

Entrepreneurial change in government-led development

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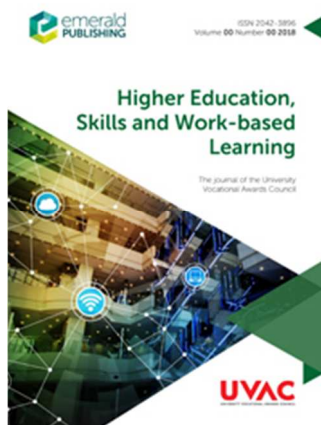
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Entrepreneurial Change in Government-led Development: Ethiopian Universities

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Entrepreneurial Change in Government-led Development: Ethiopian Universities

Introduction

Ethiopia is the second most populous country in Africa with about 100 million people of which 64 percent is below 25 years of age, with a net population growth of 2.89 percent (CIA, 2016). Despite the firm economic growth (a GDP growth rate of 10.2 percent in 2015 and 10.3 percent in 2014) (CIA, 2016), Ethiopia is facing high unemployment among its young population, in particular in urban areas (Broussar and Gebrekidan, 2012). The official national unemployment rate in 2015 was 16.8 percent (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 (FDRE), 2015). It expects graduates to create employment opportunities for themselves. In this context, higher education institutions started offering entrepreneurship courses in limited programs 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 focuses on the research question 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

1
2
3 education, or the development of entrepreneurial mind-sets of students (Bereket and
4
5 Wasihun, 2015). This research gap was the basis for a study by Mudde *et al.* (2015) to
6
7 understand how Ethiopian universities can strengthen their entrepreneurial policy and
8
9 activities. In this study, the assessment framework for European entrepreneurial Higher
10
11 Education Institutions named HEInnovate (European Commission and OECD, 2013) is
12
13 applied and Gibb's definition of Entrepreneurial Universities has been used (2013). It
14
15 refers to an academic organization that is designed for staff and students to 'demonstrate
16
17 enterprise, innovation and creativity', that creates public value, partners with local,
18
19 regional, national and international stakeholders, and is able to effectively operate in a
20
21 dynamic context.
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27 This paper first reviews literature on entrepreneurial universities, and describes
28
29 the research methodology used. Next, it presents the main findings and ends with a
30
31 discussion and conclusions.
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35 **Literature review**

36
37
38 There is wide agreement among scholars and policy makers about the importance of
39
40 knowledgeable, experienced and skilled entrepreneurs for innovation, employment
41
42 creation and economic growth. Entrepreneurship development is directly linked with
43
44 regional and national economic development and industry policies (Röpke, 1998; Naudé
45
46 *et al.*, 2011). Fostering entrepreneurship and entrepreneurship education have become
47
48 topics of high priority in public policy in the industrially developed and developing
49
50 world (Luthje and Franke, 2003; Mitra and Matlay, 2004).
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1
2
3 The notion that an entrepreneurial university is conducive for making students
4
5 more entrepreneurial is widely supported. In 1998, Röpke stated that a university itself
6
7 needs to become entrepreneurial for faculty, students, and employees to turn into
8
9 entrepreneurs. An important feature of an entrepreneurial university is that the
10
11 organization is designed to encourage and support individual entrepreneurial behaviour
12
13 (Clark, 2004; Coyle *et al.*, 2013; Aranha and Garcia, 2014). In fact, the concept of
14
15 entrepreneurial university defines the functioning of an institution through
16
17 entrepreneurial attributes. Thus, an entrepreneurial university is an institution that is
18
19 designed for and demonstrates attributes like intuitive decision making, the capacity to
20
21 make things happen autonomously, networking, initiative taking, opportunity
22
23 identification, creative problem solving, innovative, future - and achievement
24
25 orientation, willingness to take reasonable risks, and perseverance (Coyle *et al.*, 2013;
26
27 Morar, 2013). Kirby (2006) is focusing more on the cultural entrepreneurial aspects of
28
29 the institute in combination with the individual mind-set and skills as a precondition for
30
31 entrepreneurial behaviour. He states that for an individual to act entrepreneurial, there
32
33 needs to be a setting with a 'favourable attitude' towards entrepreneurship, the belief
34
35 that he or she is able to act entrepreneurial, and the 'belief that entrepreneurship is
36
37 intrinsically rewarding'.

41
42
43
44 But an entrepreneurial university is more than geared towards stimulating
45
46 individual entrepreneurship. It is considered to be an answer to many challenges faced
47
48 by higher education institutions, in particular the growing number of students vis-à-vis
49
50 limited resources, the demand for contributing to economic growth with innovation and
51
52 knowledge generation, the information and communication technology revolution, and
53
54 globalisation (Gibb *et al.*, 2009, updated 2012; European Commission and OECD,
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1
2
3 2012; Coyle *et al.*, 2013; Gibb, 2013). The entrepreneurial university is perceived to be
4
5 able to cope with these challenges by innovation in research, knowledge exchange,
6
7 teaching and learning, governance and external relations (European Commission and
8
9 OECD, 2012).

