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MANAGING THE RESOURCING PROCESS IN AN IT OUTSOURCING ENVIRONMENT: A CASE EXAMPLE [CASE STUDY]

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ABSTRACT

A case is described of a firm, which decided to develop a new IT system using a mixture of contract or outsourced workers and company employees. The company employees were placed in the key positions on the project so that outsourced workers were relegated to the technical jobs with no real prospect of promotion or development. These strategic choices set the context for the outsourcing process that emerged. A key problem that was identified was a very high level of turnover among the outsourced workers. This was problematic because it created increased costs of recruitment, meant that there were often temporary unfilled vacancies and lead to significant knowledge loss. The analysis focused on exploring ways to improve the process of outsourced worker recruitment so that people were selected who were more likely to remain on the project and so reduce turnover and the associated problems. However, analysis of the context and the constraints that existed given this context suggested that turnover was inevitable and that fundamental changes to the recruitment process were not feasible. Instead efforts were directed at smoothing the recruitment process to reduce the problems caused by high turnover. The paper concludes that theoretical frameworks need to be developed for improving IT management that are contextually embedded. A framework is presented which considers the context and constraints in this particular case.

1. INTRODUCTION

Firms are increasingly choosing to manage their IT infrastructure and their IT expertise through a market rather than a hierarchical mode of governance. In other words, IT outsourcing is becoming a preferred strategic option (Willcocks and Fitzgerald, 1994). Loh and Venkatraman (1994) define outsourcing as the 'significant contribution by external vendors in the physical and/or human resources associated with the entire or specific components of the IT infrastructure in the user organization' (p. 264). They identify different types of outsourcing arrangement dependent on the degree to which physical and human resources are internalized or externalized. Using their framework, the case study to be considered here is an example of

'application development', which involves the partial externalization of the human resource element while maintaining ownership of the physical resources – the computer assets. This type of outsourcing arrangement has a specific, limited and time-restricted focus, that is the development of the particular IT application, and is project-based. This selective (Lacity et al., 1995) and transitional (Willcocks and Fitzgerald, 1994) approach to IT outsourcing is more common than adopting a 'total' approach (Lacity and Hirschheim, 1995). The application development project involved both permanent employees and contract workers. As such the case is also an example of multi-sourcing (Wibbelsman and Maiero, 1994).

Much previous research that has examined IT outsourcing has focused on its determinants, analyzing the reasons why firms choose to outsource. The explanations for IT outsourcing appear now to be well-documented and include both economic, rational reasons (Willcocks and Fitzgerald, 1994; Loh and Venkatraman, 1994) as well as political reasons (Scarbrough, 1998). What is less well-developed is a processual account focusing on the structures, management processes and managerial roles that are involved in making this form of governance effective (Loh and Venkatraman, 1994). Such a processual focus is clearly relevant to practitioners (Niederman et al., 1991). However, despite this practitioner relevance this issue has been largely ignored in the IS literature (Loh and Venkatraman, 1994). The focus of this case study analysis is precisely on these processual issues, exploring in particular the processes of outsourced worker recruitment and selection for an IT application development project.

Much has been written in the Human Resource Management (HRM) literature about the importance of recruiting appropriate personnel and about how selection decisions can be improved to increase the 'fit' between the person selected and the job requirements (see for example Anderson and Herriot, 1997). In particular in this literature attention is given to improving the predictive validity of the methods used to make selection decisions (Murphy, 1997). Predictive validity refers to the relationship between the assessment made during the selection process and subsequent job performance. The key is to use selection methods, which provide high predictive validity. The case analysis considers how far this literature can help in improving selection decisions in the particular case context. The analysis highlights that there are a number of constraints arising from the particular context that significantly restrict the approaches to recruitment and selection that can be used. Understanding these constraints is crucial to the effective management of these important processes of recruitment and selection.

The paper is structured as follows. First the case is described briefly to set the context and highlight the resourcing problems facing the project. Next the actual process of resourcing is described in detail and the problems with this process are analyzed. While this analysis highlights some obvious ways of improving selection and recruitment, the paper argues that it is necessary to consider the constraints that exist. The final section involves a discussion and conclusion of the case and implications are drawn for both theory and practice.

