

# Interest Alignment and Firm Performance

Oliver Gottschalg\*  
HEC School of Management, Paris

Degenhard Meier\*\*  
RWTH Aachen

Stephan Schödel\*\*\*  
Bain & Company, Munich

\* Oliver Gottschalg, Strategy and Business Policy Department, HEC School of Management, Paris, 78351 Jouy en Josas Cedex, France, [oliver.gottschalg@insead.edu](mailto:oliver.gottschalg@insead.edu)

\*\* Degenhard Meier, Lehrstuhl Wirtschaftswissenschaften für Ingenieure und Naturwissenschaftler, RWTH Aachen, 52056 Aachen, Germany, [meier@win.rwth-aachen.de](mailto:meier@win.rwth-aachen.de)

\*\*\* Stephan Schödel, Bain & Company  
80335 München, Germany, [Stephan.schoedel@bain.com](mailto:Stephan.schoedel@bain.com)

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## ABSTRACT

*The degree to which firms are able to align the individual interests of their members with overall strategic objectives has been long recognized as a fundamental determinant of firm performance (e.g. Jensen and Meckling (1976; Jensen (1986)). Much of our attention has focused on the role of extrinsic motivation based on rewards and sanctions to achieve such interest alignment. Recently, Gottschalg and Zollo (2004) have proposed a more comprehensive conceptual framework of interest alignment that considers not only extrinsic, but also enjoyment-based hedonic intrinsic and obligation-based normative intrinsic motivational mechanisms. This study derives testable hypotheses from their framework and thus provides an empirical test of interest alignment theory based on a sample of 69 management buyouts in the UK. The results of the multivariate regression model suggest that in this setting, interest alignment does have a significant influence on firm performance. Surprisingly, however, the performance impact of intrinsic motivation (particularly of a hedonic nature) is much more powerful than that of extrinsic motivation, which fails to show any statistical significance. Furthermore, and contrary to “received wisdom”, the three types of motivation mutually reinforce each other in their positive impact on performance.*

## KEY WORDS

*Competitive Advantage, Interest Alignment, Motivation, Buyouts*

JEL Classification: M10

## 1 Introduction

Firm performance depends to a large extent on the degree to which the members of the organization work towards the accomplishment of organizational goals. As seminal contributions in agency theory have pointed out, the interests of individuals in an organization are not always aligned with those of the organization as a whole (*Jensen and Meckling (1976); Jensen (1986); Alchian and Demsetz (1972)*). This may drive employees to behave in ways that impede firm performance. The performance impact of organizational interest alignment, defined as *the degree to which the members of the organization are motivated to behave in line with organizational goals (Gottschalg and Zollo (2004))*, has been emphasized by several recent contributions to the management literature (*Makadok (2003); Coff (1997); Coff (1999); Castanias and Helfat (1991)*). Accordingly, firm performance can be seen as dependent on two elements. A firm's market position (*Porter (1979); Porter (1980); Porter (1985)*) and resource configuration (*Barney (1986); Barney (1991); Penrose (1959); Peteraf (1993); Wernerfelt (1984)*) determine its *potential* performance, whereas the extent to which firms actually *realize* their performance potential crucially depends on the aggregate motivation of employees. In other words, organizational interest alignment moderates the potential performance that is based on market positions, assets and capabilities (*Figure 1*).

The question then arises: through which motivational mechanisms are firms able to achieve interest alignment and thereby enhance firm performance? Most existing approaches to this question have their theoretical foundations in agency theory (*Jensen and Meckling (1976); Jensen (1986); Alchian and Demsetz (1972)*). This stream of research focuses on how reward systems and control mechanisms can ensure the alignment of individual interests with organizational goals. It makes the (implicit) assumption that human action is driven by *extrinsic* motivation, i.e. the desire to obtain additional work rewards from the external environment (*Brief and Aldag (1977)*). Firm performance is then enhanced based on reward systems that lead to a higher marginal cost of shirking and to higher monetary benefits from engaging in performance-enhancing behavior (*Frey and Jegen (2001)*). Research in social psychology and organizational behavior, however, points to the importance of different motivational mechanisms to trigger performance-enhancing behavior. In fact, a vast stream of research initiated by *Deci and Ryan (1975)* and *Lepper and Greene (1976)* demonstrated in experimental settings the influence of *intrinsic* motivation, i.e. the

pleasure and satisfaction derived from an activity (*Deci (1975)*), on performance. Substantial controversy remains even within the field regarding whether, and under what circumstances, the introduction of reward-based extrinsic motivation reduces intrinsic motivation to the point that performance suffers (e.g. *Deci and Koestner (1999)*; *Deci and Koestner (1999)*; *Eisenberger and Cameron (1996)*; *Eisenberger and Cameron (1998)* ; *Eisenberger and Cameron (1999)*). Recently, this debate seems to have moved towards the insight that the relationship between extrinsic motivation and performance is contingent upon the characteristics of the rewards (*Deci and Ryan (1985)*), the nature of the task (*Prendergast (1999)*; *Steers and Mowday (1977)*) and individual preferences (*Gottschalg and Zollo (2004)*). What this research clearly indicates, however, is the need to explicitly consider different types of motivation to understand the ways through which organizations align individual interests with firm goals.