10
11
12
13 Literature reveals different frameworks for the entrepreneurial university (Clark,
14
15 1998, 2004; Etzkowitz, 2004; Kirby, 2006; Rothaermel *et al.*, 2007) highlighting a
16
17 variety of factors that affect entrepreneurial transformation. An essential driver of a
18
19 long-term transformation process that is mentioned by many is an entrepreneurial
20
21 strategic intent (Clark, 1998, 2004; Vorly and Nelles, 2009; European Commission and
22
23 OECD, 2012; Foss and Gibson, 2015). Besides the importance of strategy, Vorley and
24
25 Nelles (2009) identify four other internal, interacting factors that shape an
26
27 entrepreneurial university. These factors are i) structures, like technology transfer
28
29 offices, incubators, technology parks, and business portals, ii) systems, that facilitate the
30
31 communication and configuration of linkages between structures, iii) leadership of most
32
33 influential persons including administrators, board of directors, department heads, and
34
35 ‘star scientists’, and iv) the university culture with its institutional, departmental and
36
37 individual attitudes and norms.
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44 The importance of leadership as one of the crucial dimensions that shape the
45
46 entrepreneurial agendas of universities is widely stressed and reflected in most of the
47
48 frameworks (Vorly and Nelles, 2009; European Commission and OECD, 2012; Coyle *et*
49
50 *al.*, 2013; Gibb, 2013). Foss and Gibson (2015, p. 254) stress the importance of the
51
52 ‘combination of exceptional leaders’ and ‘an initial impetus for change’ derived from
53
54 the university context. Clark (1998) refers to ‘a strong central steering core’ to embrace
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1
2
3 management groups and academics. Leih and Teece (2016) identify entrepreneurial
4
5 leadership through three types of capabilities, sensing, seizing and transforming.
6
7 Sensing is about recognizing opportunities, identifying (global) trends, and ‘recognizing
8
9 threats that impact student enrolment, faculty retention and the quality of services’.
10
11 Seizing captures capabilities needed for ensuring the implementation of timely and good
12
13 execution of the best initiatives. Last, transforming capable university leaders are able
14
15 to change the campus culture, build unconventional partnerships, and ‘shut down poorly
16
17 performing programs and departments’. In their search for what entrepreneurial means
18
19 for university leadership, they stress the ‘ability to connect the university externally and
20
21 internally, and to do what is necessary to unite the campus around new mandates and
22
23 exigencies’. Rothaermel *et al.* (2007) come to a similar view, describing entrepreneurial
24
25 universities being managed in such a way that they become capable of responding
26
27 flexibly, strategically and yet coherently to opportunities in the environment.
28
29
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33 Three other factors of importance for entrepreneurial transformation of
34
35 universities are funding, engagement with society and discretion. Globally, public
36
37 funding of higher education becomes increasingly constrained, with the same amount or
38
39 less money available for more students and more, bigger institutions. This leads to an
40
41 immediate pressure on universities to act more entrepreneurially. Universities have to
42
43 raise their revenues and cut on costs (Clark, 2004; European Commission and OECD,
44
45 2013). Another important factor is the degree of engagement with society. Etzkowitz
46
47 (2004) indicates that the real lever towards becoming an entrepreneurial university is
48
49 the interaction with industry (and government). He coined the Triple Helix model
50
51 (Etzkowitz and Leydesdorff, 2000) that describes the interaction among university-
52
53 industry-government at various levels: local, regional, national and multi-national. A
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1
2
3 strong 'interdependence', the interrelation with industry and government, is a key
4
5 phenomenon of entrepreneurial universities (Etzkowitz, 2004; Clark, 2004). Thirdly,
6
7 literature stresses the need for – a certain degree of – autonomy to educational
8
9 institutions and for individual staff to become entrepreneurial (Clark, 1998, 2004;
10
11 European Commission and OECD, 2014). Universities have to be able to take decisions
12
13 on matters such as academic innovation, financial investment, and organizational
14
15 adaptation. They need to be agile to meet the ever changing demand in society (Gibb,
16
17 2012). While universities are more interacting with society, they need to become more
18
19 independent in decision-making (Etzkowitz, 2004; Etzkowitz *et al.*, 2017).
20
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23

