Impact of Workplace Change on Satisfaction and Productivity
A comparative analysis of case studies in Thailand and the Netherlands

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ABSTRACT

This paper presents the findings from a case study in Thailand on the use and experience of a new working environment, five months after the organisation moved to a new office building.

The *purpose* of this study is to collect new data about employee satisfaction and perceived productivity after a workplace change, to find out which aspects employees find most important in their work environment, and to explore the impact of national and organisational culture.

The *data-collection* included interviews, observations, analysis of documents, and the use of questionnaires in order to measuring employee satisfaction, perceived support of labour productivity through the work environment, perceived dominant characteristics of the work environment, and key dimensions of national and organisational culture. Results from the Work Environment Diagnosis Instrument (WODI) are compared with similar data from case studies in the Netherlands. As such, this study made it possible to explore the impact of workplace change in different cultural contexts.

The *research findings* reveal many differences in employee satisfaction and prioritized aspects. On most aspects of the work environment the percentages of satisfied employees in the Thailand case are much lower than the corresponding average percentages in the Dutch cases. The Thai employees put much more emphasis on adjacency and locality of spaces, subdivision of the whole building, and sharing own ideas about the work environment, whereas functionality and comfort of workspaces and opportunities for concentration and communication are mentioned much less by the Thai people than by the Dutch people. The preference for a less hierarchical organisation and the quite masculine culture of Thai people may have their impact here.

A *limitation* of the study is the lack of data about organisational culture in the Dutch cases. Additional data collection in Dutch working environments and more in-depth analyses are needed for a further exploration and explanation of different responses in connection to different people, places, processes and culture.

The *originality* and *value* of the paper is the exploration of similarities and dissimilarities in the impact of new working environments on employee satisfaction, perceived productivity support and prioritized aspects in two different cultures: Asia and Europe.

Keywords: Workplace Change, Employee Satisfaction, Productivity, Priorities, Culture

1   WORKPLACE CHANGE

Many organisations consider to changing their accommodation or have already implemented a new working environment by the introduction of a new office concept, a renovation of the present building or moving to another building. The drivers to change may vary from new space needs as a consequence of organisational change (growth, shrinkage, re-organisation), new opportunities on the real estate market, or trying to cope with objectives such as cost reduction, enlarging efficiency, improving labour productivity, increasing employee satisfaction or contributing to a more sustainable built environment (Van der Voordt, 2003). A careful process, from the initiation to setting clear accommodation goals, making conceptual choices, elaborating choices into a brief and design, and the management of the new environment after construction require sound information about the organisation, its working processes and preferred characteristics of the physical environment (Ikiz-Koppejan et al., 2009). In order to support evidence based decision making on accommodating people, sound data about the impact of physical interventions on organisational performance are needed. An important resource of a firm is its human capital. So it is of utmost importance to understand the impact of workplace change on employee satisfaction and labour productivity. In order to be able to learn from earlier projects, Post-Occupancy Evaluation (POE) or 'building-in-use studies' can be very helpful (Van der Voordt and Van Wegen, 2005; Preiser & Vischer, 2005). In Thailand, no long tradition exists in conducting a POE, ex ante – in order to understand the present performance of the working environment, or ex post – in order to measure if the accommodation goals and objectives have been obtained and to explore other intended and unexpected effects. An ongoing PhD research project of the first author offered the opportunity to conduct a case study at Dhanarak Asset Development Company Limited (DAD) in Thailand (Riratanaphong, 2010). This paper presents the findings from the case study, with a focus on the use and experience of the new working environment, five months after the DAD-organisation moved to a new office building. Some of the data could be compared with similar data from case studies in the Netherlands (Maarleveld et al., 2009). The paper aims to answer the following questions:

- What is the relationship between workplace change, employee satisfaction and perceived labour productivity?

- What is the impact of different contexts – in particular national and organisational culture - on employees' appraisal of their working environments and prioritized aspects?

First we will briefly reflect on the impact of culture on workplace performance. Then the research findings from the Thailand case will be presented and compared with the average percentage of satisfied and dissatisfied office employees in Dutch case studies. Finally we will reflect on the research findings and try to explain similarities and dissimilarities between the Thai and Dutch research findings.