This study builds on a theoretical model of motivational mechanisms at the organizational level proposed by *Gottschalg and Zollo (2004)*. This model departs from previous approaches to study interest alignment in the following ways. First, it builds on recent advances in motivation theory (*Lindenberg (2001)*) in which the traditional intrinsic-extrinsic dichotomy (*Deci (1975)*; *Deci (1976)*; *Brief and Aldag (1977)*) has been refined through the distinction between (obligation-based) “normative” intrinsic motivation and (enjoyment-based) “hedonic” intrinsic motivation. The corresponding three-dimensional conceptualization of motivational mechanisms captures the essential distinction between a task-oriented and a social component of intrinsic motivation, while remains sufficiently parsimonious for its application in a business context. Second, it develops its arguments at the organizational level of analysis, which corresponds to the goal of understanding the impact of rewards on firm, rather than individual, performance. Third, it explicitly states antecedents, interaction effects and consequences of all three dimensions of interest alignment.

It is the objective of this study to see whether or not some of the theoretical arguments made by *Gottschalg and Zollo (2004)* are supported by empirical evidence. To this end, we derive a set of testable hypotheses regarding the impact of different components of interest alignment on firm performance from their model and test them empirically using a sample of 69 recent management buyouts in the UK. Buyouts provide an ideal setting for studying the performance impact of interest alignment, as they drastically change important antecedents of all three components of interest

alignment (*Jensen (1989); Cotter and Peck (2001); Smith (1990); Berg and Gottschalg (2005)*) while leaving much of the determinants of *potential* firm performance (*see Figure 1*) unchanged. In a sense, the buyout constitutes an exogenous “shock” to the organization that allows us to observe the performance implications of changes in organizational interest alignment and to compare the relative strength of its extrinsic, hedonic intrinsic and normative intrinsic components.

The empirical analysis reveals a number of interesting results. First, our data supports the view that overall interest alignment does play a significant role in determining firm performance. Second, among all three components of interest alignment, only hedonic intrinsic motivation has a significant (positive) influence on performance, while extrinsic motivation does not seem to have any significant influence. Third, and contrary to “received wisdom”, the three types of motivation mutually reinforce each other in their positive impact on performance.

## **2 The Performance Impact of Organizational Interest Alignment**

Motivation has been identified as an important determinant of individual task performance, as it influences to what extent individuals reach their potential performance (e.g. *Schuler and MacMillan (1984)*). In a very similar fashion, firm performance is also a function of how well the individuals who work for the organization are motivated to accomplish organizational goals (*Jensen and Meckling (1976); Jensen (1986); Alchian and Demsetz (1972)*). If one conceptualizes a firm’s *potential* performance as determined by the combined use of its assets, capabilities and market positioning, the translation of *potential* into *actual* performance crucially depends on individuals’ willingness to utilize their skills and the available assets to compete in the most effective way (*Castanias and Helfat (1991); Schuler and MacMillan (1984); Schuler and Jackson (1987)*). Following *Gottschalg and Zollo (2004)*, we thus model *actual* organizational performance as a function of both *potential* organizational performance and the aggregate level of *motivation* to behave in ways conducive to the realization of that potential. Organizational interest alignment, as a measure of the aggregate correspondence between individual and organizational goals, can therefore be defined as “*the degree to which the members of an organization are motivated to behave in line with organizational goals*” (*Gottschalg and Zollo 2004:7*). It is important to note that this definition of interest alignment does not impose

restrictions as to *how* the members of the organization are being motivated, thereby enabling the consideration of different motivational mechanisms.<sup>1</sup> At the same time, this definition directly implies a positive impact of high levels of organizational interest alignment on performance. It is interesting, however, to take a closer look at the different motivational processes that contribute to the creation of interest alignment.

As proposed by *Gottschalg and Zollo (2004)*, organizational interest alignment is the result of three (interrelated) motivational mechanisms: *Extrinsic motivation* is driven by the goal of obtaining additional resources (*Lindenberg (2001)*) that come in the form of extrinsic work rewards or outcomes (*Brief and Aldag (1977)*) such as money, power, recognition etc. It can be formally defined as the degree to which behavior is influenced by tangible and intangible rewards obtained from the environment. The impact of extrinsic motivation depends jointly on the reward system in place, which determines the extrinsic work rewards that the individual obtains as a function of any given behavior, and on the importance of these rewards to the individual. *Hedonic intrinsic motivation* is driven by the goal of being engaged in enjoyable (*Lindenberg (2001)*), self-determined and competence-enhancing (*Deci and Ryan (1985)*) behavior. It is influenced by the perceived characteristics of the task and the task context (*Hackman, Oldham et al. (1975)*; *Hackman and Oldham (1976)*; *Hackman and Gersick (1990)*). The impact of hedonic intrinsic motivation depends on the importance the individual attributes to being engaged in enjoyable, self-determined and competence-enhancing behavior (*King, Hautaluoma et al. (1983)*). It can be defined as the degree to which behavior is to driven by job satisfaction. *Normative intrinsic motivation* is driven by the goal of engaging in behavior that is compliant with organizational norms and values. Individuals are thus normatively intrinsically motivated to engage in a given behavior, to the extent that this behavior is congruent with organizational norms and values (*Allen and Meyer (1990)*; *Kreps (1997)*). The intensity of normative intrinsic motivation hence depends on the degree to which individuals identify themselves with organizational norms and values. More formally, normative intrinsic motivation can be defined as the degree to which behavior is influenced by the norms and values of the firm (for an overview on the drivers of motivation see Table 1).

