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Diagnosis of the Process of Building Relationships between Customer and Company and Company and Employee

Lukasz Skowron[1] -- Marcin Gasior[2]

[1]Faculty of Management, Lublin University of Technology, Poland
[2]Faculty of Management, Lublin University of Technology, Poland

ABSTRACT

In the article the authors address the problem of the growing significance of measuring intangible assets of an organization and its increasing influence on the market position of companies.
Within the set of intangible assets of an organization the authors focus on the problems of measuring employee motivation and customer satisfaction. As the results of these studies show, by nature non-quantifiable issues are key aspects of building market position of the twenty-first century company. To make an accurate diagnosis of the issues discussed in the work the authors present structural equation modelling method (SEM), as an effective tool for the presentation of the process of building complex marketing phenomena such as both employee motivation and customer satisfaction.
Presented in this paper the results of our' own studies show (in the measurement of employee motivation and customer satisfaction) performed SEM modeling confirm the high efficacy of these tools in the area of measuring the phenomena studied with the determination of the main success factors within the analyzed issues. The results show that the structural equation modeling is now regarded as the most advanced and simultaneously accurate method of measurement within the analysis of intangible assets of an organisation. Thanks to the structural equation modelling investigator obtains the exact knowledge about the perception of the company by its main stakeholders (internal - employees or external - customers), so it can match the management of the company to meet the needs and expectations of the market, which in in the strategic perspective, ensures the company sustainable competitive advantage and strong market position.

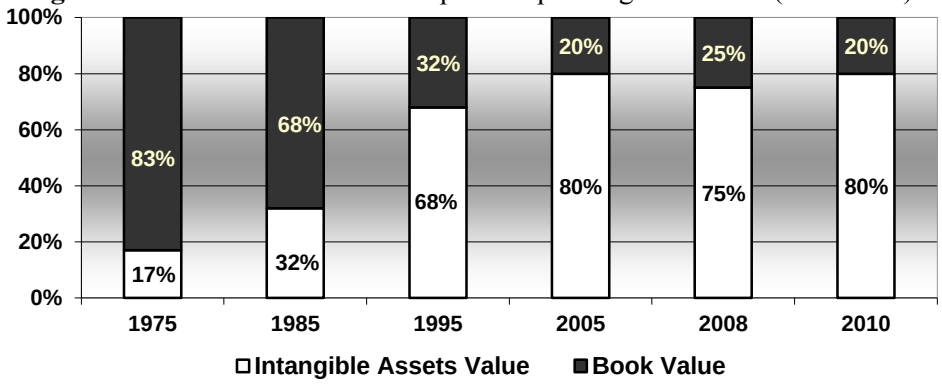
Keywords: Intangible Assets, Customer Satisfaction, Employee Motivation, Employee Satisfaction, Structural Equation Modeling (SEM), Partial Least Squares (PLS)

1. Introduction

Over the past years, we can notice increasing interest in measuring customer value and the process of building profitable and long-term customer relationships both in business practice as well as in the scientific literature.

From the marketing point of view, the customer is the main target of wider marketing activities of the organizations. Today's market is characterized by dynamic changes (depending on analyzed sector these changes may relate to aspects of the technology, logistics, distribution of products, and information about them, issues of development of know-how in this area etc.). Companies wishing to survive in the market are compelled to build close relations with the customers, who should be the perfect source of obtaining knowledge about the direction and scope of a company research on product development and customizing offers to current market needs. No matter which sector of the market the companies operate in, always the customer is the ultimate determinant of success and market position of these companies. If any market offer does not meet the due interest of the customers, it will not have any chance to survive in the market despite the objectively determined high market value, understood as a positive rate of widely perceived quality of the offer to the price.