2   THE IMPACT OF CULTURE

Many organisations recognize organisational culture as a powerful element that affects performance and long-term effectiveness of organisations. Organisational culture is a commonly held framework that contains basic assumptions and values of organisation's members. It is the collective programming of the mind which distinguishes the members of one group or category of people from another (Hofstede, 1997). Organisational culture is defined as the beliefs and expectations that bring about norms that powerfully shape the behaviour of individuals and

groups in the organisation (Schwartz & Davis, 1981; Schein, 1990; O' Reilly et al., 1991). Organisational culture is usually a result of the values and beliefs of the founders of the organisation, the beliefs and expectations of the employees, type of organisation (e.g. commercial companies versus not for profit companies, financial firms versus architectural firms or web designers), the age and lifecycle of the firm, and the impact of national culture (van der Voordt et al., 2003). Widely accepted key dimensions of national culture are the ones measured by Hofstede (1997): small versus large power distance, collectivism versus individualism, femininity versus masculinity, and weak versus strong uncertainty avoidance.

The role that organisational culture plays in an organisation can be divided into the functions of organisational culture and the influence that organisational culture has on the different processes in the organisation (Martins and Terblanche, 2003). Functions of organisation culture can be summarized as (Furnham and Gunter, 1993):

- socializing of new members in the organisation

- creating the boundaries of the organisation

- creating feelings of identity and commitment to the organisation

- creating a competitive edge

- making sense of the environment in terms of acceptable behavior and social system stability

3   CASE DESCRIPTION

The case study in Thailand has been conducted at Dhanarak Asset Development Company Limited (DAD). DAD formerly shared its workplace with the Treasury Department, Ministry of Finance in a building on the Rama 6th road, which is located in the city center of Bangkok. The workplace was located on the 7th floor of a 20-year-old multitenant building, nearby amenities such as shops, restaurants, newsstands, drug stores and swimming pools. Although the office was occupied by a lower number of employees (50) than in the new location, the former space was perceived as rather crowded because of limited floor space. When the Bangkok Government Complex was completed in 2009, DAD moved to one of the buildings of this complex. The main reason to move was to cope with the increasing demand for office space according to a growing number of employees. Another, more psychological reason was the wish to being accommodated in a single tenant building without the need to share the workplace with another organisation, as was the case in the former location. The new office comprises three separate zones in two buildings, accommodating employees of five departments. The main building is occupied by the policy, administration, business development & marketing and finance departments. The second building is occupied by the operation department that controls building service engineering of the complex. The office was arranged in different types depending on job titles and functions. Generally, employees occupy workplaces with partitions while high ranking personnel occupy cellular type offices. Large and small meeting rooms are located in several spots throughout the office. However, there are some vacant spaces that have not been appointed yet for a particular function. Figure 1, 2 and 3 show the exteriors and workplaces of the company and one of the floor plans.
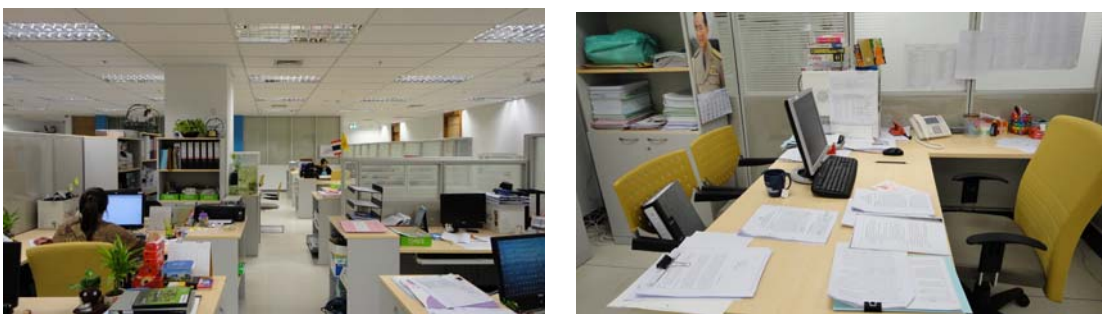
Figure 1 Exterior of the buildings

Figure 2 Interior of the working environment

Figure 3a Floor plan of the administration and business development & marketing department

Figure 3b Zoom in on part of the floor plan

4　　RESEARCH METHODS

Research methods included interviews, document analysis, observations and the use of three questionnaires. The impact of workplace change has been examined through the WODI Light questionnaire, a tool for an indicative evaluation with a focus on overall employee satisfaction and perceived support of labour productivity through the working environment (Maarleveld et al., 2009). The cultural dimensions are identified through the Values Survey Module (VSM 94) (Hofstede, 1997) and the Organizational Culture Assessment Instrument (OCAI) (Cameron & Quinn, 2006). A semi-structured interview was applied for ten interviews, with the chief marketing officer, senior specialist, public relation manager, human resource manager, procurement and property manager, four senior officers and one general officer. Interview questions referred to real estate operating decisions, strategic driving forces and corporate culture. Documents used for the analysis included the annual report, the roles and responsibilities handbook, the code of conduct handbook and the report on the employee satisfaction and attitude survey. Observations were conducted by a walk through the workplace and recording where and when certain behaviour occurs. The research took place from September till October 2010.