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<sup>1</sup> In this respect organizational interest alignment differs from the related concept of the “governance

Most previous work on motivation has been done on the individual level of analysis. It is, as yet, uncertain how individual motivation aggregates to the organizational level. Existing work on governance examining one, i.e. the extrinsic, aspect of interest alignment implicitly assumes that individual motivation can simply be aggregated to the organizational level. Lacking a theory of how motivational levels aggregate, we must expect a priori that motivation operates similarly at the individual and organizational levels. If this is true, we expect overall interest alignment to be driven by three different underlying motivational mechanisms: extrinsic, hedonic and normative interest alignment. *Extrinsic interest alignment* is the degree to which individual interests are aligned with organizational goals based on extrinsic motivation, *hedonic interest alignment* is the degree to which individual interests are aligned with organizational goals based on hedonic intrinsic motivation, and *normative interest alignment* is the degree to which individual interests are aligned with organizational goals based on normative intrinsic motivation.

As interest alignment in general is positively related to firm performance, each of its components has to be expected to also have a direct and positive impact on firm performance. Whenever extrinsic, normative intrinsic or hedonic intrinsic factors are at play to increase individual motivation, both the corresponding component of interest alignment at the collective level and, ultimately, firm performance are increased. This effect can be formally stated in the following hypotheses:

*H1: The greater the level of extrinsic interest alignment in a given organization, the higher the performance of the firm.*

*H2: The greater the level of normative interest alignment in a given organization, the higher the performance of the firm.*

*H3: The greater the level of hedonic interest alignment in a given organization, the higher the performance of the firm.*

In addition to testing whether the hypothesized positive impact of the three components of interest alignment is supported by empirical evidence, it is also interesting to compare them in their relative strength. In the following, we will

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problem”, with its implicit focus on agency theory arguments and thus extrinsic motivation.

empirically test our hypotheses regarding the influence of different components of interest alignment on firm performance.

### **3 Research Design**

#### *3.1 Research Setting*

Our hypotheses are tested in the context of leveraged management buyouts in the UK. This was an ideal setting as it fulfilled certain key criteria. First, it allowed us to observe *changes* in the strength of interest alignment. Second, we could measure the *performance impact* of these changes. And third, we could *isolate* the performance impact of interest alignment from other factors that may alter firm performance.

A buyout dramatically changes several of the antecedents of interest alignment identified by *Gottschalg & Zollo (2004)*. Extrinsic interest alignment, for example, changes through the introduction of pay-for-performance remuneration schemes or equity plans for top management and employees (*Fox and Marcus (1992); Anders (1992)*). Detailed interviews with 23 top executives involved in the management of (successful and less successful) buyouts revealed that buyouts also have a substantial impact on intrinsic forms of motivation. Managers described important changes in the way employees perceive their job after the buyout, which influence hedonic intrinsic motivation. At the same time they emphasized the effect a buyout can have on the social community of the firm, and hence on normative intrinsic motivation.

It should also be noted that the performance of a buyout can be assessed with a (relatively) high degree of accuracy and objectivity: unlike other acquisitions, buyout companies remain independent legal entities and the return on equity (annualized Internal Rate of Return (IRR)) to the equity investors has been widely used by researchers and practitioners as an objective performance measure for buyouts (*Gottschalg, Loos et al. (2004), Gottschalg, Phalippou et al. (2004)*).

Finally, buyouts are stand-alone acquisitions that tend to leave the resource configuration of the acquired company relatively unchanged (*Baker and Montgomery (1994)*), especially when compared to events that lead to comparable changes in the antecedents of interest alignment (like a merger or major acquisition). This is not to deny the substantial level of change that a buyout can trigger in the acquired company. However, if we apply the distinction between factors that determine potential performance and those that determine the ability to realize this potential (*Figure 1*), a



large amount of overall value generation through the buyout can be attributed to the latter (*Berg and Gottschalg (2005)*). As we also control for many of the factors that change potential performance in our model, we are able to sufficiently isolate the performance impact of changes in interest alignment.