Figure-1. The market value of companies operating in the U.S. (S & P 500)



Source: Ocean Tomo's Annual Study of Intangible Asset Market Value – 2010
http://www.oceantomo.com/media/newsreleases/intangible_asset_market_value_2010

The results of numerous studies conducted by independent researchers around the world show that at the turn of the centuries there was a change in significance of intangible and tangible assets in determining the fair market value of the companies (see Figure 1) (Choi *et al.*, 2000; Daum, 2001; Malone and Rose, 2006; Chareonsuk and Chansa-ngavej, 2008; Ramirez and Hachiya, 2012). The main factor in these important changes is the globalization in the field of information transfer. Intangible assets by definition difficult to be univocally assessed, are largely determined and valued by the exchange of opinions made by internal and external customers of a company. Such aspects as the perception of the quality of the brand / product, company image in the market and brand equity are inextricably linked to the level of satisfaction of employees and customers of the organization. A satisfied customer, who is a devoted advocate of the company, is building its market image that in the age of the Internet will be publicized in the minds of other potential customers quickly and very effectively (mainly through social media and rating services).

Currently, in the business practice of companies there are hardly any discussions on the issue of the relevance of the discussed phenomena. The market is aware of their priority role. The problem is however the development of effective measurement methods that would provide companies with the opportunity to quantify these phenomena with the potential to control the entire process of building them. In this paper authors will outline structural equation modeling (SEM) method as a tool for presenting the studied marketing phenomena in the structure of the cause-effect relationships and will present the results of primary research conducted in the area of measurement of employee motivation and customers loyalty and satisfaction in the companies from different economic sectors.

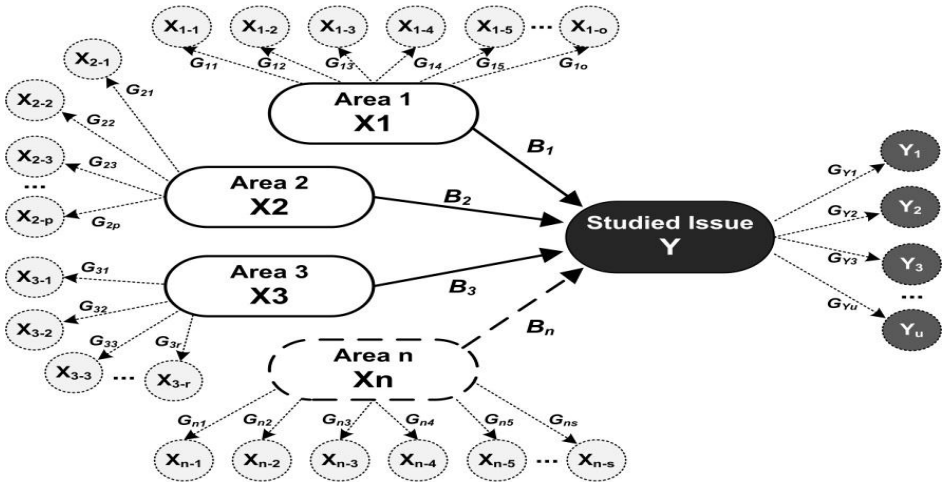
2. Structural Equation Modeling - Theoretical Considerations

Detailed description of SEM has been the subject of numerous scientific studies (Chin, 1998; Chin *et al.*, 2003; Henseler *et al.*, 2009; Kristensen and Eskildsen, 2010; Skowron, 2010a; 2010b; 2010c). In this article we are only presenting the framework structure of the discussed measurement technique and the results of primary research conducted by the authors using the method of Partial Least Squares (PLS) (in the measurement of employee motivation and customer satisfaction and loyalty).

The main idea of SEM can be best explained on the framework presented in Figure 2.

The presented framework model shows the main idea of structural equation modeling (SEM), and thus an opportunity to present the complex and non-quantifiable by definition marketing phenomena (such as customer satisfaction, employee motivation) as the effect of the impact of areas that create these phenomena. Structural equation models on the one hand allow for determining the value/evaluation of specific areas assigned by individual respondents (Figure 2 - Y, X1, X2, X3, ..., Xn). They also allow for defining the power of their impact on the studied phenomenon (in the case of the framework model presented in Figure 2, the examined phenomenon is the issue of Y and the impact of the various areas is described by symbols B_1, B_2, B_3, …, B_n). In addition, SEM allows for identifying specific concepts within each of these model areas which, for the studied group of respondents, are crucial in building their opinions about a given area (e.g. in Figure 2, in the case of "Area 1" individual research questions are indicated by symbols $X_{1\text{-}1}$, $X_{1\text{-}2}$, $X_{1\text{-}3}$, $X_{1\text{-}4}$, $X_{1\text{-}5}$, …, $X_{1\text{-}o}$ and their significance level is determined respectively

