

Employee motivation profile for job enrichment

Adrian Tobias Teuber, MBA, B.Eng. (a.teuber@gmx.net)

Professional School of Business and Technology, University of Applied Sciences Kempten, Germany

Summary

- Research questions:** The aim of this article is the prediction of the employee's willingness to take over enriched tasks. Which characteristics of intrinsic or achievement motivation lead to which willingness to take over new and additional tasks, and what kind of tasks?
- Methods:** The dimensions of intrinsic motivation, achievement motivation and job enrichment, as well as the corresponding sub-dimensions were defined to measure the employee's current motivation profile and its level of demand for enriched tasks. The data were collected with an online survey within a German machinery company (N = 66). Afterwards, the sample and the questionnaire were verified and with the collected data, correlation and linear regression analyses were performed.
- Results:** The idea to derive the demand for job enrichment activities from the current intrinsic or achievement motivation profile was not fully supported. Whereas, additional analyses within the job enrichment dimension showed highly significant and positive correlations among all job enrichment sub-dimensions.
- Structure of the article:** Introduction; Literature Review; Research questions & methods; Empirical results; Conclusions; About the author; Bibliography

Introduction

The need to increase productivity and efficiency, to keep up with the market, translates into increasingly simplified work tasks. On the other hand, the motivation needs of employees are quite the opposite, because the concentration of repetitive tasks demotivates them. Therefore, it is necessary to enhance work tasks so that the scope of the individual's activities increases. In addition, this increases the flexibility of the company through the variable use of its personnel. However, this means that employees have to take on new and additional tasks and, of course, that individuals need to be able and want to perform enriched activities.

If new work tasks are assigned to an employee, there is a risk that the individual feels overwhelmed, which reduces its work performance or that the person may feel bored and unappreciated due to the simple tasks. Both possibilities probably lead to a reduction of motivation and a negative work output, whereas the intention of the job enrichment activity is usually planned to increase the motivation, work performance and the profitability of the company. In order to reach the aim of the company's profitability gain, it would be essential to obtain a simple way to examine the employee's willingness to take over enriched tasks. With the information of the person's desire for job enrichment, each employee could get specific enriched tasks where the person feels confident and comfortable, and the employee could develop consistently and consequently through job enrichment activities.

Therefore, this article investigates if a correlation exists between the current motivation of an individual and its willingness to take over enriched tasks. Consequently, it is assumed that through the examination of the current motivation of a person, the will to take over enriched tasks can be predicted. More precisely, it is expected that the intrinsic motivation profile or achievement motivation profile shows the employee's willingness to take over specific characteristics of enriched tasks.

Literature Review

Motivation

Motivation cannot be directly observed (Schunk, Pintrich, & Meece, 2010) but it explains human behavior regarding direction, intensity and endurance (Urhahne, 2008). Moreover, motivation is person related (Deci & Ryan, 1980, 2000; Maslow, 1943; McClelland, 1965; Plant & Ryan, 1985; Thomas & Velthouse, 1990), so that everyone has their own

motivation profile. If someone is motivated to do something, it means he or she is moved to do something (Ryan & Deci, 2000a). Furthermore, Ryan and Deci (2000a) describe that an individual who feels no inspiration or impetus to act is characterized as unmotivated, and an energized or activated person is seen as motivated. Thus, the question is how motivated or moved is an individual to do particular tasks and what are the factors for motivation and task.

Dimensions of motivation

Herzberg, Mausner, and Snyderman (1959) divided motivation in intrinsic and extrinsic factor. The intrinsic factor or motivators, are self-motivating, can hardly be controlled from external influences and are more satisfying (Herzberg et al., 1959). The first acknowledgment of intrinsic motivation was done by White (1959) during an animal study. He called it intrinsic peculiarities, intrinsic need and intrinsic motive, and spoke of the urge as motivation (White, 1959). DeCharms (1968) described later that personally initiated actions can have an internal or external perceived locus of causality. The hygiene factors, or extrinsic factor, depend on the environment, where the individual has barely influence, and they are dissatisfying if they are not available (Herzberg et al., 1959). The study from Bassett-Jones and Lloyd (2005) showed that Herzberg et al. (1959) two-factor theory is still valid. Via a survey about idea contribution with 3,200 responses, they figured out that intrinsic satisfaction is more important than the extrinsic influences, e.g. money and recognition (Bassett-Jones & Lloyd, 2005). Sherrod, Hage, Halpern, and Moore (1977) also pointed out that intrinsically motivated people are more task motivated and perform better than persons who are only extrinsic motivated by external forces. Besides, people that are intrinsically motivated to do something do not require external rewards; their impetus comes from their definition of who they are and what interests them (Deci & Ryan, 2010). Intrinsic motivation means doing something because of inherent interest, enjoyment and contentment (Ryan & Deci, 2000a). This shows that for sustainable satisfaction, performance and motivation, the focus should be set on intrinsic motivation. In addition, Herzberg et al. (1959) describe that the employees become unmotivated if the hygiene factors are not present, whereas the motivators encourage the individuals to work harder. Intrinsically motivated behaviors out of interest, enjoyment and the