### *3.2 Sample and Data Collection*

The research design involved three phases. In the first phase, detailed interviews were conducted with 23 senior executives involved in European buyouts, either as managers of buyout portfolio companies or as investment managers working for private equity firms. Based on these interviews, a questionnaire-based survey was developed and fine-tuned to ensure measurability and clarity. Recipients of the survey were identified using the buyout database of the Centre for Management Buyout Research (CMBOR) at the University of Nottingham, the most comprehensive source of information on buyouts in the UK. Management buy-ins were excluded from our analysis, as the change in the top management team they imply is likely to have a particular impact on interest alignment that we wanted to exclude from our analysis. In the second phase, a survey was conducted on the 2,415 buyouts that took place between 1996 and 1999 in the UK, or were exited between 2000 and 2002. These criteria were chosen as reliable performance (IRR) information could be obtained, either in the form of realized returns (in case of buyouts already sold) or marked-to-market book returns a sufficient interval (at least three years). The final phase of the research design involved augmenting the dataset with secondary data on relevant characteristics of the acquired company and comparable stock market returns over the investment horizon for each deal.

The survey consisted of four main parts. The first and third parts asked the responding top executive of the buyout company to assess the motivation levels of his or her top management team prior to and following the buyout. Extrinsic, hedonic and normative interest alignment were measured through a total of eight questions using an instrument developed by *Theresa Amabile* and colleagues (*Amabile, Tighe et al. (1994)*) that was adjusted to the buyout setting. The second part of the survey gathered information about the characteristics of the buyout such as the year of entry and exit, the industry segment of the acquired company, the initial financial leverage and events that could have an influence on the *potential* performance on the buyout company (restructuring, layoffs, follow-on acquisitions of divestitures etc.). The fourth part of the

survey assessed buyout performance through multiple objective and subjective performance measures.

Of the total 2,415 companies to which the survey was sent in July 2003, 303 were removed from our list as they could not be contacted and 244 indicated that no one from the management team in place during the time of the buyout was still with the company. Two follow-up letters at fortnightly intervals were sent to the remaining 1,868 companies. With 89 companies responding before October 2003, the response rate was 5%. In early 2004, we made a second effort to collect data from a sub-sample of the remaining 1,779 firms. Of these, we had access to additional information for 334 via research contacts with institutional investors in buyout funds. We focused our efforts on these 334 firms, as the link between the qualitative information collected through the survey and the quantitative (performance) information available through the research contacts was particularly valuable. Each of these companies received several follow-up calls: 31 could not be reached by mail or phone, and 51 reported that no one from the buyout management team was still with the company. These were thus removed from our target list. Of the remaining 257, 29 returned our survey, which corresponds to a response rate of 11% for the second data collection and increased the overall response rate to 6.3%. This response has to be interpreted in light of the inevitable complexity of a survey that aims at capturing complex motivational processes at the organizational level. Equally, we need to consider the tendency in the private equity domain not to disclose any information on individual transactions. For this reason, survey response rates in the buyout area tend to be lower than for publicly traded companies.

The survey was sent to the most knowledgeable respondent, who was identified by the CMBOR buyout database. Most of the respondents were either Chief Executives (68%) or Managing Directors (19%), the remaining respondents held other top management functions. Respondents were motivated to complete the questionnaire by the opportunity to compare their own buyout experience with those of other firms, as well as by assurances that their individual responses would be kept strictly confidential.

Out of the 118 responding companies, we were able to obtain an objective IRR performance measure for 69 companies, either directly from the respondent through the survey (21 cases), or based on proprietary information the author was able to obtain

from institutional investors in buyout funds (48 cases)<sup>2</sup>. To assess the impact of a possible non-response bias, a number of sample mean comparison tests were made. First, the general characteristics of the responding companies in our sample were compared to all 2,415 buyouts from the CMBOR database initially identified for this study. Two-tailed t-tests for continuous variables and chi-square tests for categorical variables indicated that there were no significant differences between the two samples in terms of size (equity invested), deal source (privatization, secondary buyout, public-to-private deal etc.), comparable public market returns, the distribution of deals across 10 industry categories or the percentage of deals that were already exited. However, the average holding period of the deals in our sample was significantly longer (5.5 vs. 5.2 years) than the average buyout in the CMBOR database. Also, the entry years 1997 and 1999 were significantly over-represented in our response sample. In a second step, the performance (IRR) of the 69 deals in our sample was compared with a set of UK buyouts composed of deals on which our research partners from the community of investors in buyout funds were able to provide us with performance information. The performance of the buyouts in our sample does not statistically differ from either the overall set of 402 UK buyout deals or the 190 UK buyout deals that were entered during the same time period as our survey responses.

### *3.3 Measurement and Model Specification*

*Dependent Variable.* We operationalize firm performance as the annualized gross return on equity (IRR).

*Explanatory Variables.* Changes in Interest Alignment have been measured based on survey responses that capture motivational levels prior to and following the buyout. Given the novelty of the theoretical distinction between hedonic and normative types of intrinsic motivation, and the limited amount of prior research on organizational-level motivation, existing instruments (e.g. the Work Preference Inventory (WPI) developed by *Amabile et al.*, 1994) had to be adjusted to capture the hedonic–normative distinction and the organizational level of analysis, and to take account of the buyout setting<sup>3</sup>. In the survey, the responding member of the top

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<sup>2</sup> The author would like to thank the research partners for providing access to this information.

