From Protecting the Environment to Fostering Innovation: Moroccan Universities in the Era of Territorial Competitiveness

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Abstract. It has been acknowledged that Moroccan universities have ample opportunity to enhance regional competitiveness through the Sustainable Development Goals. Yet, little is known about how professors and students perceive universities' role in stimulating innovation, partnership, and sustainability within their backyards or communities. By exploring how much Moroccan universities are thought to be participating in territorial competitiveness via the realization of the SDGs, this study aims to bridge that gap. It is through this work that we aim to emphasize the perceptions of Abdelmalek Essaâdi University's (AE University) students, graduates, and professors regarding the role of a Moroccan university in fostering territorial innovation through the lenses of relevant Sustainable Development Goals. Furthermore, we strive to highlight links between the aforementioned university and plans for territorial competitiveness. This will help pinpoint areas for improvement in university practices and achievements in relation to territorial development. The plan is to carry out an exploratory study via an online survey. The collection of data will be conducted on the perceptions of AE University students and professors about the role(s) of their university in fostering innovation and achieving SGDs. It is upon the survey data that we will strive to analyze connections existing between universities and territorial competitiveness via SDGs in order to further emphasize the likely role of universities in broadening territorial innovation practices in Morocco. It is through this analysis that we will discuss the findings and main results of the study in the hope of enriching the existing literature on the matter while helping to assist concerned stakeholders in territorial development areas, including universities and SDGs.

Index Terms— Innovation, Moroccan University, Sustainable Development Goals, Territory, Territorial Attractiveness, Territorial Competitiveness, University,

Introduction

The history of universities worldwide underlines a number of battles this knowledge symbol has overcome. Research-wise, it is safe to state that the university's journey spilled a lot of ink because it was both complex and multifaceted. In fact, it is no longer fashionable to limitedly describe a university as an engine of knowledge, as it is now eligible for studies centered on not only the heart of sustainable development but also on questions around territorial marketing, innovation, environmental sustainability, and the Social Development Goals. This positioning of the university concept and centricity is of our choosing in the present work, mainly due to the rollercoaster universities have been on.

Universities have come under increasing pressure in the past few decades to provide evidence of their value and influence [1] as well as their academic level and importance to society at large. As a result, various performance indicators and rankings have been created, and more emphasis is now being placed on university operations and achievements [2], as a wake-up call towards efficient conduct. It also goes without saying that more students from different social strata are pursuing university degrees, rendering higher education more accessible and prevalent. As a result, academic curricula, student bodies, and institutional purposes now reflect a broader spectrum, thus inciting universities to shift in the direction of diversification [3].

Given the increasing importance of environmental sustainability and protection, universities seek to be a part of this sphere. The history that comes along with such ambitions could mainly be translated by the currents of environmental education (EE) and education for sustainable development (ESD) [4]. In fact, considered high learning institutions of power and influence upon their inputs, universities are continuously expected not only to provide education and raise awareness but also to implement solutions for environment-related challenges.

Furthermore, in the era of speeding races toward territorial innovation, universities are now asked more frequently to promote economic growth and innovation through commercializing research, partnering with industry, and fostering entrepreneurship. Overall, the genesis of an entrepreneurial university continues to echo, since 1995 [5], in current times of necessary territorial innovation.

Notwithstanding the important adaptations made by universities to blend their roles in the veins of various stakeholders, they keep expressing a will to catch up on the attractiveness/competitiveness tandem. In fact, ranking amongst top-performing universities is now one of the bonus objectives of a handful of higher education establishments [6], thus becoming an important gauge of institutional growth and achievement based on a worldwide scale of key criteria ranging from talent to funding and prestige.

Naturally, it is taken as read that the bubble of digital has now reached all seeds of innovation, including universities [7]. Being new wine in old bottles, contemporary methods of digital learning are weighing heavy on the shoulders of traditionally based academia. Yet it is adding a new challenge to the list of universities' winning ultimatums.

Overall, the portrayed journey of the university tries not to fail through both breakthroughs and hardships. Yet, we are utterly interested in the effect of these changing challenges on where universities stand in the sphere of territorial competitiveness through the lenses of the Sustainable Development Goals.

