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HOW ARE THE COMPETITION AND MARKET ENTRY STRATEGIES DEVELOPED IN HEALTHCARE INSTITUTIONS

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ABSTRACT

When developing competition and market entry strategies, health institutions must know which strategies are likely to work. However, efficient implementation of strategies is also crucial because sometimes we witness health institutions failing due to improper implementation of suitable and effective strategies.

In the twenty-first century, health institutions must use competition and market tools with zero- error strategies. On the other hand, health institutions must have a good knowledge of the structure and characteristics of the service market to develop competition and market entry strategies. This study provides a comprehensive survey of the literature on the concepts of market attractiveness, market concentration, and market growth and attempts to examine how health institutions develop their competition and market entry strategies.

Keywords: *Market Appeal, Market Concentration, Market Growth Rate, competition, health institutions*

JEL code*: D40; M30; M31*

INTRODUCTION

The success of a health institution depends on its ability to analyze the structure of its service market and develop implementable strategies based on factual data and observations. It is because, for health institutions operating in an uncertain and volatile environment, it is vital to gain knowledge about the structural characteristics of the targeted market before entering it.

Regarding the structure of target service market, it is essential to know certain defining features such as the number of health institutions already operating in the market, ease of entry into the market, variety of products offered in the market, degree of competition between institutions in the market, the health institution's growth potential in the market, ratio of insured population in the market, and the average rate of profitability in the market. For instance, if there are a few health institutions already operating in the market, it may represent an opportunity for the health institution targeting to enter the market. Similarly, the health institution may enter the market by advertising the use of robot technology in open-heart surgeries. On the other hand, the excessive intervention of the Social Security Institution (SSI) on prices can be a threat to the health institution. Likewise, the Ministry of Health's stipulation that private health institutions must make agreements with SSI may also be perceived as a threat by the entrant private health institution.

PURPOSE OF THE STUDY

Market and competition analysis tools are employed to determine how competition and market entry strategies can be developed in health institutions. Hence, the aim of the study is to discuss how health institutions can use market and competition analysis tools properly to identify the structure and characteristics of the service area when developing their competition and market entry strategies. In this process, it is especially important for the health institutions to distinguish the attractiveness factors for the service area. This is because of the fact that the impact levels of attractiveness factors and the weights of service areas form the basis for developing implementable and evidence-based strategies. Furthermore, the study aims to discuss market concentration and market growth rate concepts because understanding these concepts are also crucial in developing competition and market entry strategies.

METHODOLOGY

In accordance with the purpose of the study, we conduct a detailed and systematic review of the related literature on competition and market entry strategies for the health institutions. Because the findings of the theoretical and empirical literature point to the importance of feasible competition and market entry strategies in all economic sectors, we also try to provide a general assessment of the main competition and market strategies employed by health institutions.

THE TOOLS FOR ANALYZING MARKET AND COMPETITION

To develop suitable competition and market entry strategies, health institutions must determine the structure and characteristics of current and prospective the service areas (markets).

MARKET ATTRACTIVENESS

The attractiveness of a service area (market) refers to the opportunities that the service area provides or is likely to provide to the health institutions. The attractiveness of a service area for a private health institution is determined by factors such as demand, revenue, profit, growth potential, competition intensity, and the growth potential of the market. As the scope of opportunities an area provides to a health institution increases, its attractiveness also rises. Market attractiveness analysis serves two purposes: to decide which region to serve and to determine which health services to provide. The steps of market attractiveness analysis are summarized below (Hax and Majluf, 1983; Wind and Mahajan, 1981):

Step 1. Determining Attractiveness Factors Pertaining to the Service Area: In the first step, environmental factors to be considered when determining the attractiveness of the service area are identified. Examples of these factors include:

Size of the market (population, demand),

Demographic characteristics of the region's population (income, percentage of insured population),

- Growth rate of the market,
- Profit rate,
- Degree of competition,
- Government incentives,
- Barriers to entry into the area, and
- Household/per capita income.