24
25 In 2013, the OECD Local Economic and Employment Development Programme
26
27 together with the European Commission's Directorate General for Education and
28
29 Culture launched an online self-assessment tool for European entrepreneurial higher
30
31 education institutions named HEInnovate (European Commission and OECD, 2013).
32
33 This framework, updated in 2015, is operationalised in seven categories of statements
34
35 that are considered to be characteristic for an entrepreneurial university: 1) Leadership
36
37 and Governance; 2) Organizational capacity; 3) Entrepreneurial Teaching and Learning;
38
39 4) Preparing and Supporting Entrepreneurs; 5) Knowledge Exchange and Collaboration;
40
41 6) Internationalisation; and 7) Measuring impact (see Box 1). The authors state that
42
43 HEInnovate is grounded on 'an interwoven and beyond-business concept of
44
45 entrepreneurship, innovation and institutional change' (European Commission and
46
47 OECD, 2014). HEInnovate reflects to a large extent the areas that Gibb (2013)
48
49 considers to be strategic for moving a university to an entrepreneurial model, hence can
50
51 be considered as an operationalization of his definition of an entrepreneurial university.
52
53 These areas are: i) Governance, leadership and organization structures that are made in
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1
2
3 response to pressures and opportunities; ii) Enterprise and entrepreneurship education;
4
5 iii) Research, knowledge transfer and exchange processes; iv) International competition
6
7 and cooperation, and v) Stakeholder relationships (Gibb, 2013). The factors as indicated
8
9 above can also be identified in this holistic framework, however little attention is given
10
11 to university culture.
12

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16 INSERT BOX 1 HERE
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19

20 Little information is available on key factors explaining differences between
21
22 entrepreneurial universities. The emphasis is on the diversity of approaches and on
23
24 identifying common denominators within this diversity (Clark, 1998, 2004; European
25
26 Commission and OECD, 2012). Differentiating factors that are mentioned are: first, the
27
28 size of the institutions, measured in number of students. Clark (1998; 2004) indicates
29
30 that this is a factor of potential relevance, explaining that in larger institutions (more
31
32 than 13,000 students) creating an institution-wide entrepreneurial culture may be more
33
34 complex. The second factor is presence of industry. In line with Etzkowitz's (2004)
35
36 view on the importance of interaction with industry, limited availability of industry
37
38 automatically limits the possibilities of interactions with universities. Thirdly, the
39
40 academic profile of the higher education institution. Being a comprehensive university
41
42 or a technical university, could also explain differences. More entrepreneurial
43
44 possibilities through industry linkages and more funding opportunities are expected for
45
46 science and technology based universities (Clark, 1998). Fourth, the funding base of the
47
48 institution is considered as an important imperative for change towards a more
49
50 entrepreneurial university (Clark, 2004; European Commission and OECD, 2014). In
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54
55 this respect, the main difference in the educational sector is public versus private
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1
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3 funding. A fifth factor from the literature is the economic strength of the country in
4
5 which the university operates. In a high growth context, there will be a strong incentive
6
7 to become more entrepreneurial.
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9

10 11 ***Entrepreneurial universities in Africa*** 12

13
14 The majority of the literature concerns universities located in high income countries
15
16 with some studies on universities in Asia (Wong *et al.*, 2007; Reyes, 2017; Mudde *et*
17
18 *al.*, 2017). Little is known about entrepreneurial university transformation in Africa. In
19
20 general terms, authors have indicated the importance for African universities to become
21
22 more entrepreneurial. Nafukho and Wawire (2004) call for entrepreneurship as a reform
23
24 agenda for universities in Africa, focusing on income generation. Beugré (2016) in his
25
26 book on building entrepreneurial ecosystems in Sub-Sahara Africa, contends that
27
28 universities need to become more entrepreneurial in teaching, research and community
29
30 service. They need to promote entrepreneurship as an engine of economic development
31
32 and growth.
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38
39 Court (1999) describes the case of the University of Makerere in Uganda that
40
41 managed to come out of a deep crisis through entrepreneurial actions. In the late 1980,
42
43 University of Makerere was in a devastating state after two decades of tyranny in the
44
45 country: the infrastructure was destroyed, supplies were absent, student numbers low,
46
47 and resources were not enough to pay wages. The situation turned around when the
48
49 University Council allowed teaching to private sponsored students and invested the new
50
51 income streams wisely for university development. Clark (2004) analyses that the
52
53 University of Makerere successfully managed to change into a more entrepreneurial
54
55 university due to entrepreneurial initiatives of the faculty itself ('stimulated academic
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3 heartland'), diversification of funding, new leadership and endorsing management
4
5 decisions and structures ('a strong central steering core'). From a fully state-dependent
6
7 university, University of Makerere had managed to transform in a more autonomous
8
9 institution with an entrepreneurial culture. He argues that this case is relevant for
10
11 universities in Africa in general, because 'it shows that expansion and the maintenance
12
13 of quality can be achieved simultaneously in a context of reduced state funding... It
14
15 dramatizes the point that a supportive political and economic environment is a
16
17 prerequisite for institutional reform.' (Clark, 2004, pp. 107-108). Last, Clark points at
18
19 the strong will to change ('institutional volition') that manifested at Makere ('it tried
20
21 harder than numerous other universities in a roughly similar situation to push for
22
23 change'). This institutional volition is a pertinent aspect underlying any institutional
24
25 transformation.
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31
32 Concluding, not much is known about the entrepreneurial status of African
33
34 universities. It leaves unanswered the question about the situation in a low income
35
36 developing country like Ethiopia. This research gap leads to the major research question
37
38 of this study: How do these selected universities score on the European
39
40 Commission/OECD framework and how can possible differences among universities be
41
42 explained.
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45