It is in these veins that we suggest approaching the subject by leading an exploratory study in the context of Moroccan universities. By zooming in on Abdelmalek Essaâdi University, we aim to explore the possible roles and contributions of the Moroccan university to regional attractiveness. Furthermore, the present study targeted university students, graduates, researchers, and faculty professors from Abdelmalek Essaâdi University, in the northern region of Morocco. This choice is mainly explained by the region's openness to international context, culture, and investments.

This study strives to enrich the existing literature on the influence of universities on local and regional development. Moreover, it aims to provide proper information for university administrators and policymakers not only on encouraging collaboration between Moroccan universities and local stakeholders but also on achieving the SDGs and highlighting innovation as a means towards competitiveness.

1 Exploring perceptions and opinions: A methodology

In this section, we lay out the road leading to the present exploratory study. We then present the investigation tool's design before summarizing the collected data's analysis.

1.1 Choice of Method and tool design

It was after seizing and comprehending the literature linking universities to territorial development that we decided to design an exploratory study zooming in on the case of Moroccan universities, such as Abdelmalek Essaâdi University.
The plan is to investigate such a topic to gather insights and understanding about the extent to which Moroccan universities strive to achieve territorial development. Moreover, we aim to explore the opinions and perspectives of university students, graduates, and professors regarding the roles of AE [1] University in regional growth.

While intending to explore different dimensions of the aforementioned research topic, we were convinced of the benefits of using an online survey to better target interested communities. Being the backbone of this study, the survey is built upon three main sections, all seeking to contribute to answering the question about the roles and vocations of Moroccan universities when it comes to local development (Table 1).

Table 1. Survey design.

Section	Aim
I. AE University: From Collaboration to Competitiveness	- To examine the perception of interaction between AE University and regional businesses and industries as well as the elements influencing regional competitiveness.
II. AE University: A possible territorial impact?	- To explore the impact of AE University on regional competitiveness. - To investigate whether it encourages a culture of creativity and entrepreneurship, sufficiently prepares students for the job market, and contributes to the general growth and prosperity of its community
III. Demographic questions	- To aid in setting the scene and permit subgroup analysis, allowing for a greater comprehension of how various populations see the contribution of AE University to territorial competitiveness.

1.2 Post-investigation: Data collection and analysis

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[1] Abdelmalek Essaâdi University

Upon collecting data from the investigation, its analysis brought the following to light: 51% of the participants are female. The scope of age ranges from 18 to 54, as demonstrated in Fig. 1.
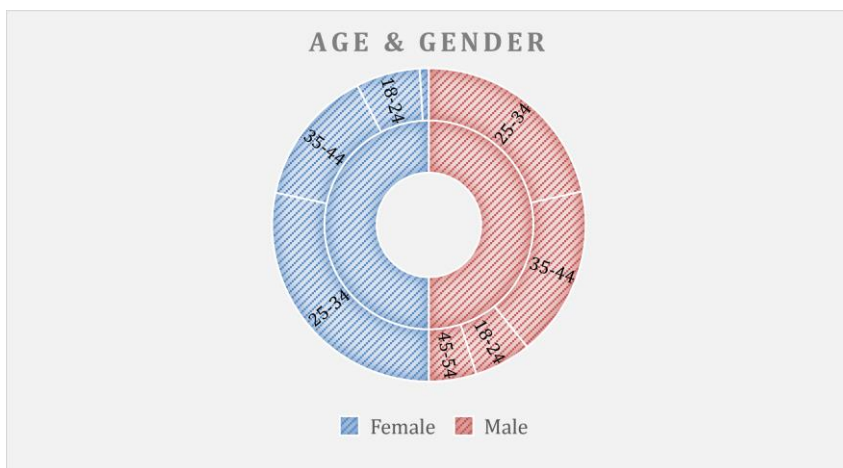

