

**WORKING PAPER NO. 31/02**

**CHALLENGING CONVENTIONAL WISDOM  
ON ATYPICAL WORK:  
WHY FIRMS USE EXTERNAL WORK  
ARRANGEMENTS IN CORE  
VALUE-CREATION AREAS<sup>i</sup>**

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SNF-project No. 6660: "Competence-based competition"  
SNF-project No. 4490: "Economic Performance and Conditions for Service Industries"  
The projects are financed by the Research Council of Norway  
(FAKTA-Programme 2001-2002 and "Kompetanse, utdanning og verdiskaping")

**INSTITUTE FOR RESEARCH IN ECONOMICS AND BUSINESS ADMINISTRATION  
BERGEN, MAY 2002**

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**ABSTRACT**

According to traditional perspectives on the "flexible firm" as well as influential theories in strategic management, non-standard work arrangements are used in the peripheral areas of the firm's value creation processes. Based on Matusik & Hill (1998), we argue that firms in dynamic environments often use non-standard, external work arrangements deliberately in core value-creation areas to access knowledge, bring in new ideas and create an innovation-stimulation competence mix with the firm's employees. In a study of Norwegian firms in computer services, this proposition receives empirical support. Further, the use of external arrangements in the core value-creation areas is positively related to an innovation (rather than cost) strategy, while there is no statistical relation with the perceived labor shortage of the competence in question.

## 1. INTRODUCTION

Research on atypical employment arrangements usually has the emphasis on these practices as means to lower costs and increase the firms' ability to reduce or expand their workforce in response to changing market conditions. The tendency of externalization of work is explained as a response to intensified competition, a growing demand for numerical flexibility as well as a strategy that fits easily with the recommendation to protect a firm's core competence (Atkinson 1984, Matusik & Hill 1998 Kalleberg 2001). Here, a different approach is taken. In a business world characterized by rapid change and intensified competition, atypical employment arrangements – and especially firms' use of personnel who is not connected to the firm through employment –also have important consequences for value-creation in core functions and competitive advantage for the firm. Indeed, we believe that *firms in dynamic environments often use non-standard, external work arrangements deliberately in core value-creation areas*; to access knowledge, bring in new ideas and create an innovation-stimulation competence mix with the firm's employees (Matusik & Hill 1998, Poppo & Zenger 1997, Helper, MacDuffie and Sabel 2000). The main intentions of the paper are a) to show how this thesis represents a departure from mainstream research on non-standard employment relations; which encompasses work based on Atkinson (1984) as well as influential perspectives in strategic management (TCE and RBV); and b) confront the idea of “externals in the core” and related hypotheses with empirical data.

The paper is organized as follows: In the next section (two) the main approach on atypical work arrangements is outlined. In section three we intend to demonstrate that this approach is one-sided. An alternative perspective in understanding externalization of work – based on Matusik and Hill (1998) is outlined. The main thesis of the paper is that external work arrangements – especially independent contractors working for, but not employed by the firm – often are used by

firms located in dynamic environments. In part four we develop hypotheses to explain why firms use a) external arrangements in core-related activities Then, the method and data of the empirical study is described (five). The empirical results are described and discussed in section six. A concluding discussion rounds up the paper.

## **2. ATYPICAL WORK ARRANGEMENTS: THE CONVENTIONAL WISDOM**

Atkinson's (1984) paper on "The flexible firm and the shape of jobs to come" has had a strong influence on the research on atypical work arrangements. Non only has the content and dimensions of the flexible firm model been investigated and discussed, the 'core-periphery' model also shares vital assumptions with other theoretical approaches to staffing and organizational boundaries.

The essence of the core-periphery model is:

1. *Flexibility*: Firms are looking for different kinds of flexibility. Functional flexibility "is sought so that employees can be redeployed quickly and smoothly between activities and tasks" (Atkinson 1984: 4). Numerical flexibility "is sought so that headcount can be quickly and easily increased or decreased in line with even short changes in the level of demand for labour (Atkinson 1984: 4).
2. *Importance to the firm*: The firm has two parts, a core, consisting of those employees being most vital to the firm and the periphery, consisting of those employees of less importance.
3. *Employment and contract relations*: In the core, functional flexibility is vital. Here, the firm seeks to establish long-term relations with highly skilled, committed employees. In the periphery, numerical flexibility is vital. The peripheral workforce consists of variable

components. Here, atypical arrangements such as self employment, temporary employment, agency workers and outsourcing of activities and services are used.

