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## RESEARCH ON SPAN OF MANAGEMENT

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### Abstract

The research carried out by the Krusevac College of industrial management was based on random sample covering 89 enterprises of different size and business and lasted several years. The research findings prove the hypothesis that the span of management grows with the increase of the number of employees in an enterprise. They also show that span of management depends on the kind of business (industry, small business, non-business) and sector organizational structure.

*Keywords:* Span of management, organizational structure.

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### 1. INTRODUCTION

The span of management is a possible number of subordinates per superior manager in effective monitoring, supervision and co-ordination of the work.

The span of management imposes restrictions in the forming of the organizational structure of an enterprise. It affects the number of hierarchical levels. The increase of the number of levels increases the number of middlemen in transmitting information in large organizations. Decentralization makes it possible for such

organizations to function and improve their communication.

The number of subordinates that a manager can oversee efficiently depends on a particular situation and a series of factors which make it.

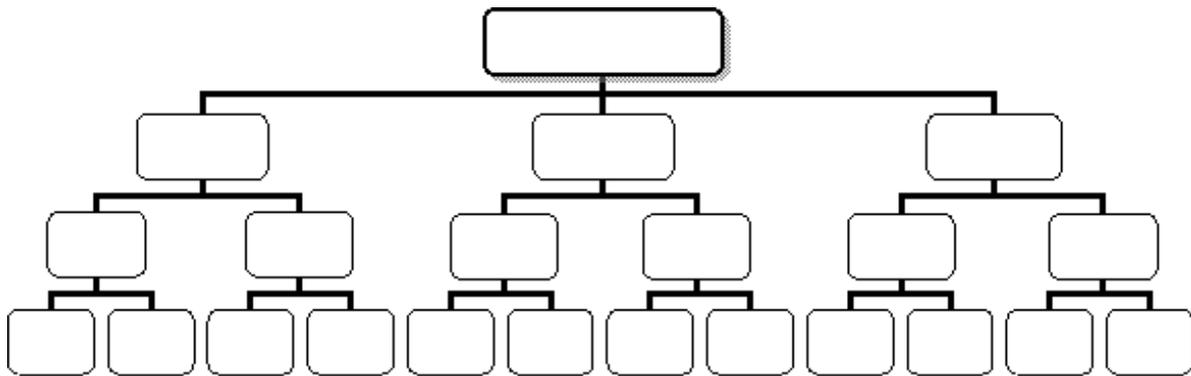
Depending on the size of the span of management we distinguish: (/4/. p. 247)

- a wide span of management with a minor height of the organizational structure (Figure 1),

- a narrow span of management with a bigger height of the organizational structure (Figure 2).

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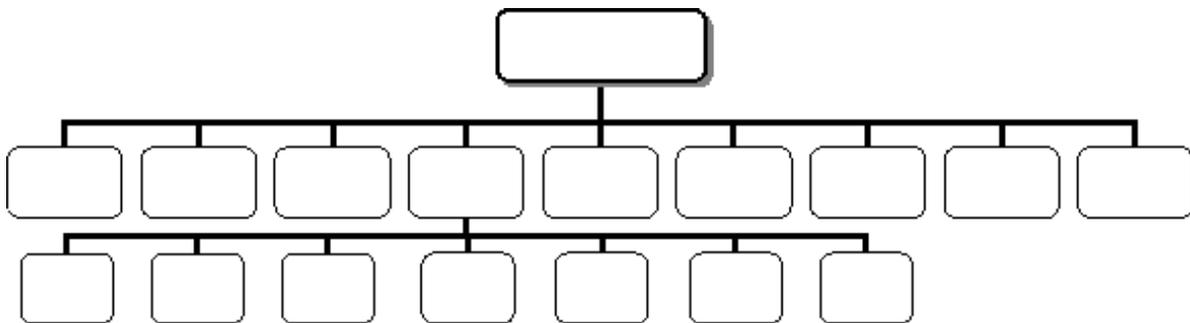
*Figure 1.*

Advantages :

- Monitoring from proximity
- Controlling from proximity
- Fast communication between subordinates and superiors

Weak points:

- Superiors usually get involved too much in the subordinates' work
- Many levels of management
- High expenses because of many levels
- Too big a distance between the top level and the lowest one.



*Figure 2.*

Advantages:

- Superiors are forced to delegate
- Clear policies are needed
- Subordinates must be carefully selected

Weak points:

- Overburdened superiors tend to become "narrow necks" in decision making
- Danger of superiors' losing control
- Highly skilled managers are required

When making decisions on the size of the span of management, it's necessary to take into consideration numerous factors affecting the size of the span of management such as:

1. character of the enterprise's environment in the sense of existence of marked dependence, especially in the environs where there is influence of the community, society, on the enterprise's activities;
2. size and complexity of the enterprise's business, the bigger they are, the wider the span of management will be, as a consequence of a need for breaking up into a larger number of organizational units;
3. development of planning in business makes a bigger span of management possible;
4. competence of subordinates, the higher it is, the wider the span of management it will lead to;
5. quality of informing and communicating with subordinates creates conditions for increase of the span of management;
6. amount of monitoring of the subordinates' work: increase of control diminishes the span of management.