Figure-2. Basic SEM framework



Source: own study

by definite values assigned to symbols G_{11}, G_{12}, G_{13}, G_{14}, G_{15}, ..., G_{1o}). The research questions are in the form of the survey questions, which in this study were addressed to the respondents in order to learn their opinion about a given aspect of the company performance and its offer (usually the studied research questions are rated by respondents on a scale 1 - 5 or 10, where 1 is the lowest / the worst, while 5 or 10 is the highest / the best rating).

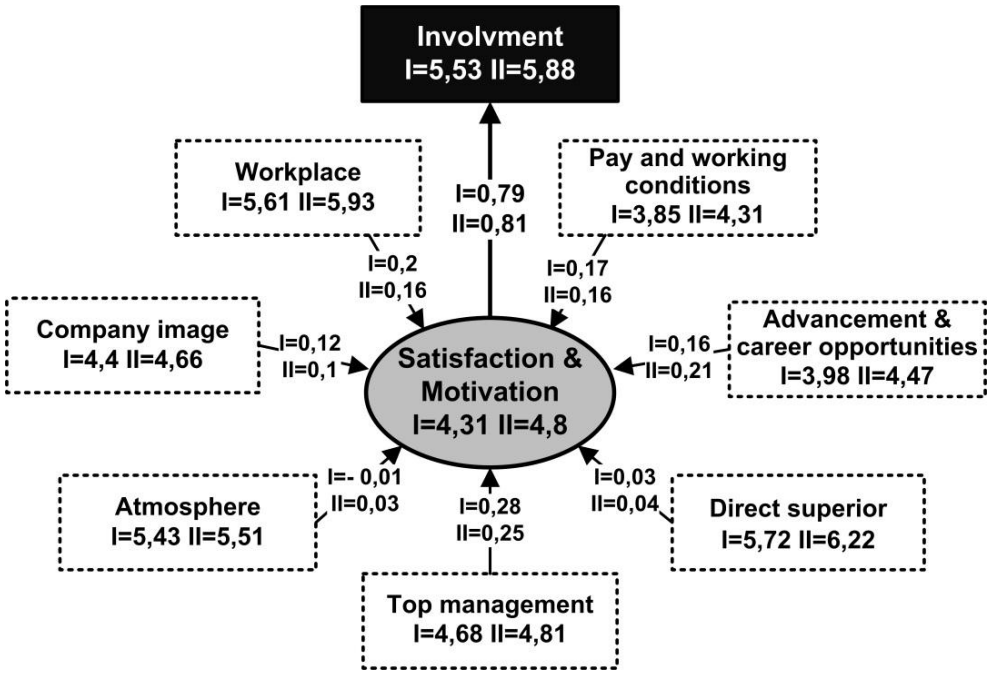
As a result of the analysis using a SEM, the researcher obtains not only a response, to the level of evaluation of the given research questions as is the case with conventional measurement tools, but also to their significance in the process of structuring of the analyzed phenomenon. In addition, the applied research methodology allows for a full diagnosis of the fitting level of the constructed model to the observed empirical reality at the level of internal consistency (indicators such as AVE, Cronbachs Alfa, Composite Reliability) and external consistency (indicator R^2) of the studied model.

