

Toward a Professional Observatory of the Surveying Profession in Morocco: a New Frame to Face New Challenges

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SUMMARY

The observatory is a professional mechanism implemented by a body to follow the evolution of a phenomenon, an area or a sector of activity in a spatiotemporal frame using quantitative and qualitative analysis. This paper has the goal to establish a feasibility study of building a professional observatory of surveying engineering in Morocco. A study of the current state of the profession has been conducted to illustrate the efforts made by the body of surveyors and its professional partners, including the school of engineering. An online survey was conducted to analyze business issues and illustrate the scenarios to be undertaken to face the challenges and take advantage of the current opportunities. This will highlight an approach of setting up an observatory of the profession in Morocco and promote good governance of the surveying engineering.

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1. INTRODUCTION

An observatory is a professional tool implemented within one or more agencies to follow and monitor in a spatiotemporal context the evolution of a phenomenon, an area, or a sector of activity. It enables collecting information needed to describe the impacts of a phenomenon on the life cycle of an environment. The decision makers are concerned by the results of the data analysis made by an observatory. The adopted approaches to reach the goal of any study are combining qualitative and quantitative analysis.

Morocco has known during the last decade numerous mutations in several domains and sectors. Those aim to promote the national economy and face the challenges of globalization era. Many trade agreements have been concluded with several countries. Strategies are followed to restructure the national economy scheme, namely the major infrastructure projects such as roads, highways, sports facilities, Green Morocco Plan, Vision 2010 for tourism, etc. The engineering surveyors will play a crucial role in monitoring and implementing and accompanying these strategies.

Morocco has not escaped to the financial crisis and he is suffering from the consequences of his choice of the opening political decision to the international market. The global financial crisis influences the national economy, particularly in the sectors of building and real estate activities. The surveying enterprises, indeed faces a series of constraints linked to the topographic services rates.

A tool of monitoring the professional surveying sector has become essential for surveyors to evaluate the impact of the crisis. This enables to follow the surveying market developments in terms of quantity and quality. An observatory is among the basic tools that will serve the surveyors national council for developing indicators on the sector healthy.

The aim of this study is to deal with the possibility of establishing such an observatory. In a comprehensive manner, we plan to define goals and missions of the observatory for surveying practices and surveyors. First of all we have conducted a questionnaire. Secondly, we have gathered data and analyzed the results of the questionnaire. Finally, we developed a strategic approach towards setting up such observatory.

2. KNOWING THE DIAGNOSTIC AND CONSTRAINTS OF THE PROFESSION

2.1 An overview of the methodology

The goal through the study is to gather a maximum of conceptual, notable, and realistic ideas on the surveying profession in Morocco. The vital way to reach this goal is to conduct a survey by means of a questionnaire to deeply understand the challenges and constraints. A significant sample of surveying engineers is set by respecting three basic rules. First, we shall

ensure that the survey has reached different categories of the respondents. Second, we emphasize on the professional experience of the respondent to ensure integrity in constraints analysis. Finally, we have respected the principle of involving respondents from various geographical areas throughout the country. The selected sample should emphasize analogous qualities and characteristics of the whole population of surveyors. It should also be a representative sample to ensure that the results can be generalized to the entire population. An online questionnaire was used to survey the viewpoints of different surveying engineers about the major challenges of the profession, the most effective solutions, and their views on the observatory.

2.2 The questionnaire

The questionnaire is designed in an organized manner to meet the objectives of the study taking into account the following steps. Based on the recommendations of a seminar organized by the national board of surveyors and on the direct interviews taken with engineers, a preliminary questionnaire was outlined. This was validated within a small group involving professors and engineers in both private and public sectors. According to their observations, the draft was enhanced and a final version of the questionnaire was built. The questionnaire was organized around closed and open questions. Scaled or rated questions were also used to enable interviewees express the level of their agreement of satisfaction toward a precise choice.

