Creative Construction Conference 2019, CCC 2019, 29 June – 2 July 2019, Budapest, Hungary

Value Methodology in the Real Estate Practice

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Abstract

Value Methodology (VM) is a management consultancy methodology that dates back 60 years. According to its definition, value is the ratio of function and resources. VM is a complex decision-support procedure that takes the consumer's need as a starting point and, in order to reach the technical-economic optimum, analyses and shapes the relationships between the functions and costs of a product in a constructively critical manner, as part of team work, in the course of a closely monitored process to create a more favorable value. VM is widely used in various industries, including the construction industry. The methodology is also successfully applied in production processes in Hungary. However, it is striking that the use of VM is not common in segments related to real estate consultancy.

This article examines the possible role of VM in the real estate practice, using the method of requesting expert opinion in a training program. The survey clearly shows that both the whole of the methodology and certain of its elements could be included in the everyday practice of real estate experts.

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Peer-review under responsibility of the scientific committee of the Creative Construction Conference 2019.

Keywords: Value Methodology, Value Engineering, Real Estate, Real Estate Valuation

1. Introduction

A special course brought together representatives of two consultancy segments with very similar names. These two segments are Real Estate Valuation and Value Methodology (VM). Both fields date back decades, adhere to strict rules and standards, and have prestigious professional organizations that cultivate their experts. It is difficult, however, to find a professional link between the consultancy segments, as the overlap between the methodologies used is very small. VM uses the opinions of real estate consultants and their results as data input, while the literature review shows that real estate consultants have not used the diverse methodological tools of VM so far.

The goal of the current survey is to examine, from the perspective of the real estate consultancy segment, in what way the methodology of VM could improve the daily work of real estate professionals and make the results of their analyses and valuations more accurate. The question is, "In which fields and in which activities it is possible and practical to apply VM?" This study is structured as follows: Chapter 2 presents the basics of Value Methodology and its application in the construction industry; Chapter 3 describes the objective, methodology and circumstances of the research; Chapter 4 contains the results and their analysis, while the last chapter explains the conclusions drawn and the recommendations put forward based on the research.

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2. About Value Methodology

The story of VM started after World War II, at the American corporation, General Electric. The first publication was prepared by Miles [1], project manager at General Electric, and was later followed by his definitive book [2]. Miles laid the foundations of Value Methodology. He claims that the options available to industrial designers when further developing products are strongly limited if they take the current state of the product as the starting point. According to the VM approach, designers should first examine the field of use for the product and exhaustively explore the needs of users. They should subsequently define the functionalities of the product and how the product has to meet certain needs. Only then should they search for solutions for the implementation of the functions. In general practice, developments thought through in this manner can achieve a cost reduction of around 10-25%. The method was found so effective in America that it has been applied on a mandatory basis in the arms industry since 1964, in environmental protection since 1978 and in public procurements as a general obligation since 1996 [3]. Value Methodology is a design approach, a systematic development tool and a decision-support procedure. Instead of seeking only to find the cheaper or better solution, it meets a need (benefits) at minimum cost (sacrifice). With a solution that meets this dual requirement, it is possible to create a product or service that is suitable from the point of view of the consumer, the user, i.e. satisfy the client.

According to its definition, value is the ratio of function and resources. VM is a complex decision-support procedure that takes the consumer's need as a starting point and, in order to reach the technical-economic optimum, analyses and shapes the relationships between the functions and costs of a product in a constructively critical manner, as part of team work in the course of a closely monitored process to create a more favorable value [4]. VM is widely used in various industries, including the construction industry.

VM use in the construction industry is commonplace [5]. Although construction projects can be designed very well, "hard thinking" does not necessarily work in this case, as various stakeholders may have different goals [6, 7]. The main reason why the use of VM in the construction industry is typically problematic is either that its user does not know VM well enough, or their experience as a facilitator in Value Methodology is insufficient. An additional reason is that, in contrast with production, products in the construction industry are a lot more complex and have many more variables or elements of chance [8]. The decision-making systems applied in VM must be adjusted to the special features of the construction industry [9]. In certain countries and areas, the application of VM is hindered for special reasons. In Hong Kong, it is the high plot price that VM cannot control, while the favoring of friends and family in tendering procedures is also an obstacle [10]; according to a study in South Africa, the failure of its application is caused by the lack of communication [11], while in Nigeria, the stakeholders of the construction market reject the new method [12]. Elsewhere, Value Methodology is used as the fulfilment of a formal obligation, but does not result in considerable benefit due to the low effort exerted by experts [13, 14]. However, in countries where the application of VM is not mandatory, market actors call for a government measure to make the methodology obligatory as part of the local construction process [15, 16, 17].