<sup>3</sup> Exploratory interviews with top managers of buyout companies indicated that it would not be practical to obtain responses to a survey that measures the entire WPI instrument twice (prior to the buyout and today). Hence the most relevant items of the WPI for our purposes were identified with the interviewees, adjusted to the context of our study and integrated in the questionnaire.

management team was asked to assess the motivational levels of his or her management team prior to the buyout and at the time of the survey. This one-respondent research design was the only practical way of collecting data on a sufficiently large cross-sectional sample of buyouts, as the requirement to have multiple respondents per company would have reduced the response rate to levels that make any statistical analysis of the data impossible. The response was given on a 5-point fully anchored Likert scale ranging from “-2” (False) to “+2” (True) through the following two questions: (1) “In the period prior to the buyout, to what extent would you say that the following statements were true (on average) for the other members of your management team?” and, (2) “Looking at the situation today, to what extent would you say the following statements are true (on average) for the other members of your management team?” Following these two introductory questions, the eight statements, described in the following in more detail, were evaluated twice to assess hedonic, normative and extrinsic interest alignment. The difference in scores on each of these questions between the present and the time prior to the buyout were taken as measures of the change in indicators of interest alignment.

*Hedonic Interest Alignment (HIA)* was measured using the two following statements: “They feel/felt satisfied by their job” and “They enjoy(ed) what they are/were doing”. These items capture the essence of the hedonic frame of (*Lindenberg* (2001)) underlying hedonic interest alignment, according to which a task is performed for its own sake, as the activity is perceived as enjoyable and leads to satisfaction.

*Normative Interest Alignment (NIA)* was measured using four items, corresponding to the statements: (1) “They really feel/felt as if this company’s problems are/were their own”; (2) “This company has/had a great deal of personal meaning for them”; (3) Their behavior is/was guided by norms and values of the company”; and, (4) “They take/took pride in the success of their company”. Again, these items have been developed to capture the nature of the normative frame (*Lindenberg* (2001)) that underlies normative interest alignment.

*Extrinsic Interest Alignment (EIA)* was assessed using two items that capture extrinsic motivation, based on the goal of obtaining additional resources (*Brief and Aldag* (1977)) in either tangible or intangible form through the statements: (1) “Their behavior is/was guided by a desire to maximize shareholder value”; and (2) “Their behavior was guided by a desire for professional success”.

### 3.4 Controls

The 19 control variables consisted of dummies for the nine industry categories, the returns to the FTSE 100 stock market index during the time between the entry of the buyout and either the exit or the date of the survey response (“Mkt Return”), the debt-to-equity ratio in the first annual report after the buyout (“LEV1A”), the size of the deal measured as the natural logarithm of the amount of equity invested (“sizeIn”), a dummy indicating whether the deal was exited or not (“X\_NO”), an indicator of the degree of involvement of the equity investor in the management of the company measured on a 5-point fully anchored Likert scale ranging from “-2” (Hands-Off) to “+2” (Deeply involved) (“GP\_INVOL”) and five dummy variables that indicated whether events that change the resource base of the company occurred after the buyout or not: “REORGAO” for strategic reorganization; “LAYOFFO” for layoffs; “RESTRUCO” for organizational restructuring; “DIVESTO” for divestitures of individual sub-units and “ACQUIO” for Acquisition programmes.

This study’s aim is to assess the effect of *changes* in different components of interest alignment on firm performance, controlling for other factors that may influence actual or potential performance. The statistical method chosen has been ordinary least-squares (OLS) multivariate regression. The model used to test our arguments is specified as follows: (*See also Figure 2*).

$$\text{Firm Performance} = \alpha_0 + \beta_1 \text{Change in Extrinsic Interest Alignment} + \beta_2 \text{Change in Normative Interest Alignment} + \beta_3 \text{Change in Hedonic Interest Alignment} + \text{Controls} + \varepsilon$$

## 4 Results

### 4.1 Descriptive Statistics and Bivariate Correlation Analysis

Descriptive statistics for all variables used on the model are reported in *Table 2*. The results indicate that the average IRR of the 69 responses for which quantitative performance information has been available is 23%. It should also be acknowledged that on average, buyouts increased all three types of interest alignment, as the average

score on all eight items was highly positive. The bivariate correlation analysis (Pearson's correlation coefficient) of the main variables in our model (*Table 3*) provides some initial evidence that there is indeed a statistically significant relationship between changes in interest alignment and performance. One finds a significant and positive relationship between performance and (a) changes in hedonic ( $p < .05$ ) and (b) changes in extrinsic interest alignment ( $p < .1$ ). Interestingly, the three constructs for changes in hedonic, normative and extrinsic interest alignment correlate positively with one another (all three  $p < .05$ ). This finding contradicts arguments that an increase in extrinsic motivation "crowds-out" intrinsic types of motivation and will have to be discussed later.