3. Motivation of Employees - Empirical Results

In the following part of this article, we are discussing the authors' own results of research on determining the level of motivation and job satisfaction of employees. The analysis covered two SMEs involved in the sale of construction products (there were examined 53 employees in the company I and 58 employees in the company II who in both cases accounted for more than 80% of the workforce). Both companies operate in the eastern Poland and are direct competitors in the market. The study of employee motivation and job satisfaction was carried out for both analyzed companies based on the model presented in Figure 3 (the employees of company I were surveyed in 2010 while the ones of company II in 2012). The structure of the model assumes that the level of satisfaction and motivation of employees[1] of the surveyed companies is the result of ratings given by respondents (employees) in the areas describing issues related to: pays and working conditions, advancement and career development, direct supervisor, chief management, "atmosphere" prevailing in the company, the image of the company and the workplace. In addition, the model assumes that the level of employee motivation and job satisfaction is a key indicator of their commitment to the delegated work. The resulting fitting indicators of the internal model confirm a good division of research questions into specific areas of analysis. In addition, for both of the surveyed companies the analyzed models received a relatively high level of the indicator R^2 for issues of motivation and job satisfaction of employees (company I - 0.62, company II - 0.66), indicating that this model was constructed in a way that describes the studied market phenomena very well (with the empirical data obtained).

[1] in this case designated as a common problem area - in the study there were asked two questions describing satisfaction and three questions concerning motivation

Figure-3. Model of building job satisfaction and motivation of employees



Source: own study

The data presented in Figure 3, show that both companies obtained almost identical results in both the ratings obtained (in individual research problems) as well as in designation of the main areas of significance of the building of job satisfaction and motivation of employees surveyed. In both companies, it should be noted that the rating of the employee motivation and job satisfaction is at a relatively low and unsatisfactory level (less than 5 points on a 1-10-point scale). For the employees of both companies the assessment of the top management performance is crucial in the process of building their motivation and job satisfaction. In the respondents' opinion, the aspects related to *the assessment of the attractiveness and difficulty of work in the current position*, *advancement and career opportunities , pay* as well as *the external image of the company* are also important elements influencing their job satisfaction and motivation to work, although they are not as important as the aforementioned *top management* issue.

To make an accurate diagnosis of management-type issues found in the analyzed companies, there will be presented a detailed analysis of problems raised in the *top management* key area (according to respondents) (Table 1).

Table-1. The results obtained in the area of "top management"

The problems in the area of "top management"	Company I		Company II	
	Average of responses	PLS significance	Average of responses	PLS significance
The support of top management for the co-operation between individuals and / or groups of employees	4.20	0.159	4.41	0.205
Style/method of managing the company by top management	4.35	**0.231**	5.35	0.194
The method of organizing work in the company by top management	4.24	**0.220**	4.63	**0.221**
The ability of top management to make the right business decisions	5.95	0.172	5.75	0.182
The ability of top management to clear transfer of information and instructions	5.03	0.204	4.48	**0.215**
Willingness of top management to inform employees about the situation, prospects and strategy of the company	3.93	0.197	5.32	0.167

Source: own study

The presented data specific to the area of *top management* (table 1) show that, despite the same levels of equation modelling dependencies between different areas in the models tested (for both the analyzed companies) the origin of intra-organizational problems occurring in these companies takes quite a different character.

In the case of company I, we are dealing with a situation in which the opinion of employees on the company top management is mainly the resultant of assessing the *method of management of the company* and *organization of the workplace there*. In both cases, the average ratings of employees assigned to the discussed research problems are at a relatively low level: 4.24 for the work organization and 4.35 for the assessment of the way / style of management. A high significance of these issues along with their low ratings result in low overall assessment of the discussed area, despite the relatively positive opinions expressed by employees regarding the issues of *top management ability to make the right business decisions* (average score - 5.95).

In turn, the analysis of the data obtained for company II shows the presence of inter-organizational problems of different nature. The employees of this company in assessing the performance of top management mainly focus on issues concerning *the way of work organization in the company* and *the ability of top management to clear transfer of information and instructions* respectively. It should also be noted that the above-mentioned issues are also among the lowest-rated research problems within the whole analyzed area (only the issue of *support of top management for co-operation between individuals and / or groups of employees* was rated lower*)*. This situation results in a relatively low overall assessment of *top management* like in the case of company I.