2. CASE: T-MOBIL AND PROJECT CARMEN

T-Mobil is one of four mobile network operators in Germany. The core product for the company is the transfer of voice and data from and to mobile phones. Rapid developments in the mobile phone industry have led to an enormous growth in customer numbers. For example, in March 2000 the price for a prepaid mobile phone decreased to under 100 DEM which led to an unprecedented growth in the market – for a short while T Mobil was attracting up to 50,000 new customers per day. However, this core product, while the subject of rapid technological changes, does not differentiate between providers. Rather, providers attempt to differentiate themselves in terms of the 'augmented' product (Dibb et al., 1997), including features like billing, quality, brand name, customer service, delivery and credit.

The IT department within T Mobil is responsible for the development and maintenance of all the IT systems within the company. Given the need to differentiate in terms of the augmented product, the company made a decision in 1996 to build a new IT system for Customer Care and Billing that would allow it to improve customer services. It was felt that the existing IT system made it difficult to achieve the high volume processing that was increasingly demanded. Moreover, the existing system was not able to support the

process-oriented working methods being used in the Call Centre and in the back office for processing customer bills and inquiries. Perhaps surprisingly the decision was made to develop the new system in-house rather than buy a standard product. The rationale given was that developing the system in-house would allow the company to develop and implement features and options not available in standard products. These would provide the company with some competitive advantage, given the importance of the augmented product. In order to develop the new IT system a large project was initiated – Project CARMEN (Customer Administration Relation Management e-Care Network).

Project CARMEN consists of 10 sub-projects, each with its own manager. Underneath each of these sub-project managers are between two and five teams, each of about 10 people and each with a team leader. Each sub-project is responsible for a more or less clearly defined functional area of the software development. At the start of the project each sub-project was given a great deal of autonomy, with only general directions given by the project manager. This was done in order to encourage the development of self-directed work teams (Osburn et al., 1990). However, early releases of CARMEN demonstrated that this autonomy was problematic. The first attempt to integrate the different components into a single software system was extremely difficult and involved considerable modification to make even the basic functions work. The project manager responded by implementing more centralized control, including setting the scope definition of the different sub-projects, introducing a centralized planning schedule to ensure synchronization, and introducing a central budget control system. However, recruitment of staff onto the sub-projects was left to the sub-project managers.

2.1. The Staffing Process

T-Mobil did not have sufficient skills and expertise to develop the IT system internally so there was a need to dramatically increase the number of IT professionals. At the time of writing this case, 200 IT professionals are involved on Project CARMEN, writing and testing the software. Given that Project CARMEN has a finite and limited life-cycle there was a need to recruit people to work on the project on a temporary basis since once the IT system has been developed and implemented these skills will no longer be required within T Mobil, at least not in such large numbers. The solution was to use contract workers, hired through agencies, which specialize in providing IT professionals. At least half of the IT professionals working on Project CARMEN are contract workers. However, all the key roles within Project CARMEN, like team or project leaders, are filled with non-contract workers, i.e. T-Mobil employees. This means that contract workers are consigned to lower level technical jobs. The turnover rate of IT professional contract workers on Project CARMEN is very high. The average length of stay is about 2 years, with the turnover rate for contract workers averaging 45% in 1999 and 43% in 2000. This means that about 50 new IT contract workers need to be found each year for Project CARMEN.

Recognizing the high level of recruitment required, a dedicated staffing function exclusively for the project was set up. This staffing function is completely separate from the HRM department within T-Mobil. The recruitment and selection of IT professionals for project CARMEN rested essentially on ‘the classical trio’ (Cook, 1993) – the job description, the CV, and an interview. The steps involved are as follows:

1. Identification of a vacancy by a sub-project manager and the development of a vacancy description. This is sent to the staffing manager.
2. The staffing manager circulates this vacancy description to all the contract worker agencies that are currently being used.
3. The contract worker agencies pre-select available candidates from their resource pool and send the relevant CVs to the staffing manager.
4. The staffing manager reviews those CVs received and sends those considered suitable to the particular sub-project manager.
5. The sub-project manager screens the CVs and builds a short-list for interview.

6. The sub-project manager contacts the agency to arrange interviews with those short-listed.
7. The sub-project manager interviews those on the short-list and selects the person deemed to be most suitable. This information is passed to the staffing manager.
8. The staffing manager informs all the agencies that the vacancy is filled.
9. The selected candidate is inducted on to the project team.