Fig. 1. Participants' age and genders

The population's educational background ranges from undergraduate students, graduates, and Ph.D. researchers to university and faculty teachers (fig. 2). Moreover, 30% of the participants are specialized in science and engineering (fig. 3).
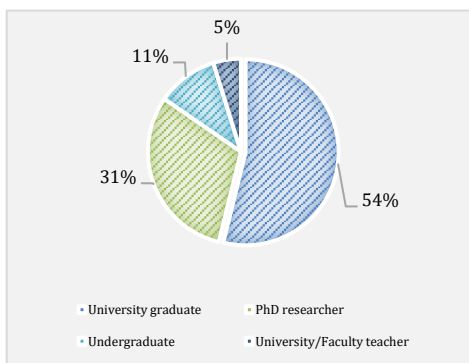

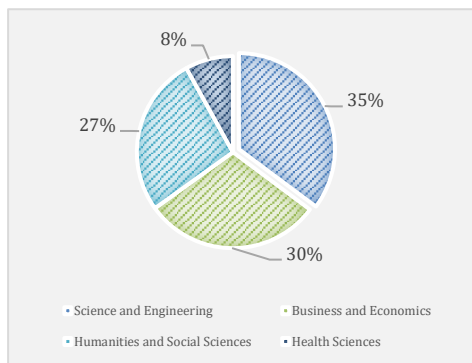**Fig. 2.** Participants' educational background

Fig. 3. Participants' fields of study

In Section 1 of the survey, we asked five questions to explore the participants' experiences and perspectives towards AE University's capacity to collaborate with local communities and institutions. By asking participants about their experience of taking part in entrepreneurial or innovation programs, we assess the extent of these programs' effectiveness in fostering innovation and supporting entrepreneurial mindsets.

Question number two, on the other hand, gauges the population's awareness of the different initiatives and programs initiated by AE University.

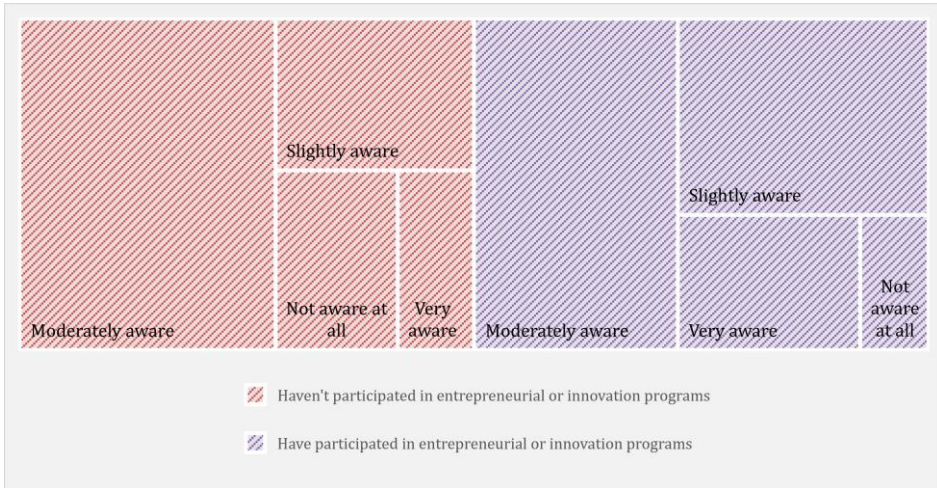Results obtained by crossing both questions are represented in Figure 4.

Fig. 4. Participants' awareness of AE University's innovation programs & their experiences

Furthermore, question 3 invites participants to rate the effectiveness of AE University in fostering innovation and entrepreneurship as a vital way of nurturing regional competitiveness. 52% of the respondents judge it to be "moderately effective".

On the other hand, Section 2 of the survey aims to assess the possible impact of AE University on its local territory. To do so, we first asked participants if they believed their university significantly contributed to the general growth and prosperity of their region (Fig. 5). Then came the inquiry, "To what extent does AE University, in your opinion, participate in meeting the Sustainable Development Goals (SDGs)?" (Fig 6).
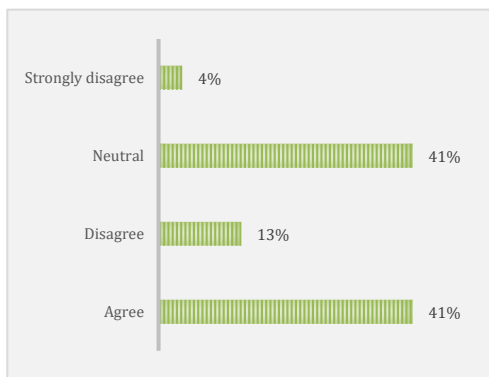