The questions focus on the following categories:

- Constraints related to the profession by dealing with the basic education curricula of surveyors, the quality and the estimated rates of the surveying activities, the surveying enterprises, and questions related to the national and regional council of the national board of surveying.
- The feasibility of setting up an observatory of the surveying profession according the future expectations, the worries about the functional issues, the institutional form of the observatory, and the financial aspects.

The questionnaire has been disseminated using an open web application via the Internet. This was the mean that enabled us to reach the maximum of our interviewees. This gave flexibility to create, manage and host the questionnaire using a client-server application. It is commonly based on the features available on the server of the provider (www.my-survey-enligne.fr). It allows us to develop quickly the format of any questionnaire, from simple to sophisticated interfaces. A questionnaire of about 25 items could be hosted by the application. Unlimited number of participants could be as well as respondents. The results are produced in a form of digital and graphical features and could be exported into pdf, csv, or xls formats. The final platform of the questionnaire was implemented within the web application and sent to the sample of surveyors as respondents.

3. SUMMARY OF RESPONSES AND RESULTS ANALYSIS

3.1 Basic education and curriculum

The main interest in this part of the questionnaire is to deal with three important concerns of the surveying engineers in the private sector. We need to evaluate the adequacy between the

basic education in surveying and the needs of the professionals. Secondly, we aim to analyze the impact the non compulsory continuous education for licensed surveying engineers while practicing the profession. Finally, we check out how the new technologies are influencing the surveying enterprises in terms of technical practices and project management. According to results showed by the figure 1, we remark that 44% of respondents assume that the education curriculum is in adequacy with the professional needs. However, 52% of the respondents concluded that the big challenge that faces the profession is the absence of a regulation enforcing the surveyors to redevelop their capacities and the fact that most of them are not using the new technology in surveying.

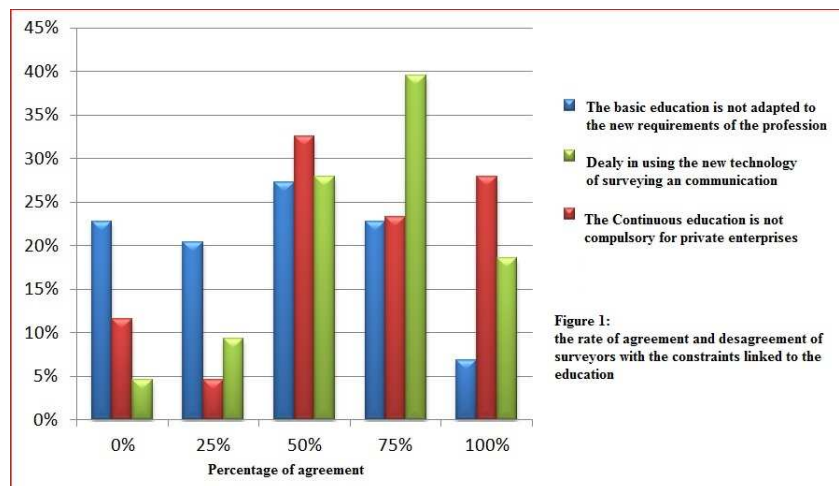
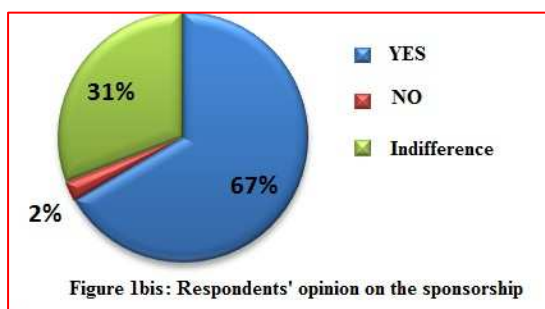


Figure 1: the rate of agreement and disagreement of surveyors with the constraints linked to the education

The overall satisfaction of the interviewees about the basic education shall be justified by new curriculum of surveying education accredited in 2009. It takes into account enhancements that have affected the professional environment in Morocco. The School of Geomatic Sciences and Surveying Engineering has improved its academic program by assessing the previous curriculum with its partners. The new program outlined new courses linked to the Quality Management System, urban law and regulation, cadastral studies, bathymetry, finance and budgets, real estate and expertise.