The WODI Light tool has been developed by the Center for People and Buildings (CfPB) in Delft, the Netherlands (www.cfpb.nl). This knowledge centre is specialised in research into relationships between people, processes and places, with a focus on offices. The CfPB collected data in a number of Dutch cases, so that we were able to compare the WODI data in the Thailand case with similar data from Dutch cases.

5   RESEARCH FINDINGS

The questionnaires were filled out by 87 participants out of 139 employees, 32 male and 55 female (1:1.7 ratio). The majority of participants are below 31 years old (48 percent) and between 31-40 years old (44 percent). Most of the participants are well educated with 57 percent holding a bachelor degree and 36 percent holding a degree above bachelor degree. Employees responded to questions with regard to time spent on different activities and in different types of workplaces, preferred places, satisfaction and dissatisfaction with different aspects, most important aspects, organisational culture and key dimensions of national culture.

The participants spent most of the time on general desk work (33 percent, see Table 1). The rest of the time is spent on desk work where interaction is necessary (13 percent), planned meetings/interaction, telephone calls and document management (11 percent), desk work (8 percent), unplanned meetings/interaction (7 percent) and reading (4 percent).

The employees spent most of their time in 1-person workspaces (30 percent, see Table 2). Other workspaces such as team spaces and half-open workspaces are much less used (14 and 13 percent respectively). The lounge workspace is only used for about 1 percent of the time spent within the office.

The most preferred places are team spaces (21 percent), 1-person workspaces (20 percent) and brainstorm spaces (17 percent). The least preferred places are 2-person workspaces and large open meeting spaces (2 percent).

Table 1 Time spent on different activities (N = 85)

Activity	Average (%)	Min (%)	Max (%)
General desk work	33	0	95
Desk work where you are not to be disturbed	8	0	50
Desk work where interaction with colleagues is necessary/required	13	0	80
Planned meetings/ interaction	11	0	35
Unplanned meetings/ interaction	7	0	45
Telephone	11	0	31
Reading (longer than 30 minutes in one stretch)	4	0	25
Document management (archiving, copying, reference work, drawings, etc.)	11	0	60
Other	2	0	50

Table 2 Time spent in various types of places (N = 85)

Activity	Average (%)	Min (%)	Max (%)
1-person workspace	30	0	100
Silence workspace	4	0	30
2-person workspace	4	0	40
Team space	14	0	100
Open workspace	7	0	100
Half-open workspace	13	0	95
Lounge workspace	1	0	20
Small meeting space	7	0	30
Large meeting space	5	0	20
Brainstorm space	7	0	40
Open meeting space (small)	4	0	30
Open meeting space (large)	4	0	40

Items that employees appreciate most are the architecture and appearance of the building (59.2 percent satisfied respondents, see Figure 4), opportunities to communicate (51.4 percent), lighting (40.4 percent), functionality and comfort of workplaces (36.7 percent) and accessibility of the building (36.5 percent). Many employees are dissatisfied about the indoor climate (38 percent), ICT and ICT support facilities (35 percent), openness and transparency (31.5 percent), archive and storage facilities (28.4 percent) and opportunities to concentrate (27.1 percent).