46 **Higher Education and Entrepreneurship in Ethiopia**

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48

49
50 Most of the Ethiopian universities are young. However, developments in higher
51
52 education in Ethiopia are going fast. Some twenty years ago Ethiopia had only two
53
54 universities with an enrolment of around ten thousand students. Between 2004/2005 to
55
56 2011/2012, the number of public higher education institutions has quadrupled from
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3 eight to 33, reaching a total undergraduate enrolment of around 500,000 students
4
5 (Education Strategy Centre, 2015). The public universities are grouped in four
6
7 generations. There are eight first generation universities, 13 second generation, and ten
8
9 third generation universities. At the time of study, the foundation of another 11
10
11 universities has been announced by the Ethiopian government. In addition, two special
12
13 universities exist, the Civil Service University and the Defence University. The first
14
15 generation universities are the oldest, founded in the 1990s or before, the second
16
17 generation universities are founded around 2006, and the third around 2015. All these
18
19 universities resort under the Ministry of Education. A specific group of higher education
20
21 institutions are the Institutes of Technology (IoTs), which usually were Colleges of
22
23 Engineering. They have a certain level of independence and are purposefully set-up to
24
25 feed industrial development. They resort under the Ministry of Science and Technology.
26
27
28 The number of private higher education institutions has also expanded, to 98
29
30 institutions, accommodating around 15 per cent of all students by 2015 (Education
31
32 Strategy Centre, 2015). Of these 98 institutions only four are considered as universities.
33
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37
38 In 2013, a national Entrepreneurship Development Center (EDC) has been
39
40 established to spearhead the development of entrepreneurship activities in the country.
41
42 It implements the country's Entrepreneurship Development Program (EDP), a
43
44 programme launched by the partnership between the government of Ethiopia and United
45
46 Nations Development Program (UNDP). The centre provides entrepreneurship training
47
48 programmes and business development support services and contributes to the capacity
49
50 development of government institutions which are involved in entrepreneurship
51
52 development. The centre has also provided training to teachers selected from different
53
54 public universities. It has supported in 2014 five public universities in setting up a
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3 Centre of Excellence in Entrepreneurship. The centres are expected to provide full-
4
5 fledged entrepreneurship development support, including incubation services, for
6
7 students, staff, and the community.
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10
11 Recently, the higher education sector in Ethiopia is pushed to strengthen the
12
13 ability of graduates to find employment by providing skills or preparing them for self-
14
15 employment through entrepreneurship development. There is an increased interest for
16
17 entrepreneurship education for undergraduate students, the establishment of
18
19 Entrepreneurship Development Centres, and initial support to student start-ups. Dugassa
20
21 (2012) and Kannan (2012) indicate however that the main objective of entrepreneurship
22
23 education in Ethiopian public universities is to familiarise students with
24
25 entrepreneurship. Entrepreneurship education with such an objective is not expected to
26
27 produce graduates with good entrepreneurial skills. Also entrepreneurship educators in
28
29 Ethiopian universities do not seem suitably qualified and experienced to use enterprise
30
31 education approaches (Dugassa, 2012; Kannan, 2012).
32
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36

37 **Methodology**

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39
40 This paper is inspired by a mixed methods study at nine universities (see table 1)
41
42 applying the entrepreneurial university framework HEInnovate of the European
43
44 Commission/OECD with its seven dimensions already mentioned (2013). The
45
46 universities, eight public universities and one private university, were purposefully
47
48 selected from a total population of 37 universities (33 public universities and 4 private
49
50 universities). Six public universities have a comprehensive academic profile and two are
51
52 technical universities. For comparative purposes, one private university has also been
53
54 included in the sample. Universities have been selected in different parts of the country,
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1
2
3 in the capital and farther away. We excluded third generation public universities,
4
5 because a university needs to be operational at least five years in order to be able to
6
7 collect useful data for this study. In addition, the Civil Service University and the
8
9 Defence University were not taken into consideration given their a-typical profile.
10

