ1.* How do these selected universities score on the European Commission/OECD framework and how can possible differences among universities be explained.

### **Higher education and entrepreneurship in Ethiopia**

Most of the Ethiopian universities are young. However, developments in higher education in Ethiopia are going fast. Some 20 years ago, Ethiopia had only two universities with an enrolment of around 10,000 students. Between 2004/2005 to 2011/2012, the number of public higher education institutions has quadrupled from eight to 33, reaching a total undergraduate enrolment of around 500,000 students (Education Strategy Centre, 2015). The public universities are grouped in four generations. There are 8 first-generation universities, 13 second-generation and 10 third-generation universities. At the time of study, the foundation of another 11 universities has been announced by the Ethiopian Government. In addition, two special universities exist, the Civil Service University and the Defence University. The first-generation universities are the oldest, founded in the 1990s or before, the second-generation universities are founded around 2006 and the third around 2015. All these universities resort under the Ministry of Education. A specific group of higher education institutions are the Institutes of Technology, which usually were Colleges of Engineering. They have a certain level of independence and are purposefully set up to feed industrial development. They resort under the Ministry of Science and Technology. The number of private higher education institutions has also expanded, to 98 institutions, accommodating around 15 per cent of all students by 2015 (Education Strategy Centre, 2015). Of these 98 institutions, only four are considered as universities.

In 2013, a national entrepreneurship development centre (EDC) has been established to spearhead the development of entrepreneurship activities in the country. It implements the country's Entrepreneurship Development Programme, a programme launched by the partnership between the government of Ethiopia and United Nations Development Programme. The centre provides entrepreneurship training programmes and business development support services and contributes to the capacity development of government institutions which are involved in entrepreneurship development. The centre has also provided training to teachers selected from different public universities. It has supported in 2014 five public universities in setting up a Centre of Excellence in Entrepreneurship. The centres are expected to provide full-fledged entrepreneurship development support, including incubation services, for students, staff and the community.

Recently, the higher education sector in Ethiopia is pushed to strengthen the ability of graduates to find employment by providing skills or preparing them for self-employment through entrepreneurship development. There is an increased interest for entrepreneurship education for undergraduate students, the establishment of EDCs and initial support to student start-ups. Dugassa (2012) and Kannan (2012) indicate, however, that the main objective of entrepreneurship education in Ethiopian public universities is to familiarise students with entrepreneurship. Entrepreneurship education with such an objective is not expected to produce graduates with good entrepreneurial skills. Also, entrepreneurship educators in Ethiopian universities do not seem suitably qualified and experienced to use enterprise education approaches (Dugassa, 2012; Kannan, 2012).

### **Methodology**

This paper is inspired by a mixed methods study at nine universities (see Table I) applying the entrepreneurial university framework HEInnovate of the European

University	Your of foundation	Total number of students (2015)	Total number of academic staff (2015)	Academic profile	Distance to Addis Ababa (in km)
Adama University	(1993) 2006	10,440	638	Technical institute	90
Addis Ababa University	1950	48,673	2,408	Comprehensive and technical institute	0
Aksum University	2006	> 12,000	> 895	Comprehensive	1,028
Dire Dawa University	2006	12,500	746	Comprehensive	500
Jimma University	(1952) 1999	42,917	1,538	Comprehensive	352
Mizan-Tepi University	2006	> 9,500	677	Comprehensive	565
Unity University	1991	5,193	76	Comprehensive, private university	0
Wollega University	2006	> 26,000	830	Comprehensive	331
Wollo University	2006	13,076	234	Comprehensive	390

**Source:** Institutional websites and strategy documents

**Table I.**  
General profile of the nine universities assessed (status March 2015)

Commission/OECD with its seven dimensions already mentioned (2013). The universities, 8 public universities and 1 private university were purposefully selected from a total population of 37 universities (33 public universities and 4 private universities). Six public universities have a comprehensive academic profile and two are technical universities. For comparative purposes, one private university has also been included in the sample. Universities have been selected in different parts of the country, in the capital and farther away. We excluded third-generation public universities because a university needs to be operational at least five years in order to be able to collect useful data for this study. In addition, the Civil Service University and the Defence University were not taken into consideration given their atypical profile.

Data were collected per university from four categories of respondents: the leadership (presidents and vice-presidents), academic staff, students and external stakeholders (see Table II). A total of 223 people were interviewed or took part in group discussions. In addition, 203 respondents filled out a structured questionnaire with statements on their own institution. A five-points Likert scale has been used for all the statements, with 1 indicating total disagreement, and 5 indicating total agreement with the statement presented.