2.2. Problems in the Staffing Process

The most obvious problem on Project CARMEN was the high turnover rate. Nearly half of the contract workers leave each year and have to be replaced. Selecting contract workers who will stay for the duration of the project would bring a number of benefits. Firstly, the high turnover rate is extremely costly since the selection and induction of employees on to any project takes time and resources. For example Honicke (1999) estimates a productivity loss of 50% in the first six months of induction, leading to a total productivity loss of 12.5% for people who stay for two years. Such costs will inevitably have a knock-on effect on the total cost of developing and implementing the IT system. Secondly, high turnover on the project means there are often unfilled vacancies. The average time needed to fill vacancies in 1999 was 14 days but this had increased to 33 days in 2000. Unfilled vacancies endanger project target achievement because of a lack of the necessary human resources, unless overtime is used. Finally, high turnover results in significant knowledge loss as individuals who have built up an understanding of the project leave, taking their tacit knowledge with them. Again this increases costs as this tacit knowledge must be rebuilt. Reducing such costs would therefore be an important contribution to reducing the overall cost of this particular IT project, and probably many other IT projects which similarly rely on a large number of contract workers. Analysis of the recruitment and selection process was therefore considered to identify the problems with a view to making recommendations for change.

1. ***Pre-selection by the agencies***: A problem in the recruitment and selection process was that contract agencies, while ostensibly operating to pre-select and screen candidates to make the job easier for the client company, i.e. T Mobil, at the same time want to maximize their 'hit rate'. In other words, there is a conflict between getting as many contract workers as possible onto the project in order to maximize income to the agency (agencies are paid for each worker employed through them) versus delivering a good pre-selection service. This inherent conflict for the agencies in terms of their role in pre-selection, was exacerbated by two factors. Firstly, the job vacancy descriptions they were sent, while containing details of the technical skills required, did not provide explicit guidance on the level at which these skills were required. Secondly, they were given little feedback as to why the candidates they had sent were either successful or unsuccessful. These factors made it difficult for the agencies to improve their pre-selection even if they had wanted to. Developing stronger relationships with these agencies so that they understand the needs of the CARMEN project and the different types of vacancies (Rynes, 1991) was therefore considered to be important.
2. ***Selection by sub-project managers***: individual sub-project managers are left to make decisions about which contract workers to select for their particular teams. These individuals are technically competent and have considerable experience in programming, analysis and project management. However, in most cases these individuals have not been trained in recruitment and selection. They make their pre-selection decisions based on their assessment of the CVs that are sent. These CVs will be formatted very differently and contain rather different information so that the short-listing process is biased by the vagaries of CV writing rather than by substantive differences between applicants. They will then interview those short-listed. These interviews are not structured with each sub-project manager deciding what questions to ask and how to interpret the answers. All the evidence on the reliability and validity of different methods of selection indicates that unstructured interviews are poor predictors of subsequent performance because they are based on the idiosyncratic beliefs that individuals bring to the interview (Rowe, 1984; Anderson and Shackleton, 1990). This is the case even where the interviewers are experienced (Dipboye, 1992). Structured interviews on the other hand have substantially better

predictive validity (Heffcutt and Arthur, 1994). The introduction of a more structured approach to interviewing would therefore potentially improve selection decisions so that those selected would better 'fit' with job requirements and so stay longer.

3. ***Informing candidates of decision by staffing manager***: The staffing manager is supposed to coordinate the selection process ensuring that potential recruits are kept informed about what is happening to their application and identifying where a candidate may be suitable for a job vacancy when they have been rejected from another. However, they cannot fulfill this role adequately because many agencies copy the CVs directly to the sub-project manager where there is a vacancy rather than going through the staffing department. Moreover, when a sub-project manager makes a short-list they are supposed to tell the staffing manager so that he knows which applicants have been rejected and which are still 'live'. However, in many cases the staffing manager is not told about who has been short-listed. So rejected candidates are not freed up for other vacancies within Project CARMEN and the staffing manager is unable to respond quickly to applications. Given the particular context (see below) this slowing down of the selection process is costly. Enforcing the central coordination of the staffing process may therefore improve the effective use of the applicant pool because it improves communication with candidates and makes them feel that their needs are being considered in the selection process (Illes and Robertson, 1997).