11
12 INSERT TABLE 1 HERE
13
14

15
16 Data were collected per university from four categories of respondents: the
17
18 leadership (presidents and vice-presidents), academic staff, students and external
19
20 stakeholders (see table 2). A total of 223 people were interviewed or took part in group
21
22 discussions. In addition, 203 respondents filled out a structured questionnaire with
23
24 statements on their own institution. A 5-points Likert scale has been used for all the
25
26 statements, with one indicating total disagreement, and five indicating total agreement
27
28 with the statement presented.
29
30

31
32
33 INSERT TABLE 2 HERE
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35

36
37 Staff and external stakeholders were purposefully selected based on their
38
39 involvement in entrepreneurship education or business development, and students were
40
41 selected who had taken an entrepreneurship course. A content analysis of the university's
42
43 policy and educational documents was undertaken. With university leadership, semi-
44
45 structured in-depth interviews were held on the strategy and organizational set-up of the
46
47 university. With teaching staff and students, focus group discussions took place on
48
49 entrepreneurial opportunities, entrepreneurship education, and research. A sample of
50
51 external stakeholders (from the private and public sector) was drawn for in-depth
52
53 interviews or focus group discussions on the role of the university vis-à-vis local and
54
55 regional development.
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57

1
2
3 Data of the interviews and focus groups were analysed in two steps. First, per
4
5 university, data were summarized by using a data-matrix that related the information
6
7 received with the variables of the European Commission/OECD framework. This
8
9 resulted in a university specific narrative that was complimented by data of the various
10
11 internal documents. As far as possible, the narratives represented a balanced picture
12
13 from the perspective of all the four groups of respondents. Subsequently, the university-
14
15 specific narratives were aggregated using the same variables of the European
16
17 Commission/OECD framework with specific attention for the theoretically inspired
18
19 factors for entrepreneurial transformation.
20
21
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23

24 **Findings**

25
26
27 The empirical findings describe how the selected universities scored on the seven
28
29 categories of the European Commission/OECD framework, present the gist of the
30
31 content analyses, interviews and focus group discussions for each of these categories,
32
33 and include information on the five factors of importance for entrepreneurial
34
35 transformation of universities which we use in the discussion: strategic intent,
36
37 leadership, funding, discretion, and engagement with society.
38
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41

42 ***Perception scores***

43
44 We start with the importance of these seven categories according to all respondents. The
45
46 perception scores of all respondents are around the neutral value of 3.0 with no
47
48 significant differences between top-management, teaching staff, students and external
49
50 stakeholders. Table 3 presents the mean per category of the analytical framework of all
51
52 the 203 respondents: the higher the value, the more positive respondents are about the
53
54 entrepreneurial status of their university. The exact value of the mean has little
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1
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3 relevance in itself but is an indication of how respondents perceive their institution. The
4
5 cumulative mean (all respondents, all seven categories) is 2.98, just below the neutral
6
7 value of 3.0, indicating that respondents answered slightly more negatively on
8
9 statements related to the entrepreneurial status of their university. The means for the
10
11 categories 'Leadership and Governance', 'Organizational Capacity', and 'Teaching and
12
13 Learning' are above the neutral value of 3.0, indicating that respondents answered
14
15 slightly more positively than negatively on statements related to the entrepreneurial
16
17 status of their university in these categories. The score for 'Impact measurement' is
18
19 significant lower (2.49), indicating that respondents were of the opinion that limited
20
21 monitoring and evaluation activities were in place.
22
23
24
25

26 INSERT TABLE 3 HERE
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29

30 The survey results have been analysed exploring whether statistically significant
31
32 differences exist between the universities. This is done by comparing the responses for
33
34 the seven categories of the analytical framework per university. The comparison
35
36 indicates that universities 2, 3 (a technical institute) and 8 score significantly higher
37
38 than university 4 ($p = 0.009$, 0.003 , and 0.000 respectively). Differences between
39
40 universities 2, 3 and 8 and university 6 are also considerable, but only university 8
41
42 scores statistically significant higher than university 6 ($p = 0.010$).
43
44
45
46