Staff and external stakeholders were purposefully selected based on their involvement in entrepreneurship education or business development, and students were selected who had taken an entrepreneurship course. A content analysis of the university' policy and educational documents was undertaken. With university leadership, semi-structured in-depth interviews were held on the strategy and organisational set-up of the university. With teaching staff and students, focus group discussions took place on entrepreneurial opportunities, entrepreneurship education, and research. A sample of external stakeholders (from the private and public sector) was drawn for in-depth interviews or focus group discussions on the role of the university *vis-à-vis* local and regional development.

Data of the interviews and focus groups were analysed in two steps. First, per university, data were summarised by using a data-matrix that related the information received with the variables of the European Commission/OECD framework. This resulted in a university-specific narrative that was complimented by data of the various internal documents. As far as possible, the narratives represented a balanced picture from the perspective of all the four groups of respondents. Subsequently, the university-specific narratives were aggregated using the same variables of the European Commission/OECD framework with specific attention for the theoretically inspired factors for entrepreneurial transformation.

**Table II.**  
Number of  
respondents per  
university

	Number of interviews and FGD participants				Number of survey respondents				Total
	(Vice) Presidents	Staff	Students	External stakeholders	(Vice) Presidents	Staff	Students	External stakeholders	
Adama University	3	6	12	8	3	6	8	8	25
Addis Ababa University	1	7	18	3	0	4	11	0	15
Aksu University	2	9	7	7	1	7	6	8	22
Dire Dawa University	3	9	9	9	3	9	9	9	30
Jimma University	3	10	9	6	2	10	9	6	27
Mizan-Tepi University	3	8	4	5	1	7	4	0	12
Unity University	1	6	5	1	3	9	10	2	24
Wollega University	3	9	9	6	3	9	9	6	27
Wollo University	3	6	9	4	2	6	9	4	21
	22	70	82	49	18	67	75	43	203

**Source:** Authors



## Findings

The empirical findings describe how the selected universities scored on the seven categories of the European Commission/OECD framework present the gist of the content analyses, interviews and focus group discussions for each of these categories, and include information on the five factors of importance for entrepreneurial transformation of universities which we use in the discussion: strategic intent, leadership, funding, discretion and engagement with society.

### *Perception scores*

We start with the importance of these seven categories according to all respondents. The perception scores of all respondents are around the neutral value of 3.0 with no significant differences between top-management, teaching staff, students and external stakeholders. Table III presents the mean per category of the analytical framework of all the 203 respondents: the higher the value, the more positive respondents are about the entrepreneurial status of their university. The exact value of the mean has little relevance in itself but is an indication of how respondents perceive their institution. The cumulative mean (all respondents, all seven categories) is 2.98, just below the neutral value of 3.0, indicating that respondents answered slightly more negatively on statements related to the entrepreneurial status of their university. The means for the categories "Leadership and Governance", "Organizational Capacity", and "Teaching and Learning" are above the neutral value of 3.0, indicating that respondents answered slightly more positively than negatively on statements related to the entrepreneurial status of their university in these categories. The score for "Impact measurement" is significant lower (2.49), indicating that respondents were of the opinion that limited monitoring and evaluation activities were in place.

The survey results have been analysed exploring whether statistically significant differences exist between the universities. This is done by comparing the responses for the seven categories of the analytical framework per university. The comparison indicates that universities 2, 3 (a technical institute) and 8 score significantly higher than university 4 ( $p = 0.009$ ,  $0.003$  and  $0.000$ , respectively). Differences between universities 2, 3 and 8 and university 6 are also considerable, but only university 8 scores statistically significant higher than university 6 ( $p = 0.010$ ).

### *Empirical findings per category of the European Commission/OECD framework*

*Leadership and governance.* The concept of entrepreneurial university appeared to be new among leadership at the Ethiopian universities. No decisions had been taken towards

	1. Leadership	2. Org. capacity	3. Teaching	4. Support entrepren.	5. Exchange, Collabor.	6. Internatio.	7. Impact measure.	Total Mean
University 1	2.94	2.83	2.69	2.59	2.54	2.90	2.64	2.73
University 2	3.33	3.61	3.31	3.08	3.26	3.03	2.99	3.23
University 3	3.40	3.47	3.17	3.20	3.15	3.49	2.79	3.24
University 4	2.75	2.55	2.77	2.43	2.49	2.37	1.87	2.46
University 5	3.34	3.29	3.29	3.08	3.06	3.20	2.55	3.12
University 6	2.80	2.68	2.88	2.34	2.29	2.40	2.18	2.51
University 7	3.25	3.66	3.37	2.93	3.02	2.69	2.47	3.06
University 8	3.60	3.80	3.50	3.14	3.38	3.36	2.87	3.38
University 9	3.30	3.06	3.21	2.92	2.86	2.80	2.21	2.91
All 9	3.22	3.25	3.16	2.89	2.94	2.93	2.50	2.98