need for competence and autonomy, are the major forces for self-determination (Ryan & Deci, 2000a).

The self-determination theory (SDT) of Deci and Ryan (1980, 1985, 2000) also divides motivation into intrinsic and extrinsic motivation plus the additional dimension of amotivation (Deci & Ryan, 1985, 2000; Ryan & Deci, 2000b). The concept of these three core dimensions distinguishes motivation from an ideal impetus to do something up to the very opposite. If someone wants to do something because of the task itself, the person is intrinsically motivated and recognizes value, meaning, and/or utility in the activity. On the contrary, reasons for amotivation are that people do not value the activity (Ryan, 1995), they do not feel able to do it (Bandura, 1986; Deci & Ryan, 1985) or that negative feedback decreased their perceived competence (Deci & Ryan, 1985).

Intrinsic motivation is the most powerful source of motivation (Bassett-Jones & Lloyd, 2005; DeCharms, 1968; Herzberg et al., 1959; Ryan & Deci, 2000a; Sherrod et al., 1977), as persons do something in the absence of operationally separable consequences (Deci & Ryan, 2000). Moreover, external rewards like money to steer behavior, damages or even replaces self-developed intrinsic motivation (Frey, 1994). Chalofsky and Krishna (2009) developed a deeper level of intrinsic motivation, called meaningful work, because of the ineffectiveness of extrinsic motivation regarding employee engagement and commitment. Furthermore, a large number of research and studies have confirmed that intrinsic motivation, compared to extrinsic motivation, lead to more engagement (Baard, Deci, & Ryan, 2004; Ryan & Frederick, 1997; Schaufeli & Bakker, 2004; Zhang & Bartol, 2010). The meaningfulness of work reaches a deeper level of intrinsic motivation (Chalofsky & Krishna, 2009), and commitment leads to higher efforts (Porter, Steers, Mowday, & Boulian, 1974) and willingness to do the work. Due to this and the above mentioned reasons, in terms of intrinsic and extrinsic motivation and amotivation, the focus is on intrinsic motivation, as the central question is: What engages people to take over what kind of enriched tasks by themselves?

Dimensions of intrinsic motivation

Based on the needs theory (Murray, 1938) and needs-hierarchy theory (Maslow, 1943), McGregor (1960) investigated and described the connection between personal needs, work attitudes and motivation

(Baard et al., 2004). The first researchers (Deci, 1971, 1972b, 1972a; Kruglanski, Friedman, & Zeevi, 1971; Lepper, Greene, & Nisbett, 1973) began to examine the concept of intrinsic motivation in the early 1970s (Deci & Ryan, 2000). Due to the complexity of motivation and to determine intrinsic motivation, sub-dimensions have been conceptualized. Intrinsic motivation or the sub-dimensions of intrinsic motivation are about the satisfaction of the individual psychological needs (Deci, 1975; Deci & Ryan, 1980; Ryan, 1995) or the striving of a person to satisfy its personal needs. The motivational factors are the same for all, but the manifestation is different (Desjardins & Baker, 2013).

To describe the human need for relationship with other people, McClelland (1961) used the term affiliation, Murray (1938) the need for affiliation, Maslow (1943, 1954) described it as belongingness, Alderfer (1972) as relatedness and Deci and Ryan (1985) called it interpersonal relatedness. In the following, the personal need to be related with other people is named affiliation, referring to McClelland (1961). Persons with a high need for affiliation like trustful relationships to work and interact with others (McClelland, 1961) and feel the desire to relate with other people (Deci & Ryan, 2000).