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

48 *Leadership and Governance*

49
50 The concept of entrepreneurial university appeared to be new among leadership at the
51
52 Ethiopian universities. No decisions had been taken towards stimulating the
53
54 entrepreneurial status of respective institutions, and no data were available on the results
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1
2
3 of entrepreneurial activities. Absence of an entrepreneurial strategy went hand-in-hand
4
5 with fragmented entrepreneurial activities that were at their infant stage. The most
6
7 prominent strategic intent was on income generation, but hardly any relations were
8
9 made between income generation activities, entrepreneurship awareness raising among
10
11 students, entrepreneurship education courses, university – industry linkages, and
12
13 community development. The situation at the Institutes of Technology differed with
14
15 strategic plans with a strong entrepreneurial focus, from the level of overarching
16
17 strategic goals ('creating an entrepreneurial institute which incubates SMEs and creates
18
19 jobs') up to the level of quantitative indicators. This corresponds with the higher
20
21 perception score of university 3.
22
23
24
25

26
27 Although an increasing number of Entrepreneurship Development Centres were
28
29 being set-up as part of the government policy to form such a centre within each public
30
31 university, there was neither a university-wide internal coordination of entrepreneurship
32
33 development activities, nor a model for coordinating and integrating entrepreneurial
34
35 activities at any of the universities. University-specific rules and regulations on
36
37 entrepreneurship development were absent, or not comprehensive or not known.
38
39
40

41
42 The results of this study demonstrate however that a different orientation of top-
43
44 management goes hand-in-hand with different level and type of entrepreneurial
45
46 activities. The top-leadership of two universities were less committed to pursue an
47
48 entrepreneurial agenda. At their universities, less entrepreneurial activities took place
49
50 and the environment was less conducive for student business development. This
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52 corresponds with the information obtained from the survey with the lower scores for
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54 university 4 and 6. At two other universities top-leadership was very much engaged.
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3 This active commitment went hand-in-hand with a more open attitude and more support
4 towards student and staff initiatives, new centres being set-up, and enterprise
5 development. This corresponds with the higher scores for university 2 and 8.
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10 *Organizational capacity*

11 The organizational capacity of the universities cannot be considered as entrepreneurial.
12 Entrepreneurial behaviour is in most cases not formally rewarded, the institutional urge
13 to seek additional income was almost absent, and rules, regulations, and procedures
14 were not proven conducive in encouraging entrepreneurial attitudes of staff and
15 students. Staff interviewed were of the opinion that the existence of considerable
16 government involvement in the day to day operations of the university casted doubt on
17 the autonomy of the university. University presidents were more positive in this respect.
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30 The assessment also found that the existing working and learning environment
31 on campus was not encouraging entrepreneurial attitudes of staff and students like risk
32 taking, pro-activeness, and self-initiative. At many universities, the infrastructure was
33 poor with for instance limited access to books, computers and internet. Toilet facilities
34 for women were often problematic. In particular at the youngest universities, students
35 and staff were frequently preoccupied with day to day issues, leaving little space for
36 entertaining entrepreneurial activities.
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46 *Entrepreneurial Teaching and Learning*

47 Regarding teaching and learning, the curricula assessed included limited attention for
48 neither entrepreneurship nor entrepreneurial behavior. It was believed by university
49 management, staff and students that the few entrepreneurship courses offered were not
50 suited for creating more entrepreneurial graduates. The majority of students approached
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3 the entrepreneurship course just as any other course they need to pass in order to
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5 graduate. The entrepreneurship course was mainly offered as a supportive or common
6
7 course, downplaying its importance. Examples were given of lecturers not coming to
8
9 class, demonstrating no commitment. The need was widely expressed to strengthen the
10
11 capacity of staff offering entrepreneurship education: most of the teaching staff lacked
12
13 practical experiences and training on how to provide entrepreneurship education.
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16 17 *Preparing and Supporting Entrepreneurs*

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19 The limited activities across the board on entrepreneurship development, including
20
21 support to entrepreneurs, are presented in table 2, differentiated by three subsequent
22
23 phases of entrepreneurship development: 1) awareness creation; 2) strengthening
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25 entrepreneurial skills, attitudes and knowledge base; and 3) Business Development
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27 Support.
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32 INSERT TABLE 4 HERE
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35 36 *Knowledge Exchange and Collaboration*

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38 The assessment resulted in a mixed picture of the level in which universities were
39
40 collaborating with external stakeholders. Older universities had partnership agreements
41
42 with international and local organizations, of which the majority were educational
43
44 institutions, whilst younger universities had hardly any formal, operational partnerships.
45
46 Active involvement of external experts in education and research can be neglected.
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48 Relations were mainly with (semi) governmental institutions, partially explained by the
49
50 limited availability of registered businesses in Ethiopia.
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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 programs 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 programs. These findings are in line with the significant low perception score for 'Impact measurement' in the survey (2.49).