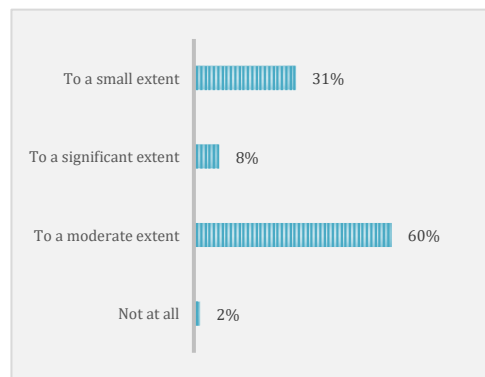**Fig. 5.** Answers on AEU's significant territorial impact

Fig. 6. Participants' rating following question 7

A follow-up question invites respondents to specify the SDGs that AE University has the most impact on. The aim is to target areas of impact and influence where this Moroccan university plays a crucial role in encouraging sustainable development. Within the 17 SDGs mentioned, the top three are listed as follows: Quality education (SDG

4) was picked by 56% of the participants. Sustainable Cities and Communities (SDG 11) is ranked second with votes of 37%, while Decent Work and Economic Growth (SDG 8) represent 28% of participants' choices.

2 Understanding AE University's impact on its territory: Results

In order to comprehend the extent of AE University's participation in the territorial competitiveness of Morocco's northern region, we conducted an exploratory study targeting its   population. The demographic data analyzed highlights favorable participation from the targeted population, with over 51% of the respondents being females aged from 18 to 54. The population under study is thus fairly represented by the aforementioned demographic distribution. Furthermore, according to the analysis, 54% of the respondents are graduates, indicating higher education qualifications among a sizable population. To that, add 31% of participants who hold PhDs, which indicates a significant presence of advanced higher educational backgrounds.

By sectioning the investigation survey, we first included questions to explore the respondents' opinions and experiences on AE University's partnerships and collaboration with local stakeholders. By assessing the effectiveness of such initiatives in supporting innovation and entrepreneurship, it was concluded that 51% of the participants have taken part in such programs, which indicates an active engagement from the university towards fostering innovation and inciting entrepreneurial mindsets. Moreover, we deduce a moderate rate of awareness of the various programs and initiatives led by AE University, indicating that it is making efforts in order to promote innovation and participate in territorial competitiveness. If anything, these findings underline the significance of a sustainable strengthening of AE University's programs and initiatives when it comes to fostering innovation and boosting local and regional development.

In this work, we focused on analyzing the contribution of AE University to regional prosperity. 41% of the respondents recognized Abdelmalek Essaâdi University's influence on the local territory. As to its participation in the achievement of the SDGs, the focus was established on quality education, sustainable cities, and decent work, thus aligning with AE University's endeavor to foster societal and economic growth.

3 Conclusion

In conclusion, Abdelmalek Essaâdi University was the subject of an exploratory study that mobilized an online survey as an investigation tool. The main aim was to assess the influence and participation of AE University in regional competitiveness through the achievement of the Sustainable Development Goals. The study targeted the university's students, graduates, and professors.

Consequently, several conclusions were drawn from the analysis of the gathered data. First, participants acknowledged that AE University is effective when it comes to promoting innovation and fostering entrepreneurship, with 52% rating it as "moderately effective". This implies that the institution is involved in fostering an innovative culture and assisting business ventures. Second, the study also shed light on three main SDGs where AE University has the most influence, according to the respondents. It is the case of the SDGs:

quality education (SDG 4), sustainable cities and communities (SDG 11), and decent work and economic growth (SDG 8).

Overall, it is important to note that the study is not limitation-free. In fact, we can mention the sample size and the zoom and focus on a particular university and region. It is in this vein that future exploration through further research is important in order to enhance the understanding of universities as an engine of territorial development and competitiveness.

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