4. *Labour market segmentation*: The core group belongs to the primary labour market, while the peripheral group belongs to the secondary labour market.

This dichotomy inherent in the model bears a strong resemblance to concepts such as the “core/ring” configuration, “shamrock” organization, “two-tier” organization, “attachment-detachment” model as well as influential perspectives in managerial theory (Kalleberg 2001). One of the main theses from Thompson (1967) is that organizations should buffer those capabilities that are most vital to its competitiveness. Similar theses may be derived from transaction cost economies (TCE) and the resource based view of the firm, both highly influential perspectives in Strategic Management. According to TCE, boundary choice is driven mainly by asset specificity. To deter against opportunism, internalization most often is the preferred solution when asset specificity is high, while other contractual solutions apply with a lower level of asset specificity (Williamson 1985, Poppo & Zenger 1998). The resource based view states that firms that are able to build rare, valuable, non-substitutable and difficult-to imitate resources will achieve an advantage over competitors. Such critical resources – or the strategic core - should be governed internally, while other resources may be governed by market mechanisms (Kogut & Zander 1992, Moran & Ghoshal 1996). Thus, it is recommended that external work arrangements is used only outside the core value-creation areas vital for creating competitive advantage. This stance is based on the assumption that using these arrangements in the core areas may have the consequence of knowledge leakage, which is detrimental to the firm’s competitive position.

Thus, the two-tier model of firms' staffing arrangements is inherent in several theoretical perspectives and conceptual schemes. While the flexible firm tradition based on Atkinson (1984) puts the emphasis on how externalization enhances a firms' numerical (rather than functional) flexibility, the strategic management theories in question argue that internal vs external work arrangements are driven by variables such as asset specificity and uniqueness, as well as considerations related to the strategic core, knowledge creation and knowledge leakage. Accordingly, the research on firms use of external work arrangements has studied extensively how these practices are used either to realize numerical flexibility, to take care of non-core activities in the value chain, or both.

An illustration of these assumptions is Kalleberg's (2001) state-of-art article on flexibility, where the concept of 'numerical flexibility' several times refers to the actual use of atypical employment arrangements, implying a strong overlap between the two categories. In their study of short-term hires and independent contractors, Davis-Blake and Uzzi (1993) relate externalization to the quest for (numerical) flexibility. Contrary to internalization which provides stability, externalization may increase a firm's flexibility in three ways; by reducing many types of employment and administrative costs, because the workers in question are hired without the expectation of long-term employment and therefore can go without tarnishing a firm's image; and may offer a firm to access specialized skills that are needed for only a short period of time.

The general trend of externalization of work is accompanied by growth in Temporary Help Agencies, independent contracting and the practice of outsourcing of activities and to external providers. In support of the numerical flexibility thesis, Houseman (1997) found that seasonality of employment demand was positively related to the incidence and intensity of firms' use of

temporary help agencies. As regards the use of direct short-term employment, firms appear to use this option related to seasonal demands, providing staffing for special projects and unexpected increases in demand (all related to numerical flexibility), as well as replacing regular employees who are absent (Houseman 1997, Davis-Blake & Uzzi 1993).

### **3. CHALLENGING CONVENTIONAL WISDOM: EXTERNALS IN THE CORE**

While external work arrangements traditionally have been related to numerical – rather than functional - flexibility and ‘peripheral’ activities rather than the ‘core’ of the firm, a more varied picture emerges. The need to replace absentees is a vital reason for using short-term hires and temporary help agencies. This reflects a quest for numerical stability rather than numerical flexibility (Nesheim 2002). Houseman (1997) and Nesheim (2002) found that firms often use temporary help agencies to lower recruitment and screening cost, by hiring those who perform well. Temporary help agencies are entering into long-term relationships with their customers (Carnoy et al 1997, Peck & Theodore 1998), implying a more strategic role for these providers of labour.

Further, contract companies and temporary help agencies comprise high skilled professionals and low skilled workers (Kalleberg 2000). While non-standard employment relations are growing, they grow most rapid in professional and technical functions (Matusik & Hill 1998). Among the category of independent contractors, many are expected to have a high skill level and considered ‘experts’ among their customer firms. Silicon Valley is an illustration of this phenomenon, “where many highly skilled employees prefer working as independent contractors, since this status enables them to benefit from their ability to move between firms” (Kalleberg 2000: 357).