#### *4.2 Multivariate Analysis*

*Table 4* presents the results of the multiple regression analyses. Model 0 constitutes the base-line specifications consisting of the control variables only, Model 1 adds the three explanatory variables for changes in extrinsic, normative and hedonic interest alignment (EIA, NIA and HIA). An interesting picture evolves from the results of our analysis of the hypothesized relationships. First, it is important to note that the three components of interest alignment significantly add to the explanatory power of the model (Adjusted  $R^2$  increases from 13,6% in Model 0 to 22,2% in Model 1; F-Test of the increase in  $R^2$  indicates significance at the 0,05 level). This supports the view that interest alignment does play an important role in determining firm performance. Second, we can take a look at our Hypotheses H1, H2 and H3, predicting a positive relationship between changes in each of the three sub-components (extrinsic, normative and hedonic) of interest alignment and performance. The analysis fails to provide support for the direct positive performance impact of both extrinsic and normative interest alignment, as stated in H1 and H2. This is particularly striking, as enhanced extrinsic motivation was one of the most prominent factors for value creation in buyouts according to the received literature (e.g. *Kaplan (1989); Singh (1990)*). With respect to changes in hedonic interest alignment, however, our results indicate a strongly positive and significant ( $p < 0.05$ ) impact on performance, in line with H3. This suggests that buyout success depends on how much the buyout contributes to greater overall job satisfaction of the managers of the target company.

#### *4.3 Robustness Checks*

As a robustness check, a test for inverted causality between performance and changes in interest alignment was carried out. In other words, an assessment was made whether the link between performance and changes in interest alignment is indeed causal, as specified in the theoretical model, *i.e.* changes in interest alignment *causing* changes in performance. This is especially important, as from a theoretical standpoint the opposite relationship (higher performance leading to increased interest alignment) is also plausible. This is especially true in the case of hedonic interest alignment, which is driven by job satisfaction and thus intuitively linked to success. With the available cross-sectional data, the best possible way of gaining insight into the causal direction of this relationship was to first run a model in which one component of interest alignment was the dependent variable, explained by controls and hypothesized antecedents (*Gottschalg and Zollo (2004)*), and then to add performance as an additional explanatory variable in a second stage of the nested models. The results of the three models with change in extrinsic, normative and hedonic interest alignment as dependent variables indicate that performance does indeed have a positive impact on hedonic interest alignment beyond the effect of its hypothesized antecedents. However, the influence of hedonic interest alignment on measures of performance was of greater magnitude and of higher statistical significance than the influence of performance on interest alignment in the alternative specifications. These results give us confidence in the hypothesized causal impact of interest alignment on performance, even though one cannot fully exclude the possibility of inverse causality with the available data. Only a longitudinal research design could shed additional light on this question and would be an interesting focus for future research efforts. As an additional robustness check we ran model with only one of the three explanatory variables at a time, rather than adding all three collectively. The results were not qualitatively different from those in Model 1. Also in the separate setting, only changes in hedonic interest alignment were significantly related to performance. Finally, we checked the variance inflation factor (VIF) for all of the variables for the estimated models. The maximum value of 3.3 is substantially below the rule of thumb cutoff of 10 used to indicate multicollinearity problems.

## **5 Discussion and Conclusion**

It was the objective of this study to empirically test some of the fundamental

tenants of interest alignment theory as proposed by *Gottschalg & Zollo (2004)*. On the most aggregate level, the results confirm the existence of an overall positive relationship between organizational interest alignment and firm performance. This supports the view that increased interest alignment can indeed serve as a tool to boost performance based on a better realization of a firm's potential performance as determined by assets, capabilities and market positions (*Figure 1*) (*Gottschalg & Zollo, 2004*).

Second, our analysis also provides detailed insight into the motivational mechanisms that underlie interest alignment. The evidence provided suggests that we may have to revise some of our prior convictions as to *how* interest alignment works. Based on existing theory, we expected a positive impact of all three components of interest alignment on organizational performance. However, our results point to hedonic interest alignment as the only significant performance determinant among the three. This suggests that the phenomenon of “loving” one's job that Amabile (*Amabile (1997); Amabile (2000)*) described as the driving force behind outstanding performance on specific tasks (creativity-related jobs, academia) may also be present at the organizational level. It seems as if the perception of a work environment as self-determined, competence enhancing (*Deci and Ryan (1985)*) works as an important determinant of firm performance. At the same time it is surprising, that extrinsic interest alignment, based on the motivation to work for tangible or intangible rewards, has no significant direct impact on performance. This is even more striking given that our empirical context, leveraged buyouts, have been frequently portrayed as archetypes for value creation based on enhanced extrinsic motivation (*Kaplan (1989)*). More generally, this finding calls into question a variety of measures commonly undertaken to influence behaviour through extrinsic motivation, such as monitoring and control regimes.

Finally, our findings shed light on the interaction effects between the different components of interest alignment. What we find is that on the organizational level different types of motivation seem to be mutually reinforcing in their influence on performance (*Table 3*). This is in disagreement with the conclusions of three decades of research and social psychology (*Deci and Koestner (1999); Deci and Koestner (1999)*), as we do not see any evidence of a possible “over justification effect”, *i.e.* a negative impact of an increase in extrinsic interest alignment on other types of interest alignment. This could be explained either by the fact that several types of motivational mechanisms can coexist on the organizational level, (while on an individual level one crowds out the



other), or that the individual preferences (of top managers) and task characteristics in the managerial context differ so radically from the typical experimental design of studies documenting the over justification effect (in psychology, pre-school children drawing pictures) that findings from the latter cannot be generalized to the former.