Source: Authors

**Table III.**  
Mean on all seven categories and total mean per university

stimulating the entrepreneurial status of respective institutions, and no data were available on the results of entrepreneurial activities. Absence of an entrepreneurial strategy went hand-in-hand with fragmented entrepreneurial activities that were at their infant stage. The most prominent strategic intent was on income generation, but hardly any relations were made between income generation activities, entrepreneurship awareness raising among students, entrepreneurship education courses, university–industry linkages and community development. The situation at the Institutes of Technology differed with strategic plans with a strong entrepreneurial focus, from the level of overarching strategic goals (“creating an entrepreneurial institute which incubates SMEs and creates jobs”) up to the level of quantitative indicators. This corresponds with the higher perception score of university 3.

Although an increasing number of EDCs were being set up as part of the government policy to form such a centre within each public university, there was neither a university-wide internal coordination of entrepreneurship development activities, nor a model for coordinating and integrating entrepreneurial activities at any of the universities. University-specific rules and regulations on entrepreneurship development were absent, or not comprehensive or not known.

The results of this study demonstrate however that a different orientation of top-management goes hand-in-hand with different level and type of entrepreneurial activities. The top leaderships of two universities were less committed to pursue an entrepreneurial agenda. At their universities, less entrepreneurial activities took place and the environment was less conducive for student business development. This corresponds with the information obtained from the survey with the lower scores for university 4 and 6. At two other universities top-leadership was very much engaged. This active commitment went hand-in-hand with a more open attitude and more support towards student and staff initiatives, new centres being set up, and enterprise development. This corresponds with the higher scores for university 2 and 8.

*Organisational capacity.* The organisational capacity of the universities cannot be considered as entrepreneurial. Entrepreneurial behaviour is in most cases not formally rewarded, the institutional urge to seek additional income was almost absent, and rules, regulations and procedures were not proven conducive in encouraging entrepreneurial attitudes of staff and students. Staff interviewed were of the opinion that the existence of considerable government involvement in the day to day operations of the university casted doubt on the autonomy of the university. University presidents were more positive in this respect.

The assessment also found that the existing working and learning environment on campus was not encouraging entrepreneurial attitudes of staff and students like risk taking, pro-activeness and self-initiative. At many universities, the infrastructure was poor with for instance limited access to books, computers and internet. Toilet facilities for women were often problematic. In particular at the youngest universities, students and staff were frequently preoccupied with day to day issues, leaving little space for entertaining entrepreneurial activities.

*Entrepreneurial teaching and learning.* Regarding teaching and learning, the curricula assessed included limited attention for neither entrepreneurship nor entrepreneurial behaviour. It was believed by university management, staff and students that the few entrepreneurship courses offered were not suited for creating more entrepreneurial graduates. The majority of students approached the entrepreneurship course just as any other course they need to pass in order to graduate. The entrepreneurship course was mainly offered as a supportive or common course, downplaying its importance. Examples were given of lecturers not coming to class, demonstrating no commitment.

The need was widely expressed to strengthen the capacity of staff offering entrepreneurship education: most of the teaching staff lacked practical experiences and training on how to provide entrepreneurship education.

*Preparing and supporting entrepreneurs.* The limited activities across the board on entrepreneurship development, including support to entrepreneurs, are presented in Table II, differentiated by three subsequent phases of entrepreneurship development: awareness creation; strengthening entrepreneurial skills, attitudes and knowledge base; and business development support (Table IV).

*Knowledge exchange and collaboration.* The assessment resulted in a mixed picture of the level in which universities were collaborating with external stakeholders. Older universities had partnership agreements with international and local organisations, of which the majority were educational institutions, whilst younger universities had hardly any formal, operational partnerships. Active involvement of external experts in education and research can be neglected. Relations were mainly with (semi) governmental institutions, partially explained by the limited availability of registered businesses in Ethiopia.

*Internationalisation.* The study indicates that Ethiopian universities were starting to become more involved in international networks, in first instance mainly through donor funded projects. Older universities had more international activities than the younger universities who were less connected internationally. At all public universities, internationalisation was embedded in the strategic plans as important pillar for academic improvement and funding. A large proportion of Ethiopian scholars were pursuing their MSc or PhD abroad, building-up an international network. Student exchange programmes of Ethiopian students going abroad were hardly in place.