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

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3 community outreach, thus creating public value, knowledge exchange and collaboration
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5 with external stakeholders was weak, in particular with private sector.
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9 Beyond the fact that attention for entrepreneurship development was a new
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11 phenomenon at the Ethiopian universities, essential factors for entrepreneurial
12
13 transformation were absent or weak at all the universities. These factors are strategic
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15 intent, funding, engagement with society, discretion, and entrepreneurial leadership
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17 (Clark, 1998, 2004; Etzkowitz, 2004; Vorly and Nelles, 2009; European Commission
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19 and OECD, 2012; Gibb, 2012, 2013; Coyle *et al.*, 2013; Foss and Gibson, 2015;
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21 Etzkowitz *et al.*, 2017).
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26 First, an entrepreneurial strategic intent as essential driver of a long-term
27
28 transformation process was absent in the higher education sector and has not been taken
29
30 into account when the still young universities were established. Strategies of young,
31
32 recently founded universities were copies of older universities. The universities were
33
34 not designed to encourage and support individual entrepreneurial behaviour. Relevant in
35
36 this context is that the Ethiopian higher education sector is strongly central government-
37
38 led, with the government expecting universities to comply with its national priorities
39
40 and political goals (Amare, 2008). The government defines the strategic parameters for
41
42 all the public universities. It has a strong say in curriculum development, controls the
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44 admission of students in view of fostering equity and access in all the regions of the
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46 country, and is responsible for the salary structure and labour conditions of the
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48 employees.
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3 Secondly, a financial imperative to become more entrepreneurial was absent,
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5 with the public universities almost fully funded by the central government. Recent
6
7 information indicated a change because the government starting to allocate budget for
8
9 the foundation of 11 new universities. As a consequence, the government set income
10
11 targets to the other universities. The implications of this policy development did not yet
12
13 result in an entrepreneurial development at the universities. The private university
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15 studied could rely on the investments of the owner and on regular income out of tuition
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17 fees.
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22 Third, engagement with society, in particular with the private sector, was
23
24 limited. Generally speaking, the further away from capital, the less companies exist.
25
26 Also (semi) government institutes are weaker than in the capital. The younger
27
28 universities, most of them operating in regions far from the economic and
29
30 administrative centre of the country, are often the strongest institutions in their region.
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32 External parties were not stimulating universities to act entrepreneurially: we found no
33
34 experience nor structure that fosters knowledge exchange and innovation.
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40 Fourth, autonomy at individual and organizational level was limited. The
41
42 universities are operating in a top-down, central governmental led development that is
43
44 not enabling entrepreneurial behaviour at the level of the individual institutions. The
45
46 educational system as well as university regulations are not conducive for agility, which
47
48 is an essential element of entrepreneurial behaviour. This is confirmed by Habtamu
49
50 (2016) in his study on Addis Ababa University when he refers to the constrained
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52 autonomy due to political interference by the Ministry of Education.
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3 The fifth factor is leadership of key players in the university. In the top-down
4
5 education and organization system of Ethiopia, the exemplary role of the university
6
7 president seems to be crucial. This study demonstrates that a different orientation of
8
9 top-management goes hand-in-hand with different level and type of entrepreneurial
10
11 activities. This coincides with the importance of leadership as one of the crucial
12
13 dimensions that shape the entrepreneurial agendas of universities (Vorly and Nelles,
14
15 2009; European Commission and OECD, 2012; Coyle *et al.*, 2013; Gibb, 2013). And
16
17 even more, it confirms the conclusion of Foss and Gibson of the importance of the
18
19 interplay between exceptional leaders and a push for change derived from the university
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21 context (2015, p. 254). It can therefore be argued that the lever for an entrepreneurial
22
23 turn at Ethiopian universities is the attitude and orientation of the institutional
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25 leadership.
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31 Beyond these factors, there is another reason hampering entrepreneurial
32
33 transformation. The European Commission/OECD framework assumes that basic
34
35 conditions for teaching, learning and research are in place at a university as a basis for
36
37 an entrepreneurial transformation process. In particular at the new universities this
38
39 assumption is not being met. Basic living and working conditions are poor, harassment
40
41 and insecurity are serious issues affecting all women in all universities (Eerdewijk *et al.*,
42
43 2015), and learning materials, including computers, are scarce.
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48 Last, the findings indicate that some entrepreneurial activities are starting up, but
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50 ‘performing entrepreneurial activities does not automatically transform a university into
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52 an entrepreneurial university’ (Sam and Sijde, 2014). They rightly state that one can
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3 only speak of an entrepreneurial university when ‘the entrepreneurial activities create
4 added value for education and research and vice versa’.