Figure 5 shows the data from the Thailand case in comparison to the average percentage of satisfied respondents in 41 Dutch cases (Brunia et al., 2010). On most items a much lower percentage of the DAD employees are satisfied in comparison to the Dutch cases. This is true for both the appraisal of the organisation and the content and complexity of the work and most aspects of the work environment. An exception is satisfaction with the architecture and building appearance. Here the DAD-case (59.2 percent) shows a slight positive difference with the average percentage of satisfied respondents in the Dutch cases (53 percent), probably due to the fact that the organisation has moved to a new building with a modern design concept. Although the percentage of satisfied DAD employees with regard to opportunities to communicate is rather high (51.5 percent), it is lower than the average percentage of 70 percent in the Dutch cases. It seems that the semi-open plan layout of the DAD buildings allows employees to have social contact with colleagues, but nevertheless almost half of the employees are not satisfied with the opportunities to communicate. Opportunities for remote working are also much less appreciated in the Thailand case in comparison to the Dutch cases. The extent to which the environment supports individual productivity and team productivity is also perceived lower in the DAD-case: 30.4 percent and 34.5 percent versus 41 percent and 39 percent according to the CfPB index.
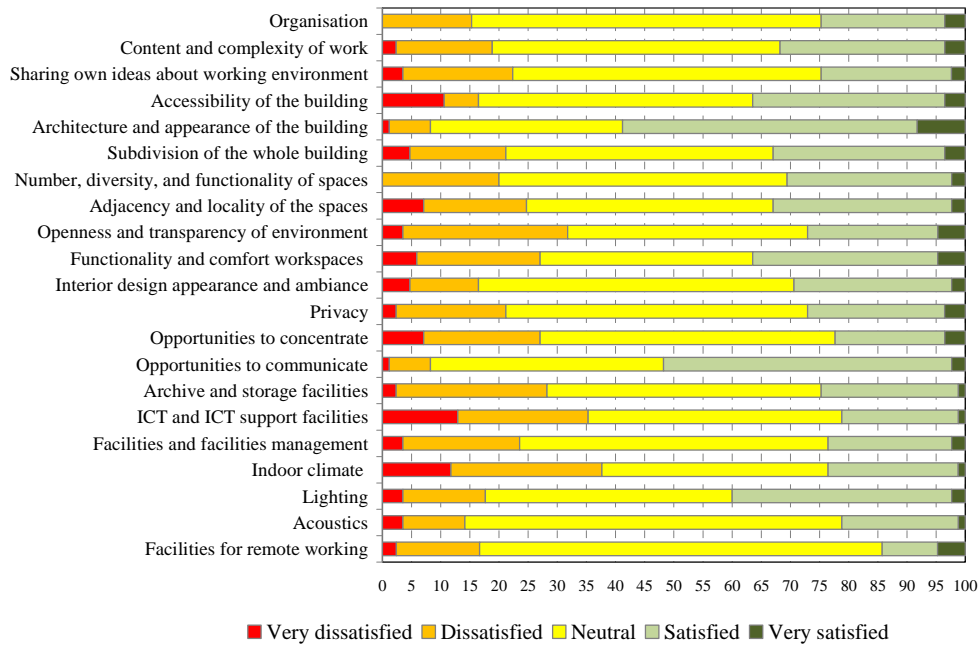
Figure 4 Percentage of satisfied and dissatisfied participants (N = 85) in the DAD case
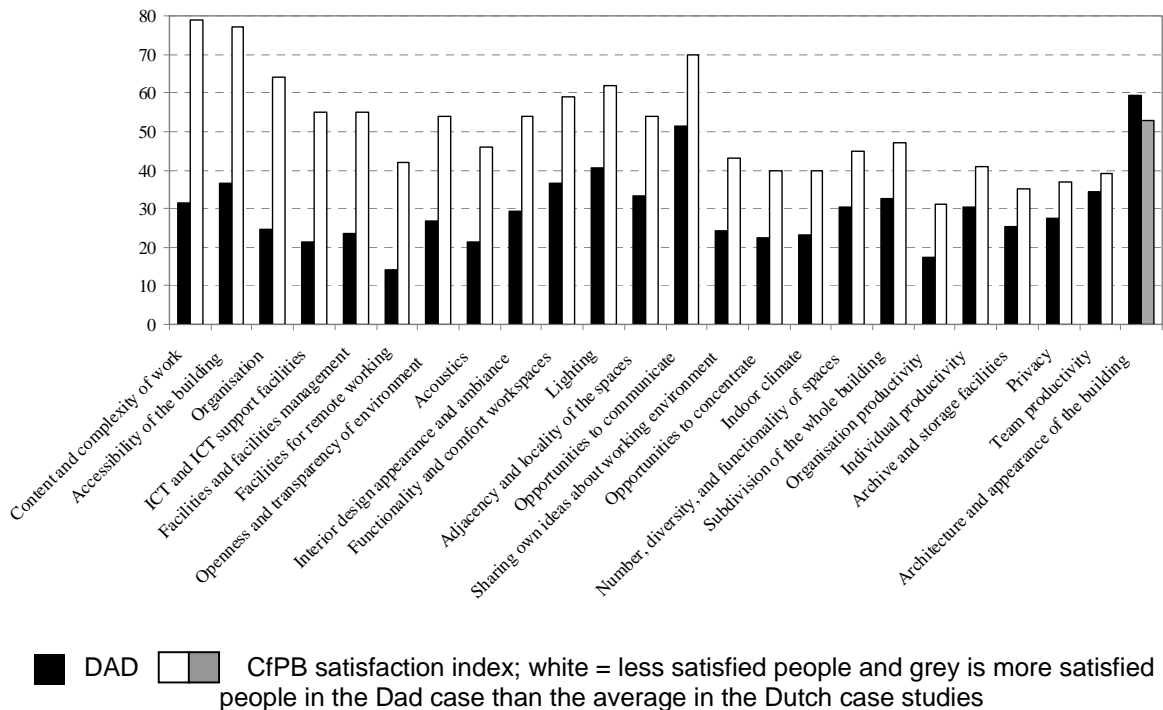