*Impact measurement.* At the time of study, no data were available on the results of entrepreneurial activities. Neither a monitoring and evaluation system was in place. Some universities were planning to develop tracer studies and impact measurements of business awareness programmes. These findings are in line with the significant low perception score for "Impact measurement" in the survey (2.49).

	Formal education	Informal education	Facilities	Events	Financial support mechanisms <sup>a</sup>
Awareness creation	Supportive or common entrepreneurship course offered in the final year of the BSc study	Employability and entrepreneurship orientation programme at the end of BSc study, 2 to 5 days	Entrepreneurship development centres being set up, not yet operational	1 day orientation day/week	Not applicable
Strengthening entrepreneurial skills, attitudes and knowledge base	Not offered	Not offered	Entrepreneurship development centres being set up, not yet operational	Not offered	Not applicable
Business development support	Not offered	Not offered/ <i>ad hoc</i> support to student groups for setting up petty businesses on campus	Entrepreneurship development centres being set up, not yet operational	Annual Expo at Addis Ababa Institute of Technology	Not offered/ guarantee, start-up capital and cheap facilities for petty businesses on campus

**Note:** <sup>a</sup>Like grants, joint venture funding, special loan arrangements, public/private seed capital

**Source:** Authors

**Table IV.**  
Entrepreneurship development within the nine universities assessed

**Discussion**

The assessment using the European Commission/OECD framework indicates that the universities had limited policies, instruments and activities in place in support of a more entrepreneurial institution. Ethiopian universities cannot be labelled as being entrepreneurial. Also, according to the definition of Gibb (2013), the same can be concluded: limited attention is given to empowering staff and students to demonstrate enterprise, innovation and creativity. And although all public universities were active in community outreach, thus creating public value, knowledge exchange and collaboration with external stakeholders was weak, in particular with private sector.

Beyond the fact that attention for entrepreneurship development was a new phenomenon at the Ethiopian universities, essential factors for entrepreneurial transformation were absent or weak at all the universities. These factors are strategic intent, funding, engagement with society, discretion and entrepreneurial leadership (Clark, 1998, 2004; Etzkowitz, 2004; Vorley and Nelles, 2009; European Commission and OECD, 2012; Gibb, 2012, 2013; Coyle *et al.*, 2013; Foss and Gibson, 2015; Etzkowitz *et al.*, 2017).

First, an entrepreneurial strategic intent as essential driver of a long-term transformation process was absent in the higher education sector and has not been taken into account when the still young universities were established. Strategies of young, recently founded universities were copies of older universities. The universities were not designed to encourage and support individual entrepreneurial behaviour. Relevant in this context is that the Ethiopian higher education sector is strongly central government-led, with the government expecting universities to comply with its national priorities and political goals (Amare, 2008). The government defines the strategic parameters for all the public universities. It has a strong say in curriculum development, controls the admission of students in view of fostering equity and access in all the regions of the country, and is responsible for the salary structure and labour conditions of the employees.

Second, a financial imperative to become more entrepreneurial was absent, with the public universities almost fully funded by the central government. Recent information indicated a change because the government starting to allocate budget for the foundation of 11 new universities. As a consequence, the government set income targets to the other universities. The implications of this policy development did not yet result in an entrepreneurial development at the universities. The private university studied could rely on the investments of the owner and on regular income out of tuition fees.

Third, engagement with society, in particular with the private sector, was limited. Generally speaking, the further away from capital, the less companies exist. Also, (semi-) government institutes are weaker than in the capital. The younger universities, most of them operating in regions far from the economic and administrative centre of the country, are often the strongest institutions in their region. External parties were not stimulating universities to act entrepreneurially: we found neither experience nor structure that fosters knowledge exchange and innovation.

Fourth, autonomy at individual and organisational level was limited. The universities are operating in a top-down, central governmental-led development that is not enabling entrepreneurial behaviour at the level of the individual institutions. The educational system as well as university regulations are not conducive for agility, which is an essential element of entrepreneurial behaviour. This is confirmed by Habtamu (2016) in his study on Addis Ababa University when he refers to the constrained autonomy due to political interference by the Ministry of Education.