Some of the researchers that emphasize knowledge aspects of firms and competitiveness, have challenged the notion that activities critical for value-creation should be internalized. Poppo & Zenger (1998) state that when technological change is rapid, «internal routines, languages and embedded forms of knowledge, may easily become rigidities that hamper performance» (1998: 872). If internal cospecialization of resources prevents the access to important sources of knowledge, internalization may actually destroy rather than create value for the firm. Firms should be able to create knowledge within their boundaries as well as to expose themselves to ideas from the outside. In this manner they stimulate creativity and prevent rigidity, encourage inventive serendipity and are able to check their own technological developments against those of its competitors (Leonard-Barton 1995). Competitive advantage may reside in the network of a relationship outside the firm as well as those resources that are governed internally (Dyer & Singh 1998). In order to benefit from external relations, collaborative rather than adversarial relations in external transactions should be sought when asset specificity and the level of core-related change is high (Nesheim 2001) .

Confronted with current evidence suggesting that a) most rapid growth in contingent work occur among firms based in dynamic environments and b) increasingly, contingent workers have vital professional and technical capabilities, Matusik & Hill (1998) have presented an extended theoretical argument refuting the thesis that non-standard employment arrangements should only be used in non-core activities and functions less vital for competitive advantage. Emphasizing knowledge aspects of the use of external work arrangements – knowledge dissemination, creation and leakage – they state:

“... we agree that for firms based in stable environments where knowledge preservation is central, contingent work in the core value-creation area of the firm should be avoided. However we do argue that for firms based in dynamic environments, employing limited number of



contingent workers is advantageous. The precise mix of contingent and traditional workers should be determined by the firm's evaluation of the relative value of component knowledge creation versus preservation and the firm's ability to integrate any new knowledge brought in. In enterprises where it is necessary to continually upgrade the firm's stock of core knowledge before it is made obsolete by the advances of others, contingent work levels should be higher, for contingent work can stimulate the knowledge-creation process (Matusik & Hill 1998: 691).

External work arrangements have several effects of a firm's knowledge stock. Firstly, the externals may bring public knowledge of occupational and industry best practices into a firm. With regard to professional and technical work, contingent workers on average should have stronger public skills than do traditional employees. Because contingent workers use their skills in more organizational settings, they should have a deeper level of knowledge. Besides, the public skills of these non-employees are evaluated by the market, if the skills are not current, the market will select against them. These best practices brought into the firm by contingent workers may be combined with the firm's existing knowledge base to help create new component knowledge with the aim of creating competitive advantage (Matusik & Hill 1998). The access to up-to-date public skills should be especially vital when firms experience capability gaps – that is, when important technical expertise is unavailable or inadequate internally (Leonard-Barton 1995).

Secondly, external work arrangements also affect the firms' stock of private knowledge. The presence of "externals" should stimulate exploration of new processes and ideas outside the firm's repertoire of routines. The presence of new individuals in the form of contingent workers should contribute to making tacit knowledge more explicit, which should make the firm able to reexamine routines and procedures.

On the other hand, contingent workers may disseminate valuable private knowledge into the external environment (Matusik & Hill 1998). Involving externals in value-creating activities related to the firm's core therefore involves important tradeoffs between knowledge creation gains on the one hand and dissemination/leakage risks on the other hand. However, the leakage issue is limited to component knowledge; related to subroutines or discrete aspects of organizational processes. As regards architectural knowledge – organization-wide routines and schemas for coordinating the various components, which are collectively held and private – the danger of dissemination is much lower, because the contingent worker in question usually is brought in to perform a specific component task and is involved with the organization for limited period in time.

In dynamic environments – characterized by rapid technological change, short product cycles and 'creative destruction' – the firm should emphasize its ability to upgrade its stock of private and public knowledge. If not they "risk seeing their competitive position deteriorate as competitors absorb new public knowledge more rapidly than the firm, and as the stock of private knowledge is made obsolete by the advances of others" (Matusik & Hill 1998: 689). Therefore, in general, for firms in dynamic environments creation gains should outweigh dissemination gains. If managed properly, firms based in dynamic environments should employ a limited numbers of contingent workers in core value-creation areas. The mix of traditional and contingent workers ought to be determined by a) the relative value of component knowledge creation versus preservation and b) the ability of the firm to integrate the contingent workers and the knowledge brought in.

Table 1 summarizes the argument. A second environmental factor – the intensity of competition – should influence the use of contingent workers, but only its use in non-core areas. Contingent work may be a useful strategy for reducing production costs, improving capacity management and for increasing numerical flexibility. The more intense the competition, the more contingent work should be used to achieve these gains.

