

Boundary conditions of the relationship between open offices and employee performance

Which individual and job characteristics affect employee performance in an open-office (vs. traditional) work environment?

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Bachelor of Science
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Purpose/Motivation: Corporations spend a lot of money to redesign their office spaces. Once the changes have been implemented, the company is committed to them for the long term. The office layout is a central decision point in this process: Does a company prefer open offices or individual closed offices? According to a survey, 73 % percent of 1.100 questioned decision makers around the globe have planned or are planning to make all of their office spaces more open (JLL, 2022, pp. 2, 6). But does an open office fit for each employee? Literature suggests that certain boundary conditions, such as job-specific and individual characteristics of employees, influence the impact of open offices on workers significantly (e.g., Maher & von Hippel, 2005, p. 219; Oldham et. al, 1991, p. 929). This literature review is aiming to identify these boundary conditions and examine their effect on the relationship between workers performance and office layout.

Theories/Hypotheses: No uniform theoretical approach is applicable to this research topic (Davis et al., 2011, p. 222). Two opposing theories are explaining the relationship between physical environment and performance:

The social relations approach hypothesizes that the absence of barriers improves communication and cooperation among workers (Bach, 1965, Zeitlin, 1969, as cited in May et al. 1979, p. 270).

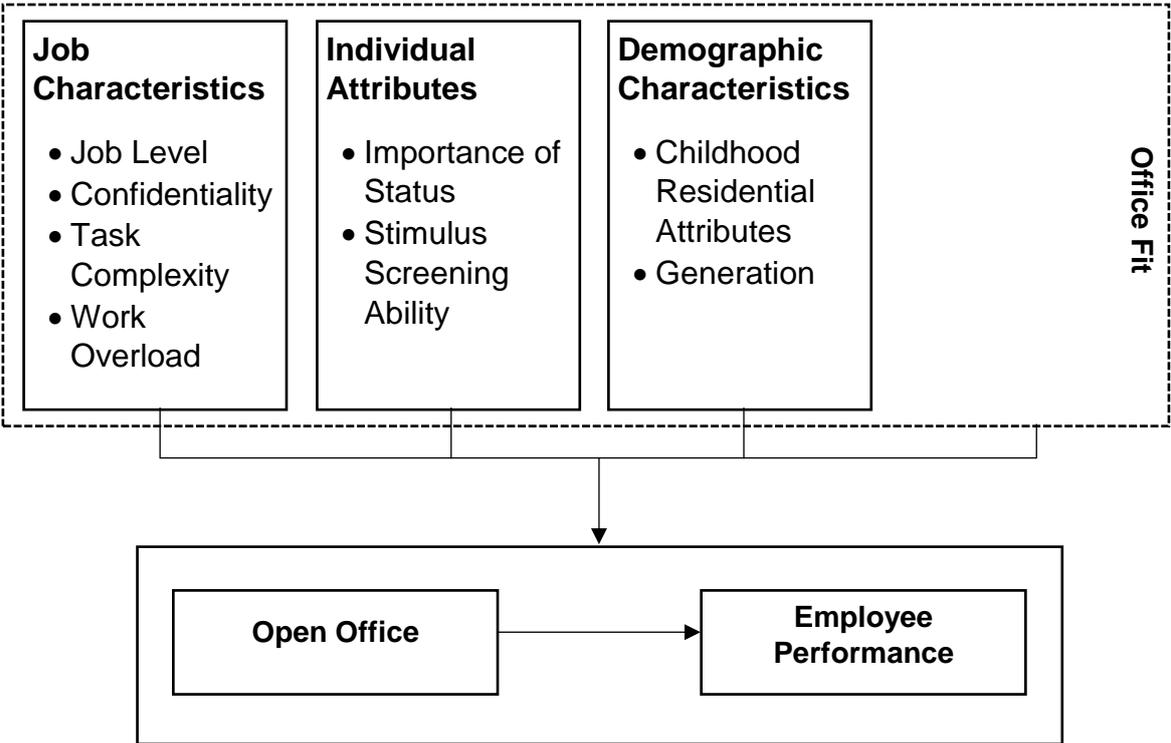
The socio-technical approach suggests that partition walls have positive effects on employees, due to better privacy and higher task identity (Cummings, 1978, p. 628; Oldham & Brass, 1979, pp. 270 - 281).

In summary, there is both a theoretical basis to argue for open offices and one for cellular offices.

Stimulus screening theory differentiates individuals with respect to their capabilities to prioritize recorded information. While so-called "screeners" can filter information according to importance, "non-screeners" are not able to do so (Mehrabian, 1977, pp. 239). Since a correlation between open offices and distractions such as noise is assumed, this theory can be used to explain performance differences in such office types.

Approach/Methodology: This work conducts a systematic review of literature on identifying individual and job specific boundary conditions that affect the relationship between open office (compared to traditional office) and employee performance. The findings are verified by semi-structured interviews with three practitioners involved in office design.

Findings: The systematic literature review and the interviews uncovered the boundary conditions listed in the figure below. These are divided into three categories. For the job characteristics category, increasing job level, task complexity and work overload is accompanied by growing preference for a private office. At the level of individual attributes, people with a high status preference prefer separate offices, while "non-screeners" (see stimulus screening theory) are more easily distracted in open offices. In the demographic characteristics category, individuals who grew up in denser childhood residential areas and younger individuals have less difficulty adjusting to open offices. The results suggest that all of these factors influence office fit (i.e., how well an office fits a person).



Research Limitations: Most identified studies included self-measured performance or supervisor questionnaires. Thus, the results may be biased.

In addition to layout, there are other variables such as light conditions, plants and technological equipment, which could also influence the effects of offices.

Research Implications: Correlation effects between the individual boundary conditions as well as other physical factors of the office would have to be further investigated to develop an approach for practice that addresses as many needs as possible.

In all three of the conducted interviews, employee involvement in an office relocation process also emerged as an important factor for satisfaction and performance in the new office. This could be a potential topic for future research.

Practical Implications: Companies can use this model as a framework in the complex decision-making process of office design to choose an appropriate layout responding to their individual needs.

Contribution: This paper reviews existing literature on the relationship between office and performance and examines them for boundary conditions. Through interviews with practitioners the findings are discussed and extended.

Paper type: conceptual

Further readings:

Elsbach, K.D., & Pratt, M.G. (2007). The Physical Environment in Organizations. *The Academy of Management Annals*, 1(1), 181 – 224.

Oldham, G. R., Kulik, C. T., & Stepina, L. P. (1991). Physical Environments and Employee Reactions: Effects of Stimulus-Screening Skills and Job Complexity. *Academy of Management Journal*, 34(4), 929–938.

Maher, A., & Hippel, C. von (2005). Individual differences in employee reactions to open-plan offices. *Journal of Environmental Psychology*, 25(2), 219–229.