Step 2. Determining the Relative Importance of Factors (Factor Weights): The attractiveness factors identified in the first step may not be equally important. Some factors may be more important than others. If the importance level of the factors is different from each other, it is necessary to determine the factor weights that reveal these differences. The weights must be determined in a way to reflect the relative importance of factors. For instance, if the growth rate of the market is the most important factor, its weight should be higher than the weights of other factors. The main purpose of factor weighting is to calculate a single "attractiveness score" that takes into account all factors with different levels of importance.

Step 3. Ranking of Service Areas: In this step, service areas are ranked individually based on the criteria identified in the first step. To determine the ranking of a service area, we also assign a rating score for each factor ranging from 1-5 (1=Not attractive at all, 5=Very attractive). Table 1 provides an example of factor weighting, rating, and the calculation of attractiveness score for a service area.

Table 1. An Example of Service Area Factor Weighting
and the Calculation of Attractiveness Score for a Service Area

Attractiveness Factors	Factor Weights	Ratings	Attractiveness Score
Population	0,14	5	0,7
Quantity of Demand	0,15	4	0,6
Market Growth Rate	0,22	5	1,1
Profit Rate	0,18	5	0,9
Share of Insured Population	0,1	3	0,3
Degree of Competition	0,16	2	0,32
Government Incentives	0,05	1	0,05
Total	1	-	3,97

Step 4. Calculation of Attractiveness Score: In the final step, attractiveness scores of each factor are calculated by multiplying the factor weights with the factor ratings. The attractiveness scores are then added up to determine the overall attractiveness score (in our example, it is 3.97) of the market (or area). The market attractiveness score ranges between 1 and 5. By using statistical data classification techniques, it is possible to group the attractiveness scores into three main categories:

i. If the overall attractiveness score is less than 2.33, the market is considered low attractive,

ii. If the overall attractiveness score is between 2.33 and 3.66, the market is considered medium in attractive, and

iii. If the overall attractiveness score is bigger than 3.66, the market is considered high attractive.

Market attractiveness analysis can help with decisions about which market to enter and determining of how the attractiveness of the market changes over time. Hence, the market attractiveness analysis needs to be repeated continuously. Over time, the attractiveness level of the service area may decrease due to several reasons such as destructive competition or a decrease in demand. In such cases, health institutions' managers may decide to exit from that region or follow a downsizing strategy and stop providing some services.

As emphasized above, health institutions conduct market attractiveness analysis not only to determine the service area, but also specify the services to offer, change offered services, or discontinue offering. In this case, the attractiveness factors are determined based on the service to be offered/being offered. An example of a service/product-based market attractiveness analysis is presented in Table 2.

Table 2. An Example of Service/Product-Based Market Attractiveness Analysis

Attractiveness Factors	Weights	Services					
		Cardiology		Neurology		Oncology	
		Ratings	Attractiveness Score	Ratings	Attractiveness Score	Ratings	Attractiveness Score
Population	0,14	4	0,56	4	0,56	5	0,7
Quantity of Demand	0,15	5	0,75	3	0,45	5	0,75
Market Growth Rate	0,23	5	1,15	2	0,46	5	1,15
Profit Rate	0,18	5	0,9	3	0,54	5	0,9
Share of Insured Population	0,1	3	0,3	3	0,3	4	0,4
Degree of Competition	0,11	2	0,22	2	0,22	3	0,33
Government Incentives	0,09	1	0,09	1	0,09	4	0,36
Total	1		3,97		2,62		4,59

Market attractiveness analysis also provides signals for the potential competition the health institution will face in the future. As the attractiveness of a market increases, so does the likelihood of new health institutions entering the market, and therefore, the degree of competition increases. Service-based market attractiveness analysis guides managers to decide which services to start offering or increase the service capacity of some departments (for example, opening a new oncology examination office, or increasing the number of beds in the oncology clinic). Similarly, market attractiveness analysis can provide early warning signals about which services current or potential competitors may start offering or increase the service capacity of some departments in their institutions. Market attractiveness analysis not only helps determine which services to offer but also guides managers on which services to stop offering.

An important aspect of market attractiveness analysis is that its results can be combined with information about the strengths and weaknesses of the health institution to develop institutional strategies. For example, the GE-McKinsey Matrix provides important information to managers in the strategy development and evaluation process by combining the findings of the market attractiveness analysis with information about the strengths and weaknesses of the health institution.