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

30 ***Marginal differences among universities***

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

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49 The qualitative findings indicate limited differences between the approach and
50 offerings in formal and informal entrepreneurship education, neither between private
51 and public universities, nor between younger and older universities. This may be
52 explained because curriculum development in Ethiopia is highly centralised by the

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2
3 Ministry of Education. In addition, young universities also often lack the competence to
4
5 design new programmes, thus as a consequence adopt existing courses from older
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7 universities (Amare *et al.*, 2015). A difference between the assessments of the private
8
9 university in relation to the public universities was expected but not reflected in the
10
11 results, neither the qualitative findings nor the survey results. Although private
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13 universities are more flexible than public universities in generating income and
14
15 managing their respective institutions, the assessment did not find any real differences
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17 in respect to the level and kind of entrepreneurial activities.
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23 A recent study of ten universities in the USA and Europe came to a similar
24
25 conclusion, indicating that clustering of universities around size and age is not useful
26
27 for describing entrepreneurial differences (Foss and Gibson, 2015). They indicate that
28
29 what matters however is the regional and national context. It can thus be argued that the
30
31 limited differences among the Ethiopian universities are because of the strong say of the
32
33 government in university operations as explained above, creating a level playing field
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35 for all the higher education institutions with limited autonomy.
36
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39 Concerning the priority for science and technology, it is often assumed that
40
41 engineering departments are more and earlier entrepreneurial than others (Clark, 1998).
42
43 This is confirmed in this study showing that an institutional entrepreneurial
44
45 transformation process is – in its first stage – present in the technical institutes studied
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47 with their explicit entrepreneurial strategy and work programmes.
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50 51 **Conclusions** 52 53 54 55 56 57 58 59 60

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3 The results of this study have relevance for the higher education community in terms of
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5 understanding the complexity of transforming institutions into more entrepreneurial
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7 organizations in a low income country. To the best of the authors' knowledge, there is
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9 not any previous study that examines entrepreneurial characteristics of several
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11 universities in Ethiopia. Given the total number of public universities in Ethiopia (33 in
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13 2015) in relation to the number in the study (eight, or 24 per cent) and given the central
14
15 government-led developments in the education sector, the authors argue that the results
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17 of the study can be generalised to all the Ethiopian public universities.
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22 The European Commission/OECD framework is useful for assessing the
23
24 entrepreneurial status of higher education institutions in a holistic manner, also in
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26 developing countries. Researchers need however to be aware that the assessment
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28 framework assumes that a university is conducive for teaching, learning and research. In
29
30 particular at younger universities in more remote areas in developing countries, these
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32 conditions may not be in place.
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37 Last, limited information is still available on how regional and national contexts
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39 impact on the entrepreneurial status of a higher education institution (Foss and Gibson,
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41 2015). Further research should look into differences and similarities between
42
43 universities operating in more or less government-led contexts and between universities
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45 in high, middle and low income countries.
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Tables belonging to:**Entrepreneurial Change in Government-led Development: the case of Ethiopian Universities***BOX 1*

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. Organizational 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 focuses 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: <http://www.heinnovate.eu>, accessed in 2013, 2014, 2015

Table 1. General profile of the nine universities assessed (status March 2015)

University	Year 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	2408	Comprehensive & Technical Institute	0
Aksum University	2006	> 12,000	> 895	Comprehensive	1028
Dire Dawa University	2006	12,500	746	Comprehensive	500
Jimma University	(1952) 1999	42,917	1538	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

Sources: Institutional websites and strategy documents

Table 2. Number of respondents per university

	Number of interviews and FGD participants					Number of survey respondents				
	(Vice) Presidents	Staff	Students	External stakeholders	Total	(Vice) Presidents	Staff	Students	External stakeholders	Total
Adama University	3	6	12	8	29	3	6	8	8	25
Addis Ababa University	1	7	18	3	29	0	4	11	0	15
Aksum University	2	9	7	7	25	1	7	6	8	22
Dire Dawa University	3	9	9	9	30	3	9	9	9	30
Jimma University	3	10	9	6	28	2	10	9	6	27
Mizan-Tepi University	3	8	4	5	20	1	7	4	0	12
Unity University	1	6	5	1	13	3	9	10	2	24
Wollega University	3	9	9	6	27	3	9	9	6	27
Wollo University	3	6	9	4	22	2	6	9	4	21
	22	70	82	49	223	18	67	75	43	203

Source: Authors

Table 3. Mean on all seven categories and total Mean per university

	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 4. *Entrepreneurship Development within the nine universities assessed*

	Formal education	Informal education	Facilities	Events	Financial support mechanisms*)
Awareness creation	Supportive or Common Entrepreneurship course offered in the final year of the BSc study	Employability & Entrepreneurship Orientation program 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 / Ad-hoc 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 & cheap facilities for petty businesses on campus

Source: Authors

*) Like grants, joint venture funding, special loan arrangements, public/private seed capital