Next to affiliation is autonomy, another factor of intrinsic motivation. McClelland (1961) described autonomy as the need for independence and power, the need to control other persons and the environment. In the same way Murray (1938) described it as the need for power. Herzberg (1966) defined it as responsibility, and Deci and Ryan (1980) named it autonomy or choice. Langfred and Moyer (2004) developed a more differentiated concept and incorporated different mechanisms, to show the effects of how autonomy can increase or decrease work performance. They mentioned motivational, informational and structural mechanisms that can have a positive or negative impact on work performance (Langfred & Moyer, 2004). In addition, people who perceive that they are making their own decisions perform better (Sherrod et al., 1977) and more choices encourage self-initiation and intrinsic motivation (Gagné & Deci, 2005). Autonomy and the resulting perceived control is defined as a crucial predictor for self-efficacy (Bandura, 1986; Bandura & Wood, 1989), and a positive relationship has also been found between the empowerment of people and their self-efficacy (Ahearne, Mathieu, & Rapp, 2005). Through empowerment, the employees get more autonomy, which in turn increases intrinsic motivation

by enhancement of the sub-dimensions autonomy and competence. If people have the opportunity to choose, they will grow and foster their self-efficacy with increased autonomy, but if the given autonomy exceeds the needs or capacity of the individual, it can be overwhelming and have a negative effect.

Competence or growth is a further sub-dimension of intrinsic motivation. In this article the sub-dimension is defined as growth according to Maslow (1954) and Alderfer (1972). White (1959) called it, in his concept of competence, as effectance motivation, as well as Harter (1978) later in her description of intrinsic motivation. Herzberg (1966) mentioned advancement and growth, and Deci and Ryan (1980) competence or perceived competence. Growth that is forced by others is not intrinsically motivating, it must arise within oneself to be intrinsically rewarding (Deci & Ryan, 1980), as all other intrinsic sub-dimensions. However, everyone has the need for self-actualization or the drive to develop oneself to the highest possible level (Rogers, 1961), but it needs to be considered that the development of a person's current needs also change.

Another factor of intrinsic motivation is the sub-dimension value or purpose. People try to live a self-defined life in the concept of self-actualization (Maslow, 1954), therefore, they plan and carry out their actions in a way that the result is meaningful and has a purpose for them. If the employees have the attitude of seeing its work tasks as valuable, the motivation of the individuals to fulfill the task will be to satisfy its desires and to create meaning for themselves. Frankl (1959) described the same importance for meaning as a strong driver of people in his personal theory. Based on this theory he developed the logo therapy (Frankl, 1959). Vroom (1964) assumed in his concept that the behavior is driven and purpose is gained to maximize pleasure and to minimize pain. Furthermore, Porter and Lawler (1968) mentioned it as intrinsic reward, and Latham and Locke (1991) as value. To the concepts of Vroom (1964), Porter and Lawler (1968), and Latham and Locke (1991) needs to be added, that they have to be related to a task to create and achieve motivation. On the other hand, people anticipate and plan the outcomes of their actions according to their expected value (Bandura, 2010). If people doubt that they can do an activity, they will not pursue the task, even if the outcome guaranteed value (Bandura, 2010).

Acknowledgement is also a source of intrinsic motivation, but with an extrinsic component. People

strive for acknowledgement to feel pleased, loved and to enhance their positive self-concept (Rogers, 1961). Persons who are behaving well have the need to get positive feedback or can feel less worth if they do not get appreciation (Rogers, 1961). In addition, Maslow (1954) used in his concept esteem and ego, and Herzberg (1966) stated it as recognition. It is an important aspect for leadership (Desjardins & Baker, 2013), but in this article the core question is what characteristics of internal needs lead to which willingness to take over what form of enriched tasks. Thus, the sub-dimension acknowledgement is not considered.

In summary, the understanding of the individual's internal psychological needs helps to allocate tasks to a person and through the task to trigger the employee's desire to satisfy its needs. Thus, it is necessary that the individual needs match to the job and task requirements.

Achievement motivation

Besides the defined factors of intrinsic motivation, achievement motivation is also considered to examine the influence on the will to take over additional and new tasks.

Next to the already mentioned need for power and need for affiliation in the intrinsic motivation section, Murray (1938) defined, along with some other factors, the psychological need for achievement. McClelland, Atkinson, Clark, and Lowell (1953), Atkinson (1957, 1964) and McClelland (1961) improved and developed the concept of Murray (1938). In their established concept of achievement motivation, they assumed that persons with the need for achievement want to exceed, either past performances or surpass the achievements of others (McClelland et al., 1953), as competence is a crucial part of achievement motivation (Wigfield & Cambria, 2010). Their concept is still one of the best known and used model to measure people's motives (Brunstein & Heckhausen, 2018). McClelland et al. (1953) defined achievement motivation as behavior that contains competition and the standard of excellence, and Heckhausen (1974) stated that the internal standard of excellence is used to verify its own actions and to compare the result with one's competence (Brunstein & Heckhausen, 2018). Herzberg (1966) also integrated the need for achievement in this concept, as the individuals experience physiological growth through achievement. Furthermore, Herzberg (1966) stated that the characteristics of each person are unique.