MARKET CONCENTRATION

Market concentration is one of the most important concepts that provides information about the structure of a market. Market concentration refers to the number of institutions in a market and the amount of service each institution provides. If a few health institutions provide a large portion of the services offered in a market, the degree of market concentration is said to be high. A rise in market concentration implies that a few health institutions dominate the market, and therefore, competition conditions are disrupted. Furthermore, high market concentration is an important barrier to entry into a market. On the other hand, if many health institutions of similar sizes are operating in a market, the degree of market concentration will decrease, and competition in the market will intensify. As the competition conditions converge to the perfect competition conditions, it limits the power of institutions to change the market structure through price settings, and therefore, barriers to entry into the market weaken. The level of market concentration also provides managers with the opportunity to identify strong and weak

competitors in the market. A high degree of market concentration indicates that there are a few competitors in the market, but they are very powerful rivals.

The M-firm concentration ratio and the Herfindahl-Hirschman index are the two most important criteria used to measure market concentration. We provide a summary of the methodology behind the calculation of these two criteria below.

THE FIRM CONCENTRATION RATIO (CR_M)

M-firm concentration ratio shows how much of the health services offered in a region is produced by M large health institutions. M is usually chosen as four, eight, or 12. For example, CR_4 represents the concentration ratio calculated by considering the market shares of the four largest health institutions, while CR_8 denotes the concentration ratio calculated by considering the market shares of the eight largest healthcare institutions. The M-firm concentration ratio is calculated as follows:

$$CR_M = \sum_{i=1}^{m} S_i$$

where m is the number of businesses with the largest market share (m is generally selected as 4, 8, 12), and S_i is the market share of the ith health institution.

We can demonstrate the calculation of CR_M with an example using the data provided in Table 3. Assume that there are 12 hemodialysis centers in a city. The hemodialysis services (session count) provided by these 12 centers are given in Table 3. If M is chosen as 4, what will be the concentration ratio?

**Table 3. An Example of the Calculation of CR_M for a
Market with 12-Hypothetical Hemodialysis Centers**

Hemodialysis Centers	Session Counts	Market Share (%)
M1	140.400	30
M2	122.304	26
M3	75.504	16
M4	68.796	15
M5	15.600	3
M6	12.636	3
M7	9.984	2
M8	7.644	2
M9	5.616	1
M10	5.616	1
M11	3.900	1
M12	3.900	1
TOTAL	471.900	100

To calculate the concentration ratio, first, we add up the hemodialysis session counts provided by the 12 hemodialysis centers in the region to find the total amount of services provided in the region (471,900). Then, we calculate the market share of each hemodialysis center as the division of the amount of service provided by each center to the total amount of service provided in the region. For example, the market share of the hemodialysis center M1 is calculated as 140,400/471,900= 30%.

Since M=4 is selected, we add up the market shares of the four hemodialysis centers with the highest market share. Then the concentration ratio is calculated as follows:

$$CR_4 = \sum_{i=1}^{4} S_i = \% \, 30 + \% \, 26 + \% \, 16 + \% \, 15 = \% \, 87$$

The concentration ratio takes a value between 0 and 100. Depending on its value, the following conclusions can be drawn about the market:

- If 0% < CR < 40%, the market is said to be fully competitive,
- If 40% < CR < 60%, the market is said to be partially oligopolistic, and
- If 60% < CR < 100%, the market is said to be highly oligopolistic and may exhibit monopolistic characteristics.

HERFINDAHL-HIRSCHMAN INDEX (HHI)

Another commonly used measure to determine market concentration is the Herfindahl-Hirschman Index. Like the M-firm concentration ratio, the Herfindahl-Hirschman Index is calculated based on the market shares of health institutions in a region. The Herfindahl-Hirschman Index (HHI) is equal to the sum of the squares of the market shares (S) of the health institutions in a region:

$$HHI = \sum_{i=1}^{n} S_i^2$$

where S_i is the market share of the i-th health institution and n represents the number of healthcare institutions in the market.