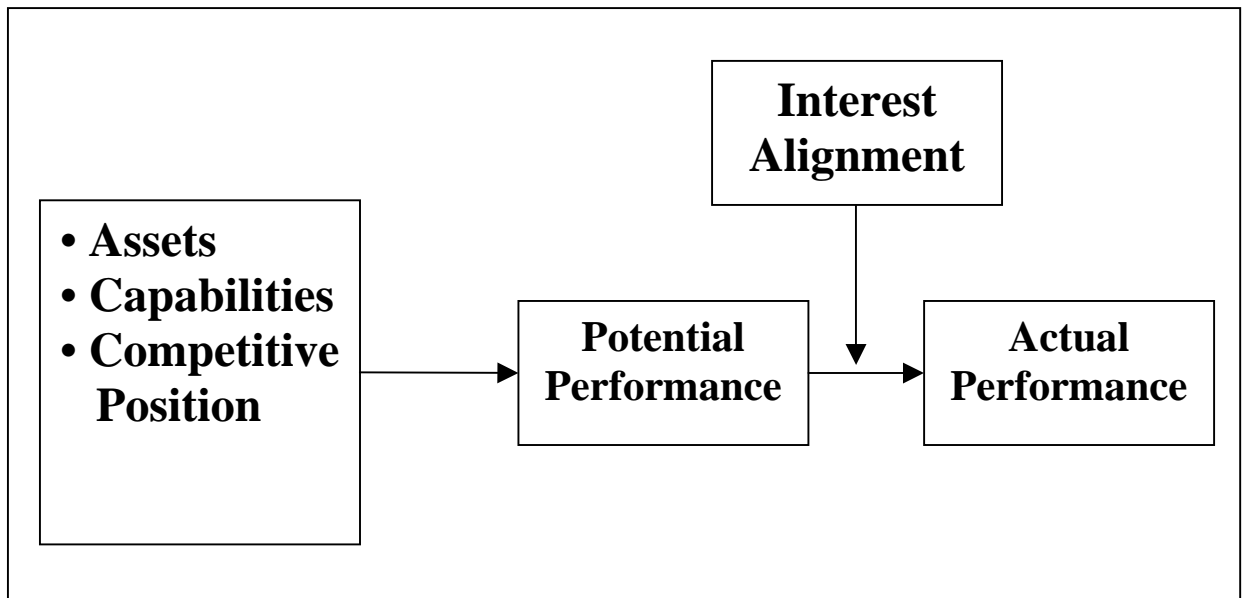
Having said this, it is important to also keep in mind that the results should be interpreted with care, since there are important limitations inherent in the design of our study that need to be considered before the findings can be generalized. First, the chosen empirical setting implies a number of particularities regarding antecedents and consequences of interest alignment. It is possible that some of our findings are idiosyncratic to the buyout situation. Second, the nature of the private equity industry with its tendency towards secrecy made survey-based data collection difficult and led to a relatively low response rate. In addition, the chosen one-respondent research design to assess aggregate managerial motivation is somewhat imperfect, as ideally motivation should be measured through multiple respondents. Finally, the study tests novel theory using novel measures and thus did not have the luxury of well-established and validated instruments in measuring the key constructs.

Future research in this area should verify whether and under what conditions the findings presented here can be observed in different empirical settings. It would be particularly interesting to conduct a longitudinal analysis to gain additional insight into the directionality of the performance-interest alignment relationship, and to gather data from multiple respondents across multiple hierarchical layers within one large organization to verify how individual motivation aggregates to organizational interest alignment. This would also allow us to better understand motivational “cascading effects”, *i.e.* whether interest alignment on one hierarchical level is influenced by, or influences interest alignment on another hierarchical level.

Overall, the results of our analyses point to the need to consider more explicitly the role of motivational mechanisms in our theories. The important impact of motivation at the organizational level has been increasingly recognized in the management discourse (*Makadok (2003); Coff (1997); Coff (1999); Castanias and Helfat (1991); Gottschalg and Zollo (2004)*). It is now time to further open up the motivation black-box. This can only be achieved if we incorporate motivation in theories in a way that does justice to the multi-dimensional and interrelated nature of the construct. The development of a comprehensive theory of firm performance and competitive advantage requires a detailed understanding of how motivation works at the