Figure 5 Percentage of satisfied respondents in the Thailand case in comparison with the average percentages of satisfied people in a number of Dutch cases (CfPB index)

On top of the most important aspects of the workplace environment we see adjacency and locality of the spaces (mentioned by 39 percent in their top 3 of most important aspects, see Figure 6), subdivision of the whole building (35 percent), sharing own ideas about the work environment (31 percent), openness and transparency of the environment (24 percent), and the architecture and appearance of the building (24 percent). The least prioritized aspects include opportunities to communicate (mentioned by no one as one of the three most important aspects), acoustics (1 percent), interior design appearance and ambiance (2 percent), opportunities to concentrate (5 percent) and lighting (6 percent). Compared to similar data from the Dutch cases (Rothe et al., 2011), the Thai employees put much more emphasis on adjacency and locality of spaces, subdivision of the whole building, and sharing own ideas about the work environment, whereas issues such as functionality and comfort of workspaces and opportunities for concentration and communication are mentioned much less by the Thai people than by the Dutch people.
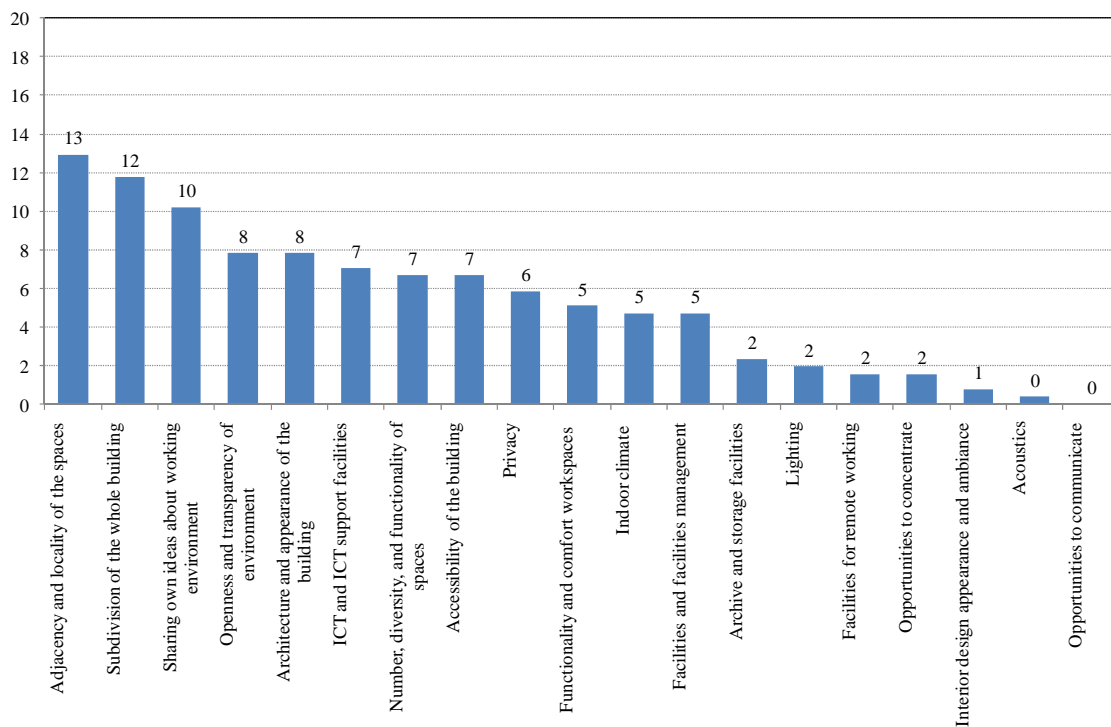