The personal state of achievement motivation, is the result of the emotional conflict between the desire for success and the prevention of failure (Covington, 2000). Success-oriented people strive for excellence, anticipate pride and are motivated to surpass others (Covington, 2000) or to exceed their own performance (Brunstein & Heckhausen, 2018). In contrary, failure-oriented persons believe that they cannot master a situation or task, or that they are likely to fail, and they are afraid to experience shame (Covington, 2000).

The existing concepts of achievement motivation can be divided into two directions (Covington, 2000), more internal or more external impetus. The more internal concepts, with the view of motivation as a drive and based on the internal state, needs and the impetus towards an action, and the second, considers psychological motives as the need for relationships, power and appreciation, which are more driven by external conditions (Covington, 2000; Guttschick, 2015). Indeed, there is always an external component, because everyone has interactions with its environment, and not each factor or sub-dimension can be observed singularly.

Based on the concept of McClelland et al. (1953), Guttschick (2015) derived and stated the following four sub-dimensions of achievement motivation. The first and the second facet of achievement motivation are performance demand and performance standard (Guttschick, 2015) and they refer to the need for achievement and competition with the standard of excellence (McClelland et al., 1953). The sub-dimension performance demand considers how much effort the individual invests to achieve its goal and what level of performance the person seeks. The higher the need for achievement, the more effort is invested in fulfilling the task perfectly. The factor performance standard, on the other hand, refers to the need of a person to compare and exceed its achievements with others. The drive for excellence of a person is based on the need to surpass others' performances and achievements for its satisfaction. The third factor of achievement motivation is the anticipation of success (Guttschick, 2015), it reflects the hope for success or fear of failure (McClelland et al., 1953), and investigates the confidence level of an individual. People with a high level in anticipation of success, are self-confided to face a challenge successfully and are not afraid of failure. The last facet, of Guttschick's (2015) developed questionnaire, is pride

in achievement and correlates with pride in success or shame in failure (McClelland et al., 1953). The sub-dimension pride in achievement examines the need for pride in success or the dissatisfaction when a task is not mastered. People with a high need of achievement motivation strive and need pride of performance.

Referring to the primary intent of this paper, to examine the will of employees to take over enriched tasks or the appropriate skills to take over unknown and additional tasks, the facets of achievement motivation are, next to the factors of intrinsic motivation, crucial to unveil the personal states and attitude.

Job enrichment

The approaches to design jobs are job rotation, job enlargement and job enrichment (Bennett, 2017) to encourage and increase the performance of employees.

The concept of job rotation is to increase the number of different working tasks without increasing the complexity (Daft, 2011), where the people are moved between simplified jobs (Parker, Wall, & Cordery, 2001) through the rotation between workplaces to reach varied working tasks. At first, the satisfaction of the employees increases, but it soon fades (Griffin, 2008).

In the case of job enlargement a number of tasks are bundled to one enlarged job (Daft, 2011) with more tasks for the workers to perform (Griffin, 2008), where the employee gets additional work tasks which match to his current field of work. Job enlargement is the horizontal expansion of work with a wider range of tasks (Parker, 1998; Parker et al., 2001), and it includes job rotation and improves the work conditions and other social relationships (Norton, Massengill, & Schneider, 1979). Nevertheless, job enlargement often also has positive effects at the beginning, and after a while, the work becomes tedious for the employees (Griffin, 2008).

Walker (1950) and other researchers (Davis, 1957; Friedmann, 1961; Herzberg et al., 1959; Walker, 1950; Walker & Guest, 1952) found that simple, repetitive and unchallenging jobs lead to dissatisfaction, increased absenteeism and turnover, and management problems of those employees (Hackman & Lawler, 1971), due to missing motivation. Moreover, the idea behind work simplification was to increase profitability, which was not achieved due to the human problems associated with simplified and repetitive work tasks (Hackman & Lawler, 1971). Maslow (1954) described in his