We can demonstrate the calculation of HHI with an example using the data provided in Table 4. The first two columns of the table provide information on the hospitals and the amount of patient day services they offer in the region. Assume that the 12 hospitals in the region provide 981,000 patient day services. We can calculate the market share of each hospital ("S_i") as the division of the amount of its service to the total amount of service provided in the region (981,000). Then Herfindahl-Hirschman Index is calculated by taking the sum of squares of "S_i", which is equal to 1,779.8 in our example.

Table 4. An Example of the Calculation of Herfindahl-Hirschman Index

HOSPITALS	PATIENT DAYS	MARKET SHARE (S)	S^2
HOSPITAL 1	270.000	27,52	757,51
HOSPITAL 2	234.000	23,85	568,98
HOSPITAL 3	180.000	18,35	336,67
HOSPITAL 4	64.800	6,61	43,63
HOSPITAL 5	36.000	3,67	13,47
HOSPITAL 6	36.000	3,67	13,47
HOSPITAL 7	32.400	3,3	10,91
HOSPITAL 8	32.400	3,3	10,91
HOSPITAL 9	28.800	2,94	8,62
HOSPITAL 10	25.200	2,57	6,6
HOSPITAL11	23.400	2,39	5,69
HOSPITAL 12	18.000	1,83	3,37
TOTAL	981.000	100	1.779,82

The Herfindahl-Hirschman Index ranges from 1 to 10,000. The rise in the value of Herfindahl-Hirschman Index indicates that the degree of market concentration increases, which implies that market conditions shift from being competitive to oligopolistic, even monopolistic. Specifically, if the value of the Herfindahl-Hirschman Index exceeds 1,800, competitive conditions are said to be disrupted.

MARKET GROWTH RATE AND MARKET SHARE ANALYSIS

The size of the market is defined as the total quantity of services provided by all health institutions in the market. It should be emphasized that there is a well-defined market for each health service. As an example, we present the number of outpatient treatment services provided by hypothetical health institutions in a region (market) in Table 5. In 2013, five health institutions provided 1,000,000 outpatient services in the region. In this case, the market size will be measured as 1,000,000 outpatient services. The growth rate of the market refers to the proportional increase in the quantity of service provided from the previous period. Using the information in Table 5, we can calculate the market growth rate between 2013 and 2014 as follows:

$$\text{Market Growth Rate} = \frac{Q_{2014} - Q_{2013}}{Q_{2013}} = \frac{1.150.000 - 1.000.000}{1.000.000} = 15\%$$

Table 5. An Example of the Market Size and the Calculation of Market Growth Rate

HOSPITALS	2013	2014
HOSPITAL A	250.000	300.000
HOSPITAL B	325.000	350.000
HOSPITAL C	175.000	200.000
HOSPITAL D	150.000	175.000
HOSPITAL E	100.000	125.000
TOTAL	1.000.000	1.150.000

If the market growth rate is negative, it indicates that the market has shrunk. A market growth rate of zero means that the market size has not changed. A market growth rate greater than zero naturally indicates that the market has grown. According to Boston Consulting Group researchers, if the growth rate is greater than 10%, the market is growing rapidly. If the market growth rate is less than 10%, the market is growing slowly.

Market share refers to the portion of the services offered by each institution in the market. A high market share for a health institution indicates that it is the institution that provides a significant part of the total services to the region. For instance, we can calculate the market share of Hospital A for 2013 as follows:

$$\text{Market Share Hospital A} = \frac{Q_{Hospital\ A}}{\sum Q} = \frac{300,000}{1.000.000} = 30\%$$

While market share provides important information about the strength or weight of a health institution in the market, it is not sufficient to determine its position compared to its competitors. To have a better perspective on the position of the institution in comparison with its competitors, managers need to calculate its relative market share. Specifically, relative market share can be used as an indicator of the position of a health institution compared to its strongest competitor. In this sense, the relative market share can be defined as the ratio of the amount of services provided by the institution (Q Institution) to the amount of services provided by its strongest competitor (Q Strongest Competitor). The strongest competitor is the institution that provides the most services in the market and has the highest market share. Relative market share is calculated as follows:

$$\text{Relative Market Share} = \frac{Q_{Institution}}{Q_{Strongest\ Competitor}} = \frac{1.150.000 - 1.000.000}{1.000.000} = 15\%$$