Overall, the literature reports on favorable experiences in the application of Value Methodology in the construction industry. Various studies claim that using VM, savings of 5-10% can be achieved, while user satisfaction can also be significantly increased [18, 19]. It is important for Value Methodology to be introduced in the project as soon as possible, since its application in the early stages results in greater benefits [4]. Researchers see an opportunity for further development in the automation of VM; using artificial intelligence, Value Methodology can provide truly efficient assistance in the entire implementation process [4, 20].

The literature does not discuss the use of VM in the field of real estate. In this topic, the RICS guide, which summarizes the concept of VM for professionals exercising activities in the real estate sector, is unique for now [21].

3. The Research

The series of master courses offered by the Budapest office of Grant Thornton provided a great opportunity for carrying out the research. The master course was created to summarize the existing national and international knowledge, practice and information in connection with valuation, and help the participants in the master course acquire this organized knowledge, as well as make this knowledge available to the broader professional public. Each session of the master course focuses on one selected, relevant topic, typically in the form of a 3-day intensive and interactive series of lectures. The course is generally taught in small groups of 15-20 people, and ends with the preparation of a final “thesis”, which contains the conclusion of the joint professional opinion of the participants. The topics for the master course events held previously included the valuation of stigmatized property, the valuation of municipal property and the impact of the Big Data era on valuations. The topic of the 8th master course was the detailed discussion of the previously described problem. The invited students were professionals in the field of real estate consultancy with great theoretical and practical experience. The course entitled “Value Methodology in the Field of Real Estate” was held at Budapest University of Technology between 14 and 17 February 2019. The course was instructed by Lucie Parrot, a Canadian professional with great experience in Value Methodology. Over the course the three days, the participants obtained an overview of Value Methodology and its application in the construction industry and learned to use the core techniques of Value Methodology themselves as part of a minor exercise. The participants of the course learned about the technique and followed the entire Value Methodology process as part of a case study together. After the preparations, the participants discussed the possible cases where VM could be applied in the field of real estate valuation as part of group work, and put forward various relevant recommendations during a “Barnstorming Section”, recommendations which they also ranked in the assessment phase.

In the course of the research, we took advantage of the fact that participants formed their own opinions on the applicability of VM at the end of the intensive learning process. At the beginning of the course, we asked them about their attitudes toward VM, so we had the opportunity to compare the initial and post-course views of the students by asking the same questions at the end of their learning process.

A total of 17 experts participated in the course, and, thereby, the research. The distribution of their experience in the real estate market is illustrated in Figure 1:

1. *Figure: The distribution of expert experience within the panel*

As can be seen, the participants had great experience; their average experience in the real estate market was 14.5 years.

The questions asked at the end of the course were divided into four main functional groups:

- Respondents' attitude toward VM
- Applicability of individual methods of VM in the field of real estate valuation
- The application of VM in certain priority areas of real estate valuation
- The application of VM in the Hungarian construction industry.

In the course of the research, we asked respondents to answer a total of 18 questions. We requested and registered the answers using multiple-choice questions and a free software called “kahoot” (www.kahoot.com). The respondents were not able to see the individual or aggregated responses from the group members after answering the individual questions, only after the survey had been closed (and even then, they did not see the individual responses). Each question was multiple-choice with four possible answers. We assigned the values of 0, 0.333, 0.666 and 1 to each option in ascending order, using the aggregate amount of which we determined the joint opinion of the respondents. The lowest possible value was therefore 0, while the highest was 17, according to the number of participants, where 0 is the lowest and 17 the highest support.

4. The Results

The course participants demonstrated a positive attitude prior to the course. Although their knowledge of VM was strongly limited (6.920), they found the role of “soft thinking” important in real estate consultancy (8.809). This value increased after the course, the opinion grew stronger (11.330).