Figure 6 Ranking of % participants marking a particular aspect as one of three most important aspects of the workplace environment (19 aspects) (N = 85)

Organisational culture

The OCAI questionnaire raises questions on six items: 1) dominant characteristics, 2) organisational leadership, 3) management of employees, 4) organisational glue, 5) strategic emphases and 6) criteria of success. Each item has four options: A = Clan, B = Adhocracy, C = Market and D = Hierarchy (Cameron & Quinn, 2006). The Clan Culture refers to a very friendly place to work where people share a lot. It is like an extended family. The Adhocracy Culture refers to a dynamic, entrepreneurial, and creative place to work where people take risks. The Hierarchy Culture is very formalized and structured; procedures govern what people do. The Market Culture refers to a results-oriented organisation; the major concern is getting the job done. Participants were asked to divide 100 points among the four options, depending on the extent to which each option is representing the respondent's organisation, both current and preferred. The higher the score, the more dominant the cultural type.

Table 3 Organisational culture index according to the Thai employees

	CLAN			ADHOCRACY			MARKET			HIERARCHY		
	Now	Preferred	Difference	Now	Preferred	Difference	Now	Preferred	Difference	Now	Preferred	Difference
Average	21.8	30.9	-9.1	23.8	22.5	1.3	25.2	21.5	3.7	29.3	25.1	4.2
Dominant characteristics	18.7	32.9	-14.2	24.6	20.4	4.2	24.5	26.1	-1.6	32.1	20.6	11.5
Organisational leadership	22.1	28.1	-6	23.8	24.7	-0.9	25.4	22.5	2.9	28.8	24.7	4.1
Management of employees	22.8	31.8	-9	26.9	19.4	7.5	25.9	19.1	6.8	24.6	29.8	-5.2
Organisational glue	19.6	29.5	-9.9	21.4	24.6	-3.2	25.3	23.2	2.1	33.8	22.8	11
Strategic emphasis	21.5	29.7	-8.2	22.8	23.4	-0.6	26.1	19.9	6.2	29.7	26.8	2.9
Criteria of Success	26.3	33.5	-7.2	23.1	22.5	0.6	24.1	18.3	5.8	26.6	25.7	0.9

Currently, the organisational culture is merely perceived as a hierarchy culture, whereas the clan culture type is preferred most (Table 3). A hierarchy culture scores high on organisational leadership (Cameron & Quinn, 2006). The leaders are considered to be coordinator and organiser and efficiency-minded. The management of employees is most connected to an adhocracy culture type, but the characteristics of the other types of culture apply as well. The organisation emphasizes permanence and stability. Efficiency, control and smooth operations are important. The dominant characteristics are formalized and structured with procedures governing what people do, which fits with the hierarchy culture type. The organisational glue is held with formal rules and policies. Maintaining a smooth-running organisation is important

National culture

Based on the 20 questions of the Value Survey Module, index scores have been calculated on five dimensions of national value systems: Power Distance, Individualism, Masculinity,

Uncertainty Avoidance, and Long-term Orientation (Hofstede, 1997). All dimensions are measured on a five-point scale. Index scores were derived from the mean scores on four questions per dimension. The value of each index is usually between 0 and 100, but values below 0 and above 100 are technically possible. Table 4 shows the indexes of the Thailand case in comparison to national data from Thailand and the Netherlands (Hofstede, 1997).

Table 4 Indexes of five key dimensions of national culture

Index	DAD	Thailand	Netherlands
1. Power Distance Index (PDI)	25	64	38
2. Individualism Index (IDV)	100	20	80
3. Masculinity Index (MAS)	83	34	14
4. Uncertainty Avoidance Index (UAI)	6	64	53
5. Long-term Orientation Index (LTO)	38	59	44

The DAD-company shows much lower scores on uncertainty avoidance, power distance and long-term orientation than Thailand as a whole, and much higher scores on individualism and masculinity. Low uncertainty avoidance means that top managers are concerned with strategy and decision making processes. The organisation is better in invention, worse in implementation. There should be no more rules than strictly necessary. The high masculinity score may mean that management is decisive and aggressive. The high individualistic culture and low power distance indicate that subordinates expect to be consulted and not to be told what to do. The low long-term orientation index means that efforts should produce quick results (Hofstede, 1997).