For example, we can calculate the relative market share of Hospital A in 2014 as follows. Hospital A's strongest competitor in 2014 is Hospital B. In this case, A hospital's relative market share will be 0.85.

$$\text{Relative Market Share Hospital A} = \frac{Q_{Hospital\ A}}{Q_{Hospital\ B}} = \frac{300.000}{350.000} = 0{,}85$$

The strongest competitor of Hospital B in 2914 is Hospital A. Hence, the relative share of Hospital B in 2014 can be calculated as follows:

$$\text{Relative Market Share Hospital B} = \frac{Q_{Hospital\ B}}{Q_{Hospital\ A}} = \frac{350.000}{300.000} = 1{,}67$$

Since the strongest competitor for Hospitals C, D, and E in 2014 is Hospital A, their relative market shares are 0,57, 0,50, and 0,357, respectively.

Based on the relative market share of an institution, we can infer three cases:

■ If the relative market share is greater than 1, then it means that its market share is higher than its strongest competitor, which means thar the institution is the market leader.

■ If the relative market share is equal to 1, then it means that its market share is equal to that of its strongest competitor, that is, it is in the same position as its strongest competitor in the market.

■ If the relative market share is smaller than 1, then it means that the institution's market share is less than its strongest competitor, that is, the institution is not in a strong position in the market.

CONCLUSION

The attractiveness of the market/service area analysis is an important tool for health institutions in designing implementable and evidence-based strategies to enter a new market. When developing market entry strategies, it is crucial for health institutions to correctly identify environmental factors pertaining to market attractiveness. Market entry scores calculated through the market attractiveness analysis are used to determine the potential markets. Market attractiveness scores are also employed in identifying environmental factors.

The market attractiveness analysis is also used to determine how the attractiveness of the market/serviced area changes over time. It should also be noted that market attractiveness analysis provides clues to health institutions about the competitive conditions they will face in the future. An increase in the market attractiveness score signals the rising likelihood of new health institutions entering the service area. Hence, in essence, a rise in market attractiveness score indicates intensifying competition in the market.

Finally, another important concept providing the health institutions with crucial information about the market structure is market concentration. A rising market concentration indicates an increase in barriers to entering the market.

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SƏHİYYƏ MÜƏSİSƏLƏRİNDƏ RƏQABƏT VƏ
BAZARA ÇIXIŞ STRATEGİYALARI NECƏ HAZIRLANIR
Selami YILDIRIM

XÜLASƏ

Rəqabət və bazara giriş strategiyalarını hazırlayarkən səhiyyə müəssisələri hansı strategiyaların işləyə biləcəyini bilməlidirlər. Habelə, strategiyaların səmərəli həyata keçirilməsi də çox vacibdir, çünki bəzən uyğun və effektiv strategiyaların düzgün həyata keçirilməməsi səbəbindən səhiyyə müəssisələrinin uğursuzluqlarına şahidi oluruq.

İyirmi birinci əsrdə səhiyyə qurumları rəqabət və bazar alətlərindən sıfır səhv strategiyaları ilə istifadə etməlidirlər. Digər tərəfdən, səhiyyə müəssisələri rəqabət və bazara giriş strategiyalarını inkişaf etdirmək üçün xidmət bazarının strukturu və xüsusiyyətlərini yaxşı bilməlidirlər. Bu tədqiqat bazarın cəlbediciliyi, bazarın konsentrasiyası və bazar artımı anlayışlarına dair ədəbiyyatın hərtərəfli sorğusunu təqdim edir. Bu tədqiqat bazarın cəlbediciliyi, bazarın konsentrasiyası və bazarın böyüməsi anlayışlarına dair ədəbiyyatın hərtərəfli icmalını təqdim edir və səhiyyə müəssisələrinin rəqabət və bazara giriş strategiyalarını necə inkişaf etdirdiklərini araşdırmağa çalışır.

Açar sözlər: *Bazarın cazibəsi, bazarın konsentrasiyası, bazarın artım dərəcəsi, rəqabət, səhiyyə müəssisələri.*