2.3. The Context for Recruitment to Project Carmen and Associated Constraints

Improving the recruitment and selection process may be considered relatively straight-forward and much is written in the HRM literature about tools and techniques that can be used (Anderson and Herriot, 1997). Certainly the suggestions noted above, that is moving to a more structured interview (Heffcutt and Arthur, 1994), improving internal coordination (Illes and Robertson, 1997) and building good relationships with recruitment agencies (Rynes, 1991) are each advocated as beneficial in this literature. However, it is important to understand the particular context within which this recruitment and selection is being undertaken. This is typically ignored in prescriptive accounts of selection and recruitment processes which seek to improve the person-job fit without considering the context within which this is taking place (Herriot 1984).

There are a number of features of the organizational context in this particular case, which need to be considered. The strategic decision to develop the new customer care and billing system in house and the strategic decision to fill all the key positions with T-Mobil employees puts significant constraints on the recruitment process. The contract workers are to be the 'meat on the bone' with the 'bone', the main framework, provided by T-Mobil employees. This means that contract workers will typically not be interested in staying long on the project since there are no real opportunities for personal development. For this reason managers do not want to spend much time on the selection process. Given this particular organizational context there are a number of constraints on what can be done. Thus, while theoretically we should be able to chose from the whole set of recruitment and selection methods available those that would be 'ideal', in reality it is necessary to consider some constraints on what can be used.

1. ***German national constraints***: Many studies demonstrate that there are national differences in the use of selection methods. Schuler et al., (1993) found that psychologists have the least influence in Germany compared to other European countries, and the fact that German companies use relatively fewer selection methods tends to confirm this. Essentially, in Germany the use of any method other than an interview is rare (Hossiep, 1996) and in most cases a single interview rather than multiple interviews is the norm (Shackleton and Newell, 1994). This led Newell and Tansley (2000) to conclude: "Theoretically, exploring these (national) differences (in selection) can help to develop our understanding of selection and assessment. Practically, this is important because it suggests that selection specialists need to tailor practice to the specific national context, for what works and is well-accepted by candidates in one country, may be less acceptable in another". The national context of recruitment of IT professionals for the CARMEN project therefore restricts the range of selection methods that could be used. Attempts to

introduce other methods, e.g. psychometric tests or work samples, is likely to meet with considerable opposition from the sub-project managers, the agencies, and the candidates.

2. ***Industry specific constraints***: Critically there is a dramatic shortage of IT professionals in the labour market generally and in the German labour market specifically. For example, Littig, a member of the executive board of the Dekra Akademie GmbH, Stuttgart, estimates that there are up to 400,000 IT vacancies (Gertz, 2000). This led to the introduction in August 2000 of a green card system for IT professionals in Germany, allowing in workers from other countries in order to fill the vacancies. Given this shortage, if the staffing decision process takes too long an individual applicant will have found another job before they are actually offered a job on Project CARMEN or even get to be invited for an interview. In other words, good candidates will not be available for very long on the job market. Indeed, this was a regular occurrence, with sub-project managers complaining that by the time they came to interview their short-listed candidates some were already no longer available. In this situation it is not the company that is choosing between candidates. Rather candidates are choosing between different job offers. Here, the key to effective selection is to make decisions as quickly as possible and improving the accuracy of the assessment of candidates in order to improve person-job fit is not likely to be a paramount objective.
3. ***Applicant group constraints***: The IT professionals in the short-term labour pool are typically working on contracts in order to develop their CV for future jobs. They are therefore not interested in staying long on a project like CARMEN, where there are no real prospects for promotion. Moreover, the typical contract worker is not so much interested in job security as in personal freedom. This is the reason for choosing to be a contract worker in the first place. This sets constraints on what can be asked of these individuals. They can choose to apply for a particular contract or not, given the bouyant job market. Asking these individuals to 'jump through additional hoops' during the selection process, such as asking them to supply references or diploma certificates, would simply put them off and send them elsewhere. What is important is that methods of selection are used that this particular group feels comfortable with (Illes and Robertson, 1997).
4. ***Situation specific constraints***: Sub-project managers have seen their autonomy eroded over the life of project CARMEN, especially with the move to more central control following the early problems arising from decentralization. Against this background any attempts to reduce further their control by standardizing and centralizing the recruitment and selection of their contract workers was going to be strongly resisted.

These constraints do not imply that the existing selection process could not be changed. However, any changes suggested need to take these constraints in to account. Given the identified problems and constraints, three areas for improvement seemed potentially possible – standardizing and quantifying vacancy descriptions; designing a standard CV format; creating a central staffing database. Each will now be considered in turn.