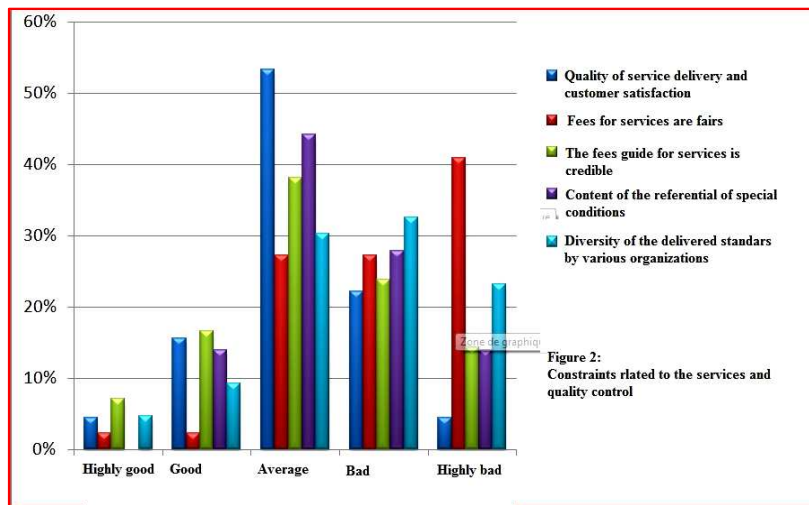
The School has concluded with the National order a Memorandum of Understanding, which aims to start a new sponsorship of student through their education life cycle. The agreement will enable the private enterprises to sponsor a student who should accept doing the whole practical training sessions within the enterprise sponsor. The figure 1bis shows that at least 67% of respondents appreciated the agreement and consider that is a beneficial way to initiate new graduate surveyors to the professional issues.



In terms of continuous education, 91% of the respondents agreed that the National Order should develop a code of professional duties and require a minimum of capacity building for the licensed surveyors. This will impact the engineers' practices when they enhance their skills in the new domains of surveying.

3.2 Quality of the surveying services

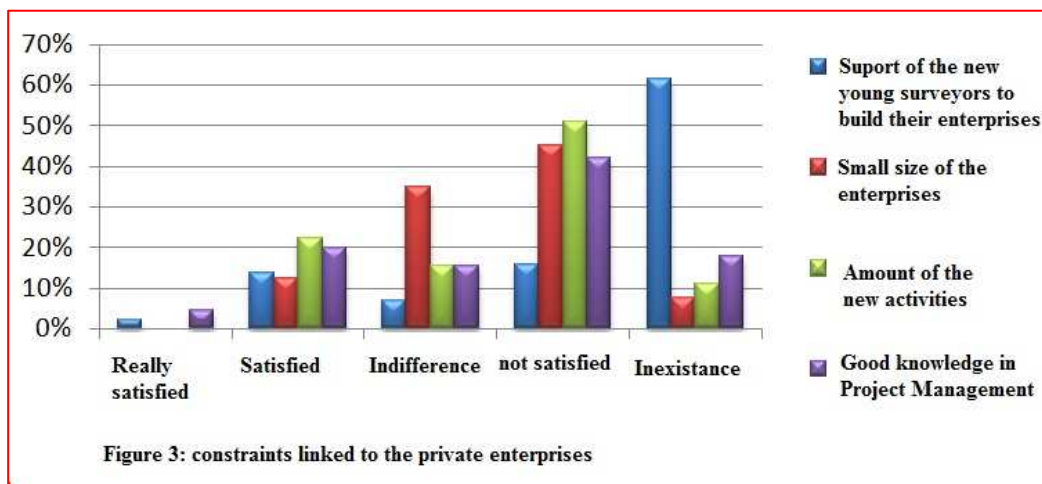
The second part of the questionnaire is related the constraints linked to the quality and fees of the surveying services established by the surveyors. The figure 2 indicates that 75% of the



respondents consider that the quality of the surveying services had an average rate. Concerning the referential of the services fees, 76% of respondents require that the referential shall be updated to meet the new needs.