The fifth factor is leadership of key players in the university. In the top-down education and organisation system of Ethiopia, the exemplary role of the university president seems to be crucial. This study demonstrates that a different orientation of top-management goes hand-in-hand with different levels and types of entrepreneurial activities. This coincides

with the importance of leadership as one of the crucial dimensions that shape the entrepreneurial agendas of universities (Vorley and Nelles, 2009; European Commission and OECD, 2012; Coyle *et al.*, 2013; Gibb, 2013). And even more, it confirms the conclusion of Foss and Gibson (2015) of the importance of the interplay between exceptional leaders and a push for change derived from the university context (p. 254). It can therefore be argued that the lever for an entrepreneurial turn at Ethiopian universities is the attitude and orientation of the institutional leadership.

Beyond these factors, there is another reason hampering entrepreneurial transformation. The European Commission/OECD framework assumes that basic conditions for teaching, learning and research are in place at a university as a basis for an entrepreneurial transformation process. In particular at the new universities, this assumption is not being met. Basic living and working conditions are poor, harassment and insecurity are serious issues affecting all women in all universities (Eerdewijk *et al.*, 2015), and learning materials, including computers, are scarce.

Last, the findings indicate that some entrepreneurial activities are starting up, but “performing entrepreneurial activities does not automatically transform a university into an entrepreneurial university” (Sam and Sijde, 2014). They rightly state that one can only speak of an entrepreneurial university when “the entrepreneurial activities create added value for education and research and vice versa”.

Concluding, the limited discretion in combination with the lack of an entrepreneurial vision, mission and strategy, the limited knowledge exchange with external stakeholders, and the non-conducive basic conditions makes that the Ethiopian universities studied are not “biased in favor of change” (Clark, 1998, p. 148). Or, differently stated, they miss the “integrated entrepreneurial culture” (Clark, 1998). This situation is not conducive for making students more entrepreneurial (Röpke, 1998). It can thus be questioned whether the universities are an effective nursery for young, entrepreneurial Ethiopians that contribute to innovation, employment creation and economic growth.

#### *Marginal differences among universities*

Significant differences were expected at forehand between universities, dependent on their age, size, academic profile, funding base and location. However, differences were limited. Distance to the capital, as proxy of availability to industry, appeared not to be relevant with the university furthest away being one of the universities with the highest scores. The older institutions in the sample have a more experienced faculty with more PhD holders, and a larger network. This study gave no indications that these differences matter significantly for the entrepreneurial status compared to the younger universities.

The qualitative findings indicate limited differences between the approach and offerings in formal and informal entrepreneurship education, neither between private and public universities, nor between younger and older universities. This may be explained because curriculum development in Ethiopia is highly centralised by the Ministry of Education. In addition, young universities also often lack the competence to design new programmes, thus as a consequence adopt existing courses from older universities (Amare *et al.*, 2015). A difference between the assessments of the private university in relation to the public universities was expected but not reflected in the results, neither the qualitative findings nor the survey results. Although private universities are more flexible than public universities in generating income and managing their respective institutions, the assessment did not find any real differences in respect to the level and kind of entrepreneurial activities.

A recent study of ten universities in the USA and Europe came to a similar conclusion, indicating that clustering of universities around size and age is not useful for describing entrepreneurial differences (Foss and Gibson, 2015). They indicate that what matters however is the regional and national context. It can thus be argued that the limited

differences among the Ethiopian universities are because of the strong say of the government in university operations as explained above, creating a level-playing field for all the higher education institutions with limited autonomy.

Concerning the priority for science and technology, it is often assumed that engineering departments are more and earlier entrepreneurial than others (Clark, 1998). This is confirmed in this study showing that an institutional entrepreneurial transformation process is – in its first stage – present in the technical institutes studied with their explicit entrepreneurial strategy and work programmes.

### Conclusions

The results of this study have relevance for the higher education community in terms of understanding the complexity of transforming institutions into more entrepreneurial organisations in a low income country. To the best of the authors' knowledge, there is not any previous study that examines entrepreneurial characteristics of several universities in Ethiopia. Given the total number of public universities in Ethiopia (33 in 2015) in relation to the number in the study (8, or 24 per cent) and given the central government-led developments in the education sector, the authors argue that the results of the study can be generalised to all the Ethiopian public universities.

The European Commission/OECD framework is useful for assessing the entrepreneurial status of higher education institutions in a holistic manner, also in developing countries. Researchers need however to be aware that the assessment framework assumes that a university is conducive for teaching, learning and research. In particular at younger universities in more remote areas in developing countries, these conditions may not be in place.

Last, limited information is still available on how regional and national contexts impact on the entrepreneurial status of a higher education institution (Foss and Gibson, 2015). Further research should look into differences and similarities between universities operating in more or less government-led contexts and between universities in high-, middle- and low-income countries.

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