hierarchy of needs theory that self-actualization is the pure source of motivation and Herzberg (1968) defined job enrichment as a meaningful change in job activities through additional responsibilities, growth and personal achievements (Norton et al., 1979). The above mentioned two-factor theory from Herzberg et al. (1959) is a further important base of job enrichment. It differentiates between the hygiene factors, which are dissatisfying if they are not available, and the motivators, which create satisfaction and motivation (Herzberg et al., 1959). Furthermore, the motivators are intrinsic to the work and define the interest in the task, and the hygiene factors are extrinsic to the work and show the work conditions (Parker et al., 2001). Thus, the hygiene factors can only reduce the dissatisfaction and create an enjoyable work environment for the employee, which does not mean that the worker is motivated by its work tasks. Motivation can only be reached if the employee see value in its work tasks by its own. Consequently, the motivators enhance employee motivation if the work task provides opportunities for responsibility, autonomy, achievement and growth (Hackman & Lawler, 1971; Herzberg et al., 1959; Herzberg, 1966).

The comprehensive approach to increase motivation (Griffin, 2008), responsibility, achievement and personal growth (Daft, 2011) is job enrichment. Unlike job enlargement, the employee gets new work tasks, responsibilities and autonomy, through the control of the necessary resources, how to perform the work and definition of the work pace (Daft, 2011). The central idea of job enrichment is the enhancing of personal achievement and growth, through more challenge, responsibility (Parker et al., 2001) and autonomy. Enriched jobs are jobs with expanded content and include enhanced opportunities for responsibility, meaning at work and information about the work result (Oldham & Baer, 2014). As job enlargement is the horizontal work expansion (Parker, 1998; Parker et al., 2001), where the employees do more tasks to finish the product (Daft, 2011; Griffin, 2008), job enrichment is the expansion of the job in a vertical direction and involve and increase the responsibility through decision making (Hackman & Oldham, 1976; Parker, 1998). Vertical expansion comprises that the employee gets additional responsibility, authority and thus more control over its work, through the opportunity to set schedules, define the work procedures and decide how to verify the work output (Oldham & Baer, 2014).

Consequently, enriched jobs create self-actualization opportunities (Bennett, 2017) which is the highest source of motivation as humans try to live in a self-defined way (Maslow, 1954) and people have the need to develop themselves to the highest possible level (Rogers, 1961). Furthermore, Parker (1998) showed in her study that job enrichment creates self-efficacy and self-esteem, and that it is more important than job enlargement, to build autonomy and the feeling of control for self-development.

Hackman and Oldham (1976) superseded the two-factor theory of Herzberg et al. (1959) with their job characteristics model (JCM) (Parker et al., 2001). They suggested in their JCM five core job characteristics which are aligned to three critical psychological states, as shown in figure 1, in their job characteristics model of work motivation (Hackman & Oldham, 1974, 1975, 1976).

Figure 1

The job characteristics model of work motivation (Hackman & Oldham, 1974, 1975, 1976)

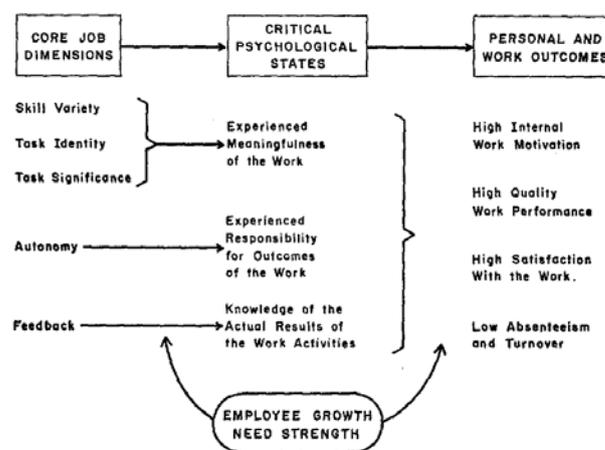


Figure 1 depicts that the job characteristics skill variety, task identity and task significance combine the psychological state of the experience and meaningfulness of work (Hackman & Oldham, 1975). The term skill variety describes the job regarding the complexity and variety of the activities, and the extent to which an individual uses different skills to complete the task (Parker, 2014; Whittington, Meskelis, Asare, & Beldona, 2017). Task identity defines the degree to which amount the employee has the possibility to complete the entire task, from beginning to end (Parker, 2014; Whittington et al., 2017) giving the individual the possibility to see its contribution to the organization and