6   DISCUSSION

The case study demonstrates various connections between workplace change and culture with regard to employee satisfaction, perceived labour productivity and prioritized aspects of the work environment. One factor is the organisational life cycle. In the earliest stages of the organisation life cycle, the DAD-case had to share its workplace with another organisation. Subsequently, the company encountered an increasing demand for space due to an increasing number of employees. It found itself faced with a growing need for structure and standard procedures in order to control the expanding responsibilities. Order and stability were needed, leading to a move to a single tenant building. This may fit with the hierarchy culture of the organisation.

The new DAD building is designed with an innovative energy conservation concept that achieves cost reduction. The operation department is accommodated in a building with some vacancy at the start, in order to be able to cope with the expected increasing demand for space due to new business activities. According to Hofstede (1997), this quality corresponds with a weak uncertainty avoidance, with top executives being concerned with strategy.

The near location of the operation department to the other departments supports efficient communication that corresponds to the emphasis on efficiency in a hierarchy culture type. The focus on efficiency is also visible in the high ranking of adjacency and locality of workplaces and subdivision of the building as one of three most important aspects of the work environment.

Smooth scheduling and low-cost production correspond with the criteria for success as described in a hierarchy culture (Cameron and Quinn, 2006).

Due to the simultaneous impact of a huge number of variables such as organizational characteristics, ways of working, physical characteristics of the work environment and personal characteristics of the employees, and lack of data on cultural issues in the Dutch cases, it is quite difficult to explain the differences in employee satisfaction, perceived support of productivity by the physical work environment, and prioritized aspects in the Thailand case and the Dutch cases. As a consequence, this paper is just a first exploration of the impact of culture and other cause-effect relationships. The lower percentage of satisfied employees on accessibility of the DAD building (36.5 percent versus an average of 77 percent in the Dutch cases (77 percent) might be due to the fact that more than half of the Dutch cases are located near a train station (Rothe et al., 2011). On the contrary, the Thailand case is located in a high traffic route that causes traffic problems during working hours. ICT and ICT support facilities, overall facilities and facilities management, and facilities for remote working were shown to be less appreciated in Thailand than in the Netherlands. Apparently Thai managers have to pay more attention to these issues, though ICT and ICT support facilities, overall facilities and facilities management were higher prioritized by the employees than facilities for remote working. The differences in percentages of satisfied employees with perceived support of productivity through the work environment are modest, again in favour of the Dutch cases. Probably the variety of task related workplaces in many Dutch cases support labour productivity in a better way than either continuously working in an open plan office or in a private office.

Remarkably the Thai employees allocate a higher priority to openness and transparency than their Dutch colleagues, whereas opportunities to concentrate and opportunities to communicate are much less prioritized in the Thailand case compared to the Dutch cases. Both aspects show also lower percentages of satisfied employees in the Thailand case.

In contrary to what might be expected, sharing ideas about the work environment is higher prioritized in Thailand (39 percent) than on average in the Dutch cases (6 percent). User participation is highly appreciated in the Netherlands (Van Meel, 2000), but it is nowadays quite common in the Netherlands, so probably for the Dutch people this item is merely a 'satisfier' - if not applied, people are dissatisfied - rather than a 'satisfier'– contributing to employee satisfaction.

7   CONCLUSIONS

The Thai respondents showed high levels of satisfaction with the architecture and appearance of the building and opportunities to communicate, and less satisfaction with regard to possibilities for remote working, acoustics, ICT and indoor climate. In comparison to the average percentages of satisfied respondents in a number of Dutch cases, the Thai respondents showed to be less satisfied on both the organisation and the content and complexity of the work and on most aspects of the work environment. The preference of the Thai employees for a less hierarchical organisational culture and the high scores on the masculinity index may contribute to the rather negative response to the new environment. But other variables such as different organisational characteristics, the content of the work processes, the overall quality level of the work environment in the former location and its use as a frame of reference might have an impact as well. In order to cope with difficulties in comparisons between cases from different countries,

additional data collection on organisational culture of the Dutch cases and more in-depth analyses are needed for further explanations of cause-effect relationships and differences in employee satisfaction and productivity in different organisational and cultural contexts.

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