The applicability of individual VM methods was found to be good and was generally supported by the experts. Table 1 shows the answers in order of support.

Question No.	VM method to employ in RE Consultancy	Compound answer value
R4	Usage the Creativity Phase	12.661
R5	Usage outside expert group	10.994
R7	Usage pre-decided time frame	10.994
R6	Usage the systematic process flow	9.661
R3	Usage the Function Analysis	9.659

1. Table: Applicability of individual VM methods

The second main set of questions was about the applicability of VM as a full methodology in certain real estate consultancy activities. Table 2 also shows the possible areas of expertise (together with their support) in order of support of the panel.

Question No.	VM usage for	Compound answer value
U4	Feasibility Study	14.662
U5	Hedonic approach in RE valuation	14.662
U2	Residual Valuation	13.327
U1	HBU analysis in RE practice	13.326
U3	Estimation of the obsolescence of a property	12.993
U6	Stigmatized properties analysis in RE valuation	12.993
U7	DCF analysis in RE valuation	10.662

2. Table: The possible areas of expertise

The course participants also expressed their overall opinions on the application of VM in the Hungarian construction industry. In principle, the respondents endorse the widest possible use (11.661), but do not find the obligatory introduction of VM in the near future feasible.

In the course of analyzing the results, we were looking for statistical connections between the respondents’ careers, previous experience regarding VM and responses given to the individual sets of questions. We did not find any correlation between previous experience and the applicability of VM in the Hungarian construction industry; there was a weak correlation ($R=0.398$) between expert experience and the opinion on the applicability of VM methods. On the

other hand, the respondents assessed matters in a consistent manner; a strong regression relationship was detected between the average of answers given to the two main sets of questions ($R=0.548$).

5. Discussion

Value Methodology is a discipline whose methodology can be used in various fields [22]. Real estate consultancy is also a long-established, well-regulated activity. Big Data and modern analytical methods supported by artificial intelligence have emerged in the field of modern real estate. Nevertheless, the human factor is still indispensable in the course of design and implementation [23]. The experts participating in the panel have significant experience, they consider the above statements as basic principles. They formed their judgment on the applicability of VM taking them into account. They find its introduction particularly useful in professional areas where the standard solutions are associated with subjective judgments (feasibility studies, hedonic method, residual valuation). This is why, out of the VM methodologies, the respondents placed the joint description of the community's experiences, the Creativity Phase first – since, instead of individual views, this approach (which is well defined by VM) incorporates the results of the work of a well-prepared and committed team into to otherwise fixed real estate consultancy process.

The given responses are consistent in the expert sample. Linking the applied research method, i.e. request for expert opinion, to prior training and group work could have clearly led to a collective commitment to the matter. This may result in an increase in support, but since there was no feedback on the results during the research, no deflecting effect occurred regarding the order. Since there are currently no experts who practice in both consultancy fields, combining the research with a training course was reasonable.

6. Conclusion

The survey confirmed the initial hypothesis that Value Methodology can be applied for the facilitation of real estate consultancy activities. Since real estate consultancy also requires a “soft” approach, certain VM solutions that use the same method could provide assistance in the performance of real estate activities with a methodology that allows for designing and monitoring. In certain fields of consultancy, particularly in the case of mass valuations, which require comprehensive analyses, or the field of feasibility studies, VM offers a new and well-established toolset to experts working in the field.

The research is intrinsically very limited; partly because members of the panel reflected on the circumstances in Hungary and gave their answers based on them, and partly because in the research, the transfer of information on VM took place only as part of a short, 3-day course. However, VM has not yet been used in the field of real estate consultancy (its application has not been described), so the results of the survey justify further research. The current survey is an initial study of the applicability of VM in real estate consultancy. Spreading the application of VM to a broader professional public in the fields specified in the research is only possible after the performance of additional practical case studies.

The incorporation of the Creativity Phase, which was placed first by experts, into the usual consultancy procedures is to be examined as a priority. In this regard, extending the current research to the establishment of a process model that meets the requirements of both disciplines examined is recommended.

Acknowledgements

The performance of the survey presented in the article was made possible by the “Knowledge Management” program supported by Grant Thornton. Particular thanks to Lucie Parrot, the instructor of the programs, for the comprehensive presentation of VM.

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