**Table 1: When and where to use external work arrangements**

(Adopted from Matusik and Hill (1998): 690-691 (table 1 and 2))

<b>The intensity of competition:</b>	<b>Stable environments</b>	<b>Dynamic environments</b>
<b>Cost and flexibility pressures</b>	<b>Dissemination risks outweigh dissemination costs</b>	<b>Creation costs outweigh dissemination risks</b>
Mild	Do not use	Use only in core value-creation areas
Intense	Use, but not in core value-creation areas	Use, especially in core value-creation areas

#### **4. HYPOTHESES**

On the basis of the arguments in the above section, one would expect that *firms in dynamic environments uses external work arrangements in core value-creation areas*. Assuming dynamic environments, a vital question is what accounts for variation in the manner in which these work arrangements are used. Why do some firms use human capital doing work for the firm without

being employed by it inside or close to the strategic core, while others refrain from doing so? Further, Matusik & Hill (1998) argue that the use of contingent workers for 'traditional' reasons is related to the intensity of competition, i.e. the strength of cost and flexibility pressures. Different mechanisms should therefore prevail, in explaining why firms use externals in core-value creation areas vs in non-core areas or to realize numerical flexibility. In this section, two hypotheses on the use in the core areas are formulated.

Dynamic environments are characterized by rapid technological change, short product cycles and 'revolutionary' as well as incremental changes. Quickly changing markets and rapid imitation by competitors make it necessary for firms to build new knowledge. However, firms who confront similar environments, may choose different responses or strategies. We believe that the building and creation of knowledge is especially vital for firms that compete on innovation and product development rather than imitation, costs or economies of scale. A strategy of innovativeness requires a continuous development of ideas. One source of ideas are experts who are connected to the firms through other types of contracts than employment contracts. While contingent workers may stimulate innovativeness inside the firm, there is also a potential danger of knowledge dissemination of valuable private knowledge into the external environment, leading to a loss of competitive advantage. In general though, "this consideration is less of a concern for a firm based in a dynamic environment, where in the absence of continual upgrading, the firm's stock of knowledge is likely to be made obsolete by the advances of others" (Matusik & Hill 1998). Therefore, a firm that compete on the basis of their ability to innovate should have more externals involved in their core-value creation functions, compared to firms that mainly competes on costs.

H1: Firms which have a strategy based on innovation and product development use externals in their core, value-creation functions to a larger extent than other firms.

Another factor that might affect the use of atypical work arrangements, is the relation between supply and demand of the skills in question. While H1 is based on the presumption that firms prefer to use of a certain number of externals rather than taking them on as employees, another mechanism may also apply. Assume that the firm prefers employment rather than external contracts with persons having the right competence for the value-creating tasks in question. If there is no available supply of this human capital or the firm doesn't want to match the wage demands of the persons in questions, it has to look at other alternatives. The competence needed may be available through contracts with externals rather than ordinary employment. Thus, this work arrangement may be used as a "second-best" solution, when there is a relatively low supply of candidates for employment. A number of studies have found a positive relation between labor shortages and non-traditional work arrangements. Kalleberg and Schmidt (1996) found that perceived labor shortages were a reason for the use of part-timers, temporary help agencies, and subcontractors, and Abraham (1990), Harrison and Kelley (1993), and Christensen (1995) all found that more than 50 percent of respondents said they contracted out because of labor shortages or a need for special skills.

H2: The higher the level of labor shortage for the competence in question, the higher the extent of externals in the core, value-creating functions of the firm.

## 5. METHOD AND DATA

*Sample:* The empirical study was conducted among in Norwegian firms in computer services (NACE-sector 72) in June 2001. This empirical setting is generally regarded as being dynamic, characterized by a high level of change and uncertainty. The sampling frame was provided by Dun % Bradstreet and consisted of 648 firms. The sample was stratified along two dimensions; size (6-19, 20 or more employees) and geography (centre vs periphery). 105 firms were contacted and 55 firms responded, i.e. a response rate of 52 %. The response rate was similar between the four strata, thus there were no response bias regarding size and geography.

Among the 55 firms, 30 used independent contractors; i.e. an arrangement where those people *doing work for* the focal firm, are not *employed by the firm* or a third party. Firms with less than five or more than 225 employees were left out, leaving us with 26 cases in the analyses.