the end result of the work task (Whittington et al., 2017). Task significance refers to the meaningfulness of the work task, and it is high if the employee's effort has an important impact on other people (Parker, 2014) within or outside the organization (Whittington et al., 2017). The second psychological state is defined as the experienced responsibility for work outcome and it increases if the work task is high in job autonomy; also the third psychological state knowledge of results grows if the job characteristics feedback is given (Hackman & Oldham, 1975). The facet of autonomy, regarding job characteristics, describes the influence, control and decision that an individual has on when and how to do its daily work (Parker, 2014). Job autonomy is high when the employee has the feeling that the result of his work is because of personal effort, control (Whittington et al., 2017) and decision (Parker, 2014). Another sub-dimension of job enrichment is feedback. The job characteristics feedback is divided into feedback from the job itself, where the person gets clear information about its effectiveness and performance from the result of the work task itself, and feedback from agents, which means the employee receives it from its superiors or coworkers (Hackman & Oldham, 1975). Due to the question of this article, which is the intrinsic will to take over enriched tasks, the sub-dimension feedback is based on the feedback from the job itself, and not on the leadership or influence of different superiors.

Furthermore, Hackman and Oldham (1974) defined the sub-dimension dealing with others to describe the requirement of the job on to what level the employees have to work closely with people inside or outside the organization.

Turner and Lawrence (1965), and Hulin and Blood (1968) came to the conclusion that not everyone has the same need to take over challenging tasks. Therefore, Hackman and Oldham (1974, 1975, 1976) integrated the employee growth need strength, which describes how the employees value development opportunities for growth or knowledge (Oldham & Hackman, 2010). Ultimately, the general idea of Hackman and Oldham (1974, 1975, 1976) is that if the sub-dimensions of job enrichment are satisfied, then the personal and work outcome of high internal work motivation, the high quality work performance, the high satisfaction with the work, and the low absenteeism and turnover are reached.

As the individual preferences and the job requirements are different, the idea of this article is to align the individual motivational states with the appropriate tasks. This also means that the job design needs to be adjusted

for a meaningful work experience (Hackman, Oldham, Janson, & Purdy, 1975) and the job profile needs to be compared with the individual needs. The above described six facets of the job characteristics model from Hackman and Oldham (1976), namely skill variety, task identity, task significance, autonomy, feedback from the job itself, and dealing with others, the individual preferences referring to job enrichment can be examined.

Research Questions & Methods

As not everyone responds favorably to challenging tasks (Hackman & Oldham, 1976; Hulin & Blood, 1968; Turner & Lawrence, 1965), the idea of this article is to examine which motivational profile leads to which willingness to take over enriched tasks. The environmental conditions are unattended because employees have usually no or very few influences on external impacts. Based on the three determined dimensions, intrinsic motivation and achievement motivation, as the current motivational state, and job enrichment, as the will to take over enriched tasks, the following hypotheses are formulated:

Hypothesis 1: *The sub-dimensions of intrinsic motivation are related to the sub-dimensions of job enrichment, to predict the will to take over enriched tasks.*

Hypothesis 2: *The sub-dimensions of achievement motivation are related to the sub-dimensions of job enrichment, to predict the will to take over enriched tasks.*

Methodology

For the collection of data, a quantitative research approach, in the form of an online survey is used to document the individual motivation profile and the willingness to take over enriched tasks.

Intrinsic motivation questionnaire

For the development of the intrinsic motivation questionnaire, the intrinsic motivation inventory (IMI) from Ryan (1982), Ryan, Mims, and Koestner (1983), and Plant and Ryan (1985) is used. The IMI is a flexible measurement tool to document people's level of intrinsic motivation and comprises the assessment of the underlying facets of intrinsic motivation (McAuley, Duncan, & Tammen, 1989). The sub-dimension of the IMI belongs to the facets of the intrinsic motivation dimension, these are perceived competence and growth, perceived choice and autonomy, value/usefulness and value, and relatedness and affiliation. The mentioned variables effort/importance and pressure/tension of the

IMI are not used. Additionally, interest/enjoyment is the main predictor of intrinsic motivation (Robinson et al., 2012) which summarize all other sub-dimensions. The IMI defines that the sub-dimensions and questions can be chosen as needed for the research question.

For each sub-dimension four questions or statements are selected. The four items are used to reach an average result for each variable, for an analytical confirmation of the items within one factor and to have the possibility to skip one item if necessary, after the reliability evaluation. Furthermore, some items were reversed to ensure the attention of the participants. The item assignment and item order of the sub-dimensions, within the intrinsic motivation dimension, is shown in table 1.

Achievement motivation questionnaire

To measure achievement motivation, Guttschick (2015) developed an online self