2.4. Improving the Resourcing Process

Standardizing Vacancy descriptions – vacancy descriptions are developed by sub-project managers with the support of team leaders. These go to contract agencies to allow them to pre-select. These job descriptions contain skill descriptions, including both technical skills, e.g. UNIX, C++ for Windows NT, and non-technical skills e.g. teamwork, communication. Technical skills dominate in the job descriptions. These descriptions specify the expected skill profile of the successful applicant but do not quantify the level of skill necessary. Rather the skill level is described in rather loose terms like 'good' or 'very good'. This is not an uncommon problem since in many cases information on qualifications necessary and desired is rather vague even in relation to long term employment (Redmond, 1989). However, in these contract jobs, where individuals must slot more directly into a vacancy in order to minimize disruption to a project, making the skill level more specific may be more crucial. In such jobs it is typically not possible to train someone if they do not have the required level of skill – they need to start work immediately. Providing the information on

the required skill level in terms that are not ambiguous could therefore help in the pre-selection process and so minimize time wasted in interviewing candidates who simply do not have the necessary technical skills. A suggested improvement was therefore to standardize the quantification of skill level as demonstrated in table 1. This suggested change was considered useful by the sub-project managers and the agencies involved.

Level	**Description**
0	Not required
1	Basic knowledge (training and theoretical knowledge only)
2	Good knowledge (minimum one year practical experience)
3	Very good knowledge (2 years practical experience)
4	Excellent knowledge (More than 2 years practical experience)

Table 1: *Devised descriptions of Skills Requirements*

Standardizing CVs – Technical skills were assessed from CVs, looking at the candidates' stated education, training and past experience in other projects. However, an analysis of the CVs sent from the agencies illustrated that they often failed to provide the information necessary to make the decision as to whether the candidate had the necessary and desirable skills. An evaluation of 196 CVs received in the period from May to August 2000 demonstrated the extent of the problem. As can be seen in Table 2 only 16% of the CVs received contained the information in a way that allowed for a full evaluation of the person in relation to the particular vacancy. In many cases the CVs did not contain essential information or the extremely personal layout distracted from the content making it difficult to compare people.

Content included on CVs	**NUMBER**	**Percentage**
Contact data on CV	115	59%
CV structured and readable	193	98%
Skills summary	189	96%
Skills summary quantified	61	31%
Project list	184	94%
Project list containing detailed information	126	64%
All requirements met	32	16%

Table 2: *Analysis of Recevied CVs*

To overcome this problem a suggested change was to introduce a standard CV format for contract workers. This contained a skill summary, using the same skill-scale as described above for the job vacancy, and a project list containing all the information necessary to support the skill summary – period of employment, industry, professional background of project, technical background of project, tools used, concrete position in project, professional background of employment, concrete skills used (weighted in percentage), team size. This new standard CV was designed and sent out for comment to the various parties involved. The recruiting sub-project managers were very positive, feeling that this would help them short-list from CVs, significantly reducing the time this took and improving the short-list itself. The response from the contract agencies was more mixed. Some did not like it feeling that it was too difficult to get all the information on the individuals they were looking after in this standard form. However, others were more enthusiastic and in fact chose to adopt the new standard CV for all their clients, feeling that it helped them to screen applicants for particular vacancies.

Central Staffing Database – Problems occurred because the staffing manager was not kept informed about applicants and vacancies. To overcome these problems a central database was designed which registered all CVs that came in for a vacancy on Project CARMEN. The database allows each sub-project manager to keep a record of progress on the CVs currently being evaluated for a particular vacancy – not evaluated yet, interview proposed, accepted, rejected. This database was viewed positively by all concerned, so that people were happy to keep their records up-to-date. For the staffing manager it meant that he could check on the status of all applications at any time and inform the contract worker agencies about the position of any particular applicant. This improved communication between the agencies and the staffing manager. The agencies were much happier with this since they no longer had to try and get hold of each individual sub-project manager in order to find out the status of an applicant. For the sub-project managers they could use the database to look at candidates that had been recently rejected for another vacancy and see whether any suited a vacancy which had just arisen in the teams they were responsible for. This could reduce the time taken to fill vacancies. It also encouraged greater communication between the sub-project managers.