The presented data show that despite the twin path relations obtained for each of the surveyed companies we deal with various problems of administrative and managerial nature occurring within them. Fin case of company I, one can see the dissatisfaction of employees with the prevailing management style that affects in their opinion the lack of effectiveness of the organization of work in the company. However, in the case of company II, one can see that the main intra-organizational problem (in the opinion of the employees surveyed) is the lack of a clear and effective system of transfer of information and instructions that prevents the efficient organization of work in the company.

These examples show how accurate diagnostic tool the path relations models are. By using this measurement method, it was possible to define the key areas of success for the building of motivation and job satisfaction of employees and to identify the major administrative and management problems that prevent the smooth functioning of the company and increasing the level of commitment and motivation of its employees.

4. Satisfaction of Customers - Empirical Results

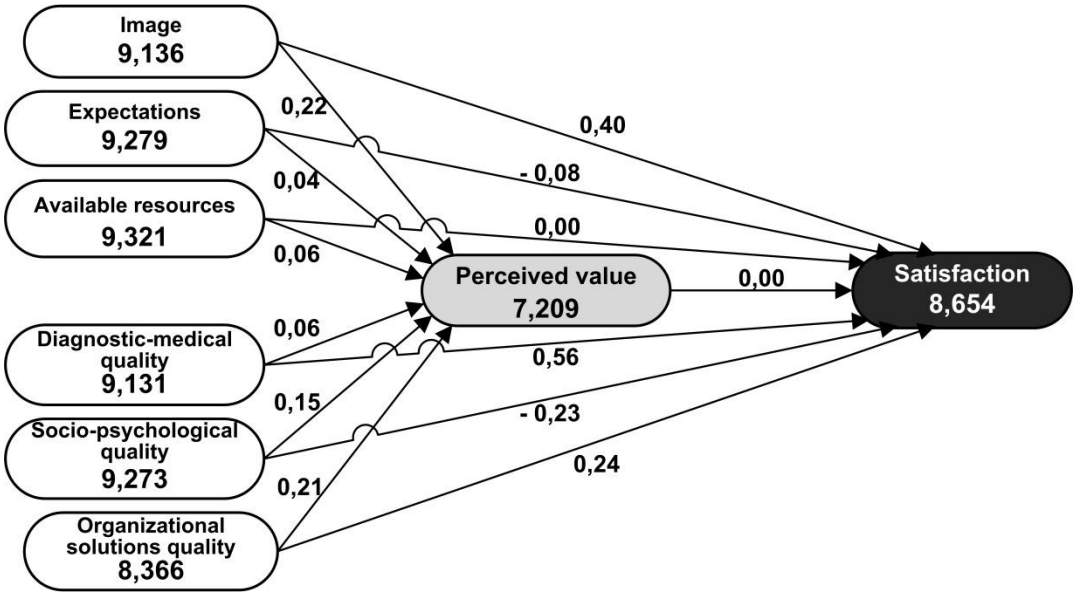
In order to present the applicability of structural equation modeling to determine the level of customer satisfaction we will present the results of our research conducted among clients of one of the private clinics operating in the city of Warsaw. The study was conducted in 2010 on a sample of 150 customers of the discussed facility with the use of a paper questionnaire being the research tool. As a result of statistical analysis of the collected empirical material we could provide a path relations model of the process of building customer satisfaction and loyalty of the analyzed customer groups (Figure 4). The framework construction of the model assumes that the level of customer satisfaction is the result of ratings assigned by the survey respondents to six independent (exogenous) problem areas (patients' expectations, the company's market image, available resources, the quality of diagnosis and treatment, the socio-psychological quality and organizational solutions quality) and one area of endogenous nature (perceived value).

In order to assess the accuracy of the model we used R^2 indicator. The variances of R^2 indicator obtained for each area of analyzed the model (for the area of the perceived value - 0.513, and for the area of satisfaction - 0.754) show that such a structured model provides a reliable picture of the mechanisms of shaping the phenomenon of customer satisfaction at the discussed medical institution. The model explains the variances that occur in the area of satisfaction even, in 75.4%, which according to accepted standards for this indicator provides a perfect fit of research model to the observed empirical reality.