3.3 The surveying enterprises

The studying of the professional shortcoming shall encompass knowing the constraints that impact the practice of the surveying profession in Morocco. The figure 3 shows the rate of the responses related to this category of questions. Indeed, 61% of respondents observe that the National Order of surveying didn't offer a great support to the new licensed surveyors. 43% of the respondents consider that the use of the new concept of the project management is not sufficient.



4. ATTITUDES TOWARD AN OBSERVATORY OF THE PROFESSION

The profession of surveying contributes in creating jobs and wealth. The engaged investments are catalysts of the socio-economic development in Morocco. However, the dominance of the small business enterprises is shortcoming that endures enormous organizational problems, reduces the competitiveness. This leads to undesirable behavior of the private enterprises facing the difficulties to satisfy the great demands of the customers. Indeed, it is necessary to establish an observatory of the surveying profession to meet the below requirements:

- Assist the Surveyors National board in implementing its strategies and action plans;
- Provide reliable statistics and indicators about the sector;
- Promote the profession by upgrading the private enterprises;
- Promote the professional ethics;
- Create and maintain the entrepreneurship between the professionals, scientists, and academic centers at the national and international levels.

The main instruments of the Observatory can be summarized in the following paragraphs:

- Pool of knowledge for collecting data by setting up a mechanism shared with various institutions and organizations. Accordingly, the National Order will get information from various origins such as government departments, national agencies, and private federations. This will enable data processing to analyze the dependencies of the profession and the real requirements of the customers. Aggregate indicators shall be available for any decision making.
- Dissemination system of information that interest surveyors in their business plan. The system reinforces the communication between the engineers and permits to share the issues linked to their practices. The dissemination will guide all surveyors to follow the surveying market and prepare their annual action plans in terms of investments.
- Prospecting committee of opportunities, which will be a reference in exploring new scopes of surveying activities. It shall develop insights to sustain the capabilities of the surveying enterprises by providing them with indicators about the new technologies and new opportunities.

According to the results of the questionnaire, 87% of the respondents are willing to contribute to setting up the observatory (Figure 4). This result encourages the National Order to initiate the process since there is a commitment of surveyors to assure success of such project. Proposals have been made by the interviewees to build the observatory.

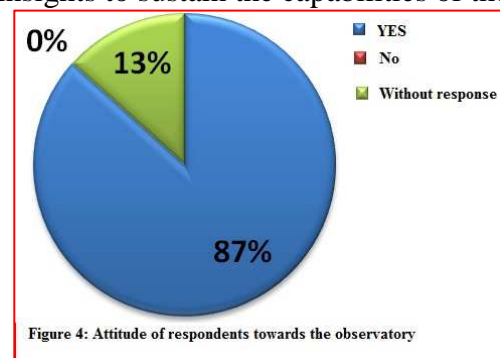


Figure 4: Attitude of respondents towards the observatory

5. CONCLUSION

The surveying sector in Morocco has grown since the creation of the National Order of Surveying Engineers and Surveyors by the la 30-93. The surveying profession plays a significant in supporting and providing services required by the national strategies and the main major projects. It is necessary to establish a tool accomplished to monitor the profession through real indicators and statistics. The observatory as a proposed tool is justified

to upgrade and corporate the sector restructuring. This study has the aim to highlight the usefulness of setting up such a tool to help supporting the National Order in its efforts in developing the surveying profession. To overcome the challenges of the future expectations, further efforts shall be made in partnership commitment with all stakeholders. Indeed, a deep analysis based on SWOT (Strengthening, Weakness, Opportunities, and Threatening) is recommended to get more indicators and facilitate the establishment of the observatory.

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BIOGRAPHICAL NOTES

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