3. DISCUSSION AND CONCLUSIONS

This case provides an example of outsourcing for an IT application development project. The economic rationale for outsourcing rather than insourcing was relatively clear here, given the requirement for a large increase in IT expertise but for a finite and limited period. Thus, Willcocks and Lester (1999) suggest that outsourcing is the preferred option where the IT activity is discrete and where the in-house IT capability is low. Similarly, McGregor and Sproull (1992) suggest three situations in which contract workers may be the preferred option - where there is a need for specialist skills which are not required long-term within a company, where there is a need to match staffing levels to peaks in demand and where workers prefer to be self-employed. This is exactly the situation in Project CARMEN. However, here we are interested not in the reasons for choosing outsourcing but rather the effective management of this process. Figure 1 provides in diagramatic form the analysis of the case, which is discussed in this section.

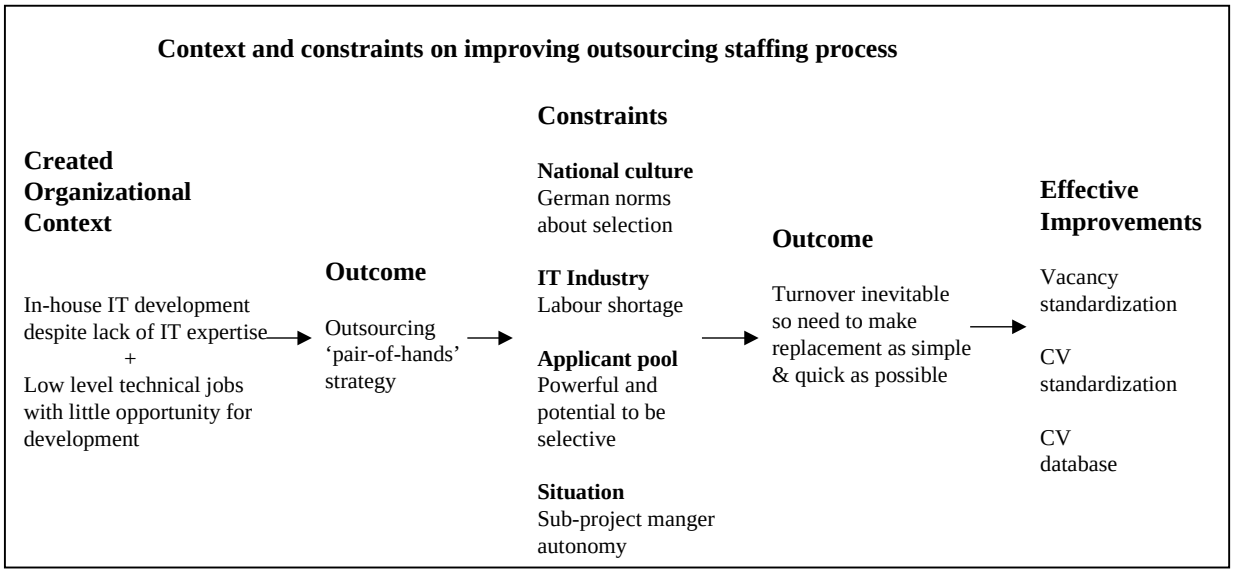

Figure 1: *Contexts and Constraints on improving the outsourcing staffing process*

The requirement for a temporary but large-scale increase in IT expertise stemmed from the organizational decision to build the application in-house (rather than buy a standard package) despite the lack of internal expertise. This decision should not be viewed as the spontaneous reaction to a business need or an external pressure but rather as the result of a process of social construction (Berger and Luckman, 1967) whereby the various social groups involved constructed the particular reality which seemed to confront them (Scarbrough, 1998). Given this decision, the outsourcing option became the obvious strategic choice to provide the needed

human resources for the project. The other decision to shape the management of human resources on the project was the decision to source the key roles in the project with internal employees, thus restricting the opportunities for the outsourced workers to low-level technical jobs. Block (1981) distinguishes between three different roles, which technical specialists can play in the course of their involvement with clients – the 'expert' role, the 'pair-of-hands' role and the 'collaborator' role. In Project CARMEN outsourced workers were essentially restricted to the 'pair-of-hands' role where the client (T-Mobil) remained in charge and the specialist outsourced workers were simply required to do whatever the client asked of them. Again this decision must be viewed as the result of a political process of social construction, rather than as the only rational decision given the situation. Indeed, Markus and Robey (1995) provide a strong argument against adopting this 'pair-of-hands' strategy for IT development projects, advocating instead the 'collaborator' strategy. However, the aim of this paper is not to question or assess the reasons for the choices made in relation to outsourcing on the project at T-Mobil. Rather, the aim is to consider the implications of these choices for the process of managing the resulting human resource requirements.