The results obtained in the various modules of this model (Figure 4) show that in the opinion of customers surveyed most of variables influencing customer satisfaction ranks very high. Of the six areas of the independent variables in the model, only the quality of the organizational unit scored well below 9 points (8.366). The results of a detailed analysis of individual research problems included in the quality of the organizational unit, show that a low rating of this area is mainly due to low assessments given by patients about the solutions used by medical entity. They include w*aiting time for medical service,*

timeliness/punctuality of provision of health services, ease of contact / consultation with a doctor and efficiency in dealing with problem situations.

Figure-4. Model of building customer satisfaction



Source: own study

In the analysed case, customer satisfaction of the investigated medical facility consists principally of the image of the entity, the effects of services (diagnostic and medical quality) and organizational efficiency the patient is handled with. The first two of these factors play a key role, providing a solid basis for the market position of the institution. It should be noted, however, that the relatively high significance of quality issues in organizational solutions in conjunction with their lowest ratings of all independent areas analyzed results in an overall level of customer satisfaction at 8.6 index point (all other areas were assessed independently on average at over 9 points in 1-10 scale).

In addition, it should be noted that the surveyed customers definitely gave the lowest scores to the *perceived value*. Also, the *perceived value* (understood as "benefit for the money") becomes in the case of the tested institution a neutral element in shaping customer satisfaction. Patients do not perceive the experience with the clinic as a transaction economically advantageous or disadvantageous (they do not feel to be winners or losers in an economic sense). The assessment of variables that build the module is not indeed too high, but it is a condition acceptable to the customer and can be the starting point for the management to take efforts to offer more flexible pricing of services.

The presented data suggest that customer satisfaction of examined medical entity is not in any way (positively or negatively) formed through the *perceived value*. This situation is unfavorable and can prove the fact that customers build their loyalty and satisfaction not in relation to the entity, but in relation to individual doctors with whom they have contact. Therefore, we are faced with a situation where the medical facility is perceived by the patients not as the provider of the services, but rather as an intermediary, facilitating the contact between them and the doctors working at the clinic.

Under normal conditions (in the classical form), the process of building customer satisfaction and loyalty should be in accordance with the chain: *experienced quality - perceived value - satisfaction - loyalty.* Lack of correlation between perceived value and satisfaction in the case of the discussed entity interferes with the process of building customer loyalty, which in the strategic perspective can seriously hamper the construction of the company's competitive position in the market of specialized medical clinics in Poland.

The analysis based on path relations model as part of the process of building customer satisfaction at of medical facility allowed for a precise diagnosis of the current state of affairs within the organization. The management not only gained precise information on the perception of company in the market and the importance of individual issues affecting the satisfaction of its customers (patients). Additional and very important information resulting from the constructed path relations model is defining the main problems of organizational nature, with which the company must deal with in the strategic perspective, in order to maintain their strong position in the competitive market for specialized medical services. We can see that

structural equation modeling allows not only for obtaining information about the current condition in terms of building company-customer relationships but also allows for the early detection of potential problems that in the long term could significantly disrupt the process of building effective and mutually beneficial company relationship with its customers. It is therefore not only a diagnostic tool but also a predictor, which significantly enhances its practical importance as a tool to support strategic decisions of administrative-management nature within the company.

5. Conclusions

As presented in this article results of our' own research demonstrate structural equation modeling can be considered as an effective diagnostic tool allowing companies for comprehensive and accurate assessment of intangible resources. Thanks to the measuring method the researcher is not only getting a synthetic index of the analyzed phenomenon, but is able to reproduce the whole (often complex and multi-level) process of its construction. This allows the accurate identification of needs and customer feedback about the phenomenon under study (with the determination of the main success factors), so that the company can effectively allocate their resources in order to maximize performance.

Currently, in the market there is more and more pressure on the business community to create a holistic model that would describe a holistic development of the market value of enterprises with simultaneous taking into account the relationships between the tangible and intangible resources involved in this process of value creation. According to the authors methodology of structural equation modelling meets all the criteria set by the market and should be considered by the business community as an excellent tool for integrated measurement of enterprise intangible assets and their reference to the classic, quantifiable (measurable) indicators of potential and market position of the company.

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