Growth of an enterprise causes the increase of the number of levels in the organizational structure. Therefore it's necessary to find a balance among the factors affecting the span of management, because in some situations it's necessary to widen the span of management and reduce the number of levels, and in others vice versa. That's why all the costs of both variants are compared in order to decide for the more favourable one.

The tendency towards managers' broader participation in decision making and the increase of developing perspectives of

managers contributes to establishment of organizational structures with a smaller height. Conditions, both internal and external, as well as quality of the managerial staff available, affect the decision most of all.

## **2. REVIEW OF THE RESEARCH FINDINGS**

The findings of the research which can be found in literature, mostly foreign one, show different views of the size of the span of management: from 4 to 9 subordinates at the top level and from 8 to 15 at lower levels, presented by various authors - H. Fayol (4-5), Urwick (6), E. Dale (6-7), J. Woodward (6), H. Koontz and O' Donnel (9), and others [2].

In our metal-working industry with up to 1000 employees the span of management is 4-5, and with over 1000 employees 5-7 ([2], p. 193).

In order to compare the results and to get the actual ones, Krusevac College of Industrial Management planned and carried out a long-term research in the period of 1996-2004 on a random sample basis covering 89 enterprises of the Republic of Serbia [6].

When setting a hypothesis for the research, the size and complexity of an enterprise's business were picked out of the above mentioned factors affecting the size of the span of management. The following hypotheses were tested: does the size of an enterprise and does the kind of business (industry, small business and non-business) affect the span of management as well as the extent to which they can influence.

The findings for different sector organizational structures (production /commercial /finance sectors and of general services) were analyzed.

*Table 1. Span of management according to the size of enterprise*

The number of employees	Number of enterprises	Span of management		
		The Whole	Middle level	First line
less than 100	15	4	5	6
from 100 to 300	35	5	11	8
from 300 to 1000	17	7	13	19
over 1000	22	8	15	27

*Table 2. Span of management according to the kind of enterprise*

Kind of enterprise	Number of enterprises	Span of management		
		The Whole	Middle level	First line
Industry	57	6	12	13
Small business	20	4	8	6
Others	15	5	10	6

*Table 3. Span of management for production sector*

		Number of employees			Kind of enterprise			Technology	
		Up to 300	300-1000	Over 1000	Industry	Small business	Non-business	Processing	Process
Middle managerial structure	Production manager			4	4			2	5
	Sector manager		5	5	5			6	2
	Plant manager	3	3	3	3			3	3
	Shop superintendent	3	3	5	4	4	3	4	3
	Department head	4	4	4	4	4	3	4	4
	Supervisor	14	18	20	16	13	12	17	15

The number of levels in the production sector grows with the growth of the number of employees and is larger for industrial enterprises. Unlike industrial enterprises, the others from the sample have maximum 2 levels within the middle managerial structure.

The span of management at the middle level of the managerial structure varies from

2 to 6 no matter which enterprise group is in question, while the span of management of a supervisor grows with the increase of the number of employees and is bigger for industrial enterprises with processing technology.

The analysis of the findings for sector organizational structures shows that the production sector within the middle

managerial structure has a bigger number of organizational levels in relation to other sectors as well as a larger span of management at the lowest level.

The findings have proved the hypothesis that the span of management increases with the growth of the number of employees in an enterprise. Thus for the managerial top in enterprises with less than 100 employees the span of management is 4, with 100-300 employees the span of management is 5, with 300-1000 employees the span of management is 7, and with more than 1000 employees the span of management is 8.

It has also been determined that the span of management varies depending upon the kind of business. The findings show that in industrial enterprises the span of management is bigger than in small-scale enterprises at all managerial levels. Thus for the managerial top in industrial enterprises the span of management is 6, but in small-scale enterprises the span of management is 4.

### 3. CONCLUSION

The working engagement of a manager is realized through his work with people by means of various communication modalities, that is setting tasks, motivating, directing, co-ordinating individual and group activities, as well as providing different kinds of help during work. And more and more achievements of information technology are used in that.

The increase of the span of management is possible owing to the improvement of methods and means of communication, raise of the level of both general and professional education of managers. An efficient and qualified manager can oversee more people.

Because of the big number of factors

which directly or indirectly affect the size of the span of management it's necessary to identify and project measures for influencing them in the function of defining an optimal size of the span of management. The same importance should be given to the defining the span of management at all the hierarchical levels respecting the difference between sector organizational structures.

The presented problems are actual because the findings of the empiric research prove that the span of management grows with the increase of the number of employees in an enterprise and depends upon the kind of business, therefore a full approach to the determination of the size of the span of management is inevitable.

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