Given these organizational choices there was a need to outsource and find the 'pairs of hands' to service the low level technical jobs that were not going to be filled by T-Mobile employees. The HRM literature would suggest that the key would be to use selection methods that have high predictive validity so that applicants would be recruited who matched or fitted the job requirements. However, the analysis has identified that there were a number of constraints that influenced the process of recruiting these necessary contract workers. These constraints meant that a focus on improving selection methods was not the most appropriate strategy to adopt. At the national level, the German culture influences and restricts what selection methods are considered acceptable. More importantly, the labour shortage in the IT industry restricts the supply of IT professionals that may be interested in working on the project. This in turn increases the power of applicants who can be very selective in the projects that they choose to work on. They will work on particular contracts because it gives them experience in a particular area that they can include on their CV. However, when sufficient experience is gained they are likely to move on, especially in jobs where there are few opportunities for developing other knowledge and skills. Given these constraints a high level of turnover of these contract workers can be seen as inevitable.

In this context improving the selection process was not about introducing more sophisticated selection methods in order to improve the 'fit' between the person and the job. Rather, the more practical need was to simplify and make smoother the selection process that already existed so that replacements could be found as quickly as possible in order to fill the very specific vacancies that arose. This practical need also found resonance with the sub-project managers who were happy to introduce changes that made it easier for them to recruit contract workers as long as this did not involve them giving up their autonomy to make these decisions. The changes introduced may therefore appear to be rather simple and even superficial. They certainly did not tackle the fundamental selection validity problem identified in the HRM literature. Thus, the unstructured interview performed by untrained managers, which has extremely poor predictive validity, remained the basis of selection decisions. Despite the opportunities for structuring and standardizing this interview process in order to improve predictive validity this improvement route was not chosen. This was because predictive validity was not seen to be the major concern. Rather the major concern, given the particular circumstances, was to attract applicants with the required skills to apply for a job vacancy and then to make decisions as quickly as possible before they found an alternative job. Moreover, it was recognized that attempts to introduce more predictive selection methods would have met with resistance from the major players involved – the sub-project managers, the agencies and the potential contract workers – as well as being 'unGerman'.

Staffing the particular IT project within T-Mobil is clearly expensive and any way in which these costs can be reduced will improve the cost-effectiveness of the overall software development project. Nevertheless, this case has demonstrated that there are significant constraints that need to be taken into account in making any improvements to this staffing process. Taking these constraints into account, given the particular context, means that the suggested improvements do not alter the basic structure of the staffing process for these IT professionals on short-term contracts on project CARMEN. This is because, given the constraints identified, any major overhaul of the staffing process was unlikely to be successful. In these circumstances, the low-

level improvements suggested may actually produce more beneficial change than would an attempt to introduce more sophisticated selection methods with higher predictive validities. Improving the definition of skills in relation to both the job vacancy and the CV and introducing a database to ensure the necessary information about potential applicants is widely available and up-to-date were considered to be the most important and beneficial changes that could be introduced. While the benefits of these changes have yet to be assessed they were at least accepted by the various parties involved because they believed that they would help them to more effectively find and manage the necessary human resources for their parts of the project.

In conclusion, this paper set out to consider ways of improving the management of governance forms that involve IT outsourcing, focusing in particular on issues of recruitment and selection. The intention was to draw on the HRM literature. However, this literature tends to assume that the key concern in recruitment is to improve predictive validity. The analysis of the particular case demonstrated that predictive validity was not the key concern. The implication of this finding is that there is a need to develop theoretical models of human resource management that are contextually embedded. Managing the recruitment and selection of IT outsourced workers is very different to managing the recruitment and selection of permanent IT employees, and in turn this is likely to be different to managing the recruitment and selection of employees for other functions. What is needed is a theoretical model that identifies what aspects of the context influence these people management processes. For example, a simple 2-by-2 framework may distinguish between recruiting people who are in short supply versus recruiting people where there is a surplus of good candidates; and recruiting people for permanent positions versus recruiting people on temporary contracts. In this paper a model has been developed which identifies the constraints that influence the recruitment of professionals who are in a strong market position (here IT professionals), as outsourced workers in jobs where there are few prospects. In this situation it is argued the key concern will be to smooth the process of recruitment so that it is fast and flexible by allowing for an easy assessment of the match between the job demands and the applicants knowledge, skills and experience.

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