*Measurements:* The variables were by the use of by perceptual indicators (1-5 scales). Three indicators were used to capture the firm's use of external arrangements in the core, value-creation areas:

- \* "Some of the externals contribute with special competence in key areas for the firm".
- \* "Some of the externals work together with our employees on assignments for vital customers".
- \* "Externals are primarily occupied with tasks outside the main activities of the firm" (reversed scale).

As regards the independent variables, ‘innovation strategy’ was measured by reply to two statements:

\* “In the markets where we operate, the ability to innovate and develop new products are the most important source of competitive advantage”.

\* “In the markets where we operate, we compete mainly on price” (reversed scale)

The supply of personnel was measured by the statement:

\* “It is difficult to recruit skilled employees”.

Firm size (used as a control variable) was measured by the number of employees in the questionnaire.

*Instrument:* The questionnaire was administered through telephone interviews, provided by an external, professional bureau.

## **6. EMPIRICAL ANALYSIS AND DISCUSSION**

In this section the results of the statistical analysis will be presented. Firstly, based on the theoretical arguments above, one would expect firms in the given environment to use externals in the core value-creation areas. Table 2 documents the extent to which these work arrangements are used in core-related areas among those that used contractors. 64 % say that externals contribute with special competence in key areas for the firm. 58 % say that externals work together with the firm’s employees on assignments for vital customers. 46 % disagrees with the statement that externals primarily work with tasks outside the core functions of the firm, implying that in these firms there work is directly related to the core value-creating functions. Combining the three measures on externals in the core in an additive index, 15 out of 26 firms obtain an average score of 4 or more (range: 1-5). Thus, in this sample, this finding clearly indicates that more than half

of the firms tend to use externals in core, value-creation functions. The main theoretical assumption behind the study is therefore supported.

**Table 2: Firm's use of externals in the core value-creation areas**

<b>Values</b> <b>Indicators</b>	<b>Disagree (1,2)</b>	<b>Neither agree nor disagree (3)</b>	<b>Agree (4,5)</b>
Some of the externals contribute special competence in key areas of the firm	24	11	<b>64</b>
Some of the externals work together with our employees on assignments for vital customers	36	5	<b>58</b>
Externals are primarily occupied with tasks outside the core functions of the firm	<b>46</b>	31	23

N=26



Secondly, moving on to predicting variation among firms' use of externals in the core, H1 and H2 will be tested. Besides 'innovation strategy' and 'supply of personal'; firm size (square root of the number of employees) was used as a control variable in the statistical analysis.

**Table 3: Descriptive statistics**

Variables	Mean	s.d.	Range	Firm size	Innovat. strategy	Supply of personnel	CORE-EXT
Firm size	5,71	2,35	3,16 – 13,42				
Innovat. Strategy	3,67	,76	2,5 - 5	,060			
Supply of personnel			1-5	,254	,097		
CORE-EXT			1-5	,163	,465**	-,165	

N=25

Table 3 shows the bivariate correlations of the variables in question. There are no statistical significant correlations among the independent variables. The dependent variable correlates positively (significant at the .05 level) with innovation strategy. There is a negative, non-significant correlation between supply of personnel and externals in the core.

**Table 4: Regression analysis: Predicting firms' use of externals in the core**

Independent variables	B (standard error)	Beta
Firm size+	,115 (.106)	,202
Innovation strategy	,825** (.318)	,469
Supply of personnel	-,302 (.215)	-,262

N=26

+ Square root

Adjusted R Square: ,193

Two-tailed test of significance, \*  $p < ,1$  \*\*  $p < ,05$  \*\*\*  $p < ,01$

The regression analysis (table 4) was run based on data from 26 firms . Adjusted R square is .193, which is fairly satisfying. The relation between innovation strategy and externals in the core is positive (Beta =,469) and significant at the .05 level. This finding supports H1. There is a negative, non-significant relation between the supply of personnel and externals in the core. Since H2 predicted a positive relation, the hypotheses is not supported. If the control variable – firm size – is left out of the regression analysis, the results are similar. Thus, the findings from regression analysis support a theoretical explanation that assumes that firms use externals in a conscious and strategic manner, in order to enhance innovation. Since one potential source of ideas are external experts, they may be connected to the firm through (non-employment) contracts to stimulate the firm's innovativeness. The mechanism behind H2, that the use of externals in the core is a second-best solution when expertise and special competence are scarce is not supported. The findings indicates an instrumental approach to externals and competitive

advantage, rather than these aspects of externalization being an effect of external ‘forces’ beyond the firms’ control. On the other hand, since this is a cross-sectional study, the causal direction of the statistical relation between innovation strategy and externals in the core has not been tested directly. Therefore, the incidence of externals in core value-creation areas may also enhance innovativeness and product development even if this choice of work arrangements was not made in the strategic manner in the first place. For example, a contractor may be taken on for short period or for a small amount of work. As the relationship develops, the person in will be given more vital tasks closer to the core of the firm. In combination with employees and internal competence, the firm’s innovative capabilities may be strengthened. An innovation – rather than a cost - emphasis may reflect an ‘emergent’ strategy (rather than a intentional strategic approach. A more incremental, processual explanation may therefore underlie the statistical relation between innovation strategy and externals in the core.