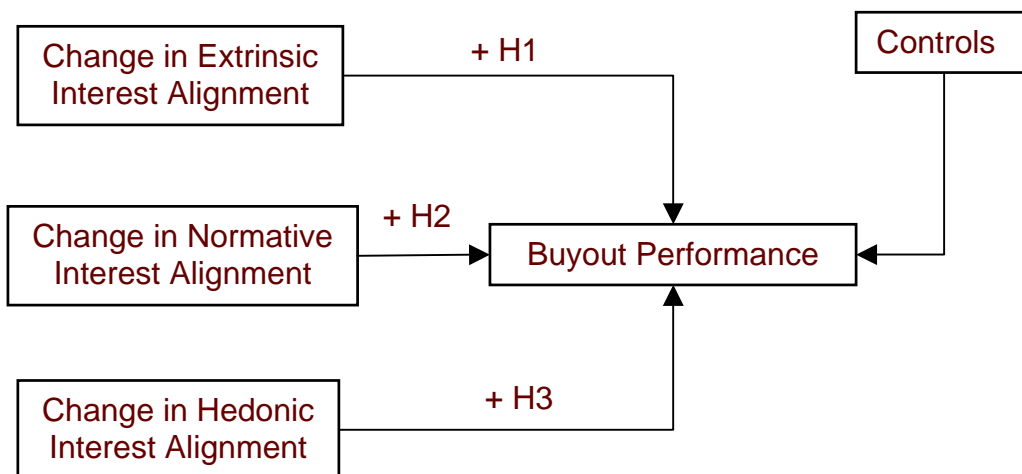
organizational level that can only be gained through an integration of existing motivation theories in both social psychology and economics. While the analysis presented in this paper can be but a first step towards this goal, it may open up the door to a rich and fruitful area for future inquiry.

**FIGURE 1: The Link between Potential and Actual Firm Performance**



A firm’s assets and capabilities and its competitive position only determine potential firm performance. Employee motivation through Interest Alignment has a crucial impact on the degree to which a firm is able to realize this potential and thus on actual firm performance.

**FIGURE 2: Three Components of Interest Alignment Determine Buyout Performance**



**TABLE 1: Drivers of Motivation**

Form of Motivation	What drives motivation?	What are the relevant characteristics of behavior?	What moderates how motivated an individual will be?
Extrinsic Motivation	The desire to obtain additional resources from the outside (Extrinsic Work Rewards)	The degree to which the additional resources will be received as a reward for such behavior	The utility of Extrinsic Work Rewards to the individual
Hedonic Intrinsic Motivation	The desire to engage in enjoyable, self-determined and competency-enhancing activity	(Perceived) characteristics of the task and the task context	The individual utility derived from being engaged in an enjoyable, self-determined and competency-enhancing activity
Normative Intrinsic Motivation	The desire to comply with organizational norms and values	The degree of congruence between the behavior and organizational Norms and Values	The identification of the individual with the organization, <i>i.e.</i> importance of compliance with organizational Norms and Values to the individual

Source: *Gottschalg & Zollo (2004)*

**TABLE 2: DESCRIPTIVE STATISTICS**

	Minimum	Maximum	Mean	Std. Deviation
IRR	- 0,5	1,0	0,23	0,38
NIA	- 5,0	16,0	6,86	4,10
HIA	- 4,0	8,0	3,61	2,69
EIA	- 3,0	6,0	1,70	1,54
LEASING	-	1,0	0,14	0,30
OTHMANUF	-	1,0	0,10	0,26
MECHANIC	-	1,0	0,05	0,17
WHOLESALE	-	1,0	0,02	0,12
PRINTING	-	1,0	0,09	0,26
ELECTRIC	-	1,0	0,09	0,26
RETAIL	-	1,0	0,02	0,12
BANKING	-	1,0	0,04	0,17
SOFTWARE	-	1,0	0,02	0,12
Mkt Return	-8,6%	23,1%	-1,0%	0,05
LEV1A	- 1,0	73,9	10,15	9,17
X_NO	-	1,0	0,69	0,41
SizeIn	-	6,2	2,65	1,40
REORGAO	-	1,0	0,52	0,50
LAYOFFO	-	1,0	0,28	0,45
GP_RELAT	- 2,0	2,0	0,57	1,04
RESTRUCO	-	1,0	0,62	0,49
DIVESTO	-	1,0	0,19	0,39
ACQUIO	-	1,0	0,30	0,46

N=69

**TABLE 3: BIVARIATE CORRELATIONS (PEARSON)**

	IRR	NIA	HIA
NIA	0,16		
HIA	<b>0,31 *</b>	<b>0,73 **</b>	
EIA	0,21 +	<b>0,32 **</b>	<b>0,26 *</b>

+ significant at the 0,1 level (2-tailed).

\* significant at the 0,05 level (2-tailed).

\*\* significant at the 0,01 level (2-tailed).

N=69

**TABLE 4: MULTIVARIATE REGRESSION ANALYSIS**

<b>Model</b>	<b>0</b>	<b>1</b>
	Std. Beta	Std. Beta
Industry Dummies	Yes	Yes
Mkt Return	<b>0,26 +</b>	0,22
LEV1A	-0,13	-0,15
X_NO	-0,04	-0,11
SizeIn	-0,04	-0,07
GP_INVOL	0,04	0,02
REORGAO	0,01	-0,12
LAYOFFO	-0,09	-0,05
RESTRUCO	-0,05	-0,05
DIVESTO	0,12	0,13
ACQUIO	-0,05	-0,07
EIA		0,20
NIA		-0,29
HIA		<b>0,43 *</b>
Model Sig	N/S	0,05
R <sup>2</sup>	0,377	0,474
Adj. R <sup>2</sup>	0,136	0,222
Sig. F Change	N/A	0,05

\* significant at the 0.05 level

.+ significant at the 0.1 level .

DV: Gross Buyout IRR

N= 69

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