

Exploratory textual network for Italian Third Mission

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Abstract

In 2012, the Third Mission (*TM*) was introduced in the Italian university system such as institutional mission alongside the traditional missions of teaching and research. During 2013, the Minister of Education identified and proposed indicators and parameters aimed at periodic evaluation of the *TM*. In spite of the apparent simplicity of the *TM* definition, its declination and evaluation still raise many questions. The *TM* evaluation framework saw a series of trials which lead to a wide standardisation in the philosophy, methodologies and indicators, by defining an inappropriate model to establish the systematic comparisons between universities.

The aim of this paper is to analyse the *TM* with a focus on the role of the universities to enhance the knowledge transfer in the socio-cultural and economic territorial environment. More precisely, by an exploratory textual network approach, we analysed the universities' strategic plans drafted from 2015 to 2022 for discovering how the *TM* has been depicted and incorporated in universities culture. We studied the importance attributed to the term "impact" in the definition of the strategic lines aimed at defining the *TM*. Our innovation in this contribution does not reside in the integration of textual analysis and Social Network Analysis but, in its conjoint application to the context of the *TM*, such as a constantly evolving socio-cultural and regulatory domain. The results of exploratory analysis suggest that currently, there is a mismatch between the evolving theoretical framework and the practice of academic activities drafted in the strategic plans. Thus, it results necessary the definition of other criteria to develop or improve the importance of the socio-economic repercussions deriving from the strategic lines in the Italian universities.

Keywords: third mission, strategic plans, textual network analysis, centrality measures

1. Introduction and background

The Third Mission (*TM*), as defined by ANVUR (National Agency for the Evaluation of the University and Research System in Italy), is an institutional mission of the university, alongside the traditional missions of teaching and research. The main aspects of Third Mission can be represented by: a) the cultural and social mission, through the increase of the well-being of society, in the educational, social and cultural fields; b) the economic enhancement of research, encouraging comparison and mutual development between the universities and stakeholders. The *TM* has been recognized as an institutional mission of the universities only in recent times and with a still incomplete normative forecast. The Legislative Decree 19/2012 constitutes the first organic reference that allows you to fully insert the *TM* in universities activities, while the Decree of the Minister of Education 47/2013 identifies the indicators and parameters of periodic evaluation of the *TM*. The uncertainty of the *TM* evaluation framework sees as the first trial the evaluation of research quality (*VQR*) from 2004 to 2010 by requiring universities to produce some indicators. Among the criteria, there are the activities that denote the inclination of the

university to open up to the socio-economic context and to the enhancement and transfer of knowledge. That is to say, scientific and cultural dissemination activities, indicators of turnover on behalf of third parties, patents and spin-offs, and other extra activities related to research (training, dissemination, organization and management of courses or events). The experience of the VQR¹ has been useful to start the process but not decisive from the point of view of evaluation philosophy, methodology, indicators. The degree of standardisation of indicators has proved insufficient to establish systematic comparisons between structures. In 2015, ANVUR collected indicators at universities to build a comparable database, and on the basis of this system, an annual or biennial evaluation process has been initiated. At present, *TM* evaluation contributes to this process of periodic evaluation and is a self-assessment tool for universities and departments, as well as information and transparency on the many activities that universities carry out for the benefit of society. However, the quantitative indicators are not sufficient to describe the complexity of knowledge transfer and their relevant impacts on society. The adoption of academic activities must be interpreted by setting the outcomes in the context, such as demonstrated by Agasisti *et al.* (2019) measuring the spin-offs on local economic development. In particular, the input actions should take into account long-term economic and social returns. Understanding and measuring impact is gaining more importance in *TM* developments and to monitor the results of *TM*, universities should track longer term impact of academic activities, by contributing to the positive internal strategies developments in accordance to external benefits created. Thus, it is assumed that the Italian universities have taken on board the importance of the social and economic repercussions deriving from the strategic lines adopted. To analyze whether the concept of “impact” has become central in the definition of the *TM*, we studied the strategic plans of the Italian universities by an integrated methodological approach which combines the textual analysis and Social Network Analysis in terms of visualisation and metrics.

2. Data, Methodology and Results

Data collection consists of the set of strategic plans drawn up by Italian universities from 2015 onwards, divided by size according to the Censis’ ranking 2021 - 2022 of state (as mega, large, medium, small and polytechnics) and non-state universities (as large, medium and small). More precisely, for this exploratory study, we have analysed all strategic plans belonging to the classification of large state and non-state universities which have drafted the strategic lines by 2022. The methodology is oriented to an exploratory textual network analysis. Our innovative contribution does not lie in the integration of textual analysis and Social Network Analysis (SNA) (Wasserman & Faust, 1994) widely used in the literature, but in the intention to develop three different purposes: A) To combine the textual and linguistic aspect to study the semantics of the texts and to go beyond the coding of the *bag-of-words* that is limited to quantify the most frequent terms outside the context. B) To integrate two methodological approaches to detect the semantic of the text and to obtain models of sense through graph representation and properties of Social Network Analysis. C) To apply this methodological combination to *TM*, as a constantly evolving socio-cultural and regulatory context.

Data pre-processing was performed on 20 texts parsed and tokenized by means of the steps of normalization, lemmatization, removal of punctuation, numbers, stop words, universities’ denomination. We detected 154,968 tokens and 120,456 types. The type-token ratio (*TTR*) indicates that the vocabulary variety is equal to 77.73%. The corpus consists of an average

¹ VQR: Valutazione Quadriennale della Ricerca

Table 1. Normalised centrality measures of the bigrams

<i>Bigram</i>	<i>Degree</i>	<i>Closeness</i>	<i>Betweenness</i>
terza_missione	0.348	0.092	0.544
punteggio_soddisfazione	0.275	0.087	0.078
azione_indicatore	0.246	0.078	0.116
indicatore_formula	0.232	0.083	0.033
raggiungere_attività	0.203	0.087	0.073
termine_soglia	0.203	0.087	0.077
indicatore_target	0.174	0.082	0.087
attività_termine	0.174	0.087	0.050
valore_iniziale	0.159	0.063	0.002
raggiungere_punteggio	0.159	0.083	0.024

The exploratory nature of the methodological approach made it possible to analyse the *TM* and to assess a lack of alignment between the evolving theoretical framework and the practice of academic activities. In the future, our work aims to analyze the strategic plans of state and non-state universities of all sizes and to compare documents after 2022, in order to check whether there has been any evolution in the most recent strategic lines on the topic of the *TM* impact.

References

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