As regards methodological considerations, the small number of cases is a potential threat to the validity of the study. On the other hand, the response rate among the firms sampled were 52 %, which is quite satisfactory. There was no response bias as regards firm size and geography. We have no reason to believe that there is a bias among the cases when it comes to the scores on the dependent variable. When contacting the respondents, the themes of the study were presented as employment relations and delivery of services. The items on externals in the core came about halfway in the interview.

In this study, we used three items to measure the dependent variable. Remember that the intention with these measures was to capture the use of external personnel in the core-value creation areas of the firm. As there is no standard operationalization to capture neither the core nor the use of

externals in the core, three items which should be relevant to the empirical context were chosen. The items are ‘special competence in key areas’, ‘key customers’ and ‘main activities of the firm”, all assumed to be related to the core of the firm. Further work may proceed in a number of ways. One option is to develop measures along the lines suggested here. A number of measures may be identified, related to critical resources, competencies, processes or relations. These measures should have a certain generality, and at the same time be useful in the relevant empirical context. Alternatively, a two way approach may be used. First the respondent is asked to identify the core (for example what are the most critical resources of the firm), then the use of external personnel in this subjectively defined area of the core is measured. By using this procedure, one would get a description more tailored to each firms’ strategy and value-creation process. One should, however, be careful that these conceptualizations of the core become too unique and non-standardized to be useful in a survey of firms (Nesheim 2001).

## **7. CONCLUDING DISCUSSION**

The main idea of this article is that, contrary to conventional wisdom in the study of atypical work arrangements, firms in dynamic environments often use external personnel deliberately in core value-creation areas. We have shown how this proposition represents a departure from conventional perspectives on non-standard employment relations as well as influential perspectives in the field of strategic management. In a sample of 26 Norwegian firms in the ICT sector, empirical support was found for the proposition. On each of the three indicators used to capture firms’ use of externals in the core, appr. half of the firms responded positively.

Further, two hypotheses were formulated in order to explain variation in firms’ use of externals in the core. While no support was found for the labour supply hypotheses, there was a significant

positive relation between a strategy of innovation (rather than a cost strategy) and the use of externals in the core. A theoretical explanation that assumes that firms use externals in a conscious and strategic manner, is thus supported. Since one potential source of ideas are external experts, they may be connected to the firm through (non-employment) contracts to stimulate the firm's innovativeness. On the other hand, since this is a cross-sectional rather than a direct study of causal relations, a more incremental, processual explanation may also contribute to the statistical relation observed in this study.

Besides the measurement issues discussed previously, a number of avenues for further research may be suggested on the basis of this study. Here, one specific sector has been investigated. In order to study the degree to which the use of externals in the core is a general phenomenon among firms in dynamic environments, across-sectors studies should be undertaken. In this manner one will be able to compare firms in the ICT-sector with firms in similar dynamic environments. To what extent is the use of externals explained by the variables emphasized in this article; characteristics of the market and the strategy of the firm? How important are the possibility to cooperate on work tasks across spatial boundaries, enabled by information technology? What are the effect of institutional factors such as the newness of the type of firm, the strength of established practices in the organization of work as well as the power of unions and collective negotiations and agreements?

While this study has focused on whether firms use externals in the core or not, and aimed to explained this in a cross-sectional analysis, a number of other aspects may also be investigated. To establish whether this phenomenon is an outcome of strategic considerations vs more incremental, emergent patterns of actions, the process of how firms establish contact with and

assign tasks to and the pattern of cooperation, knowledge development and information exchange in the relation between externals and internals should be studied. To what extent is the involvement of the external contractor a gradual process based on trust-building over time vs. A transaction resembling a market exchange with a short-term perspective?

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<sup>i</sup> This work has been financially supported by the Research Council of Norway through two programs: FAKTA-Programme 2001-2002 and "Kompetanse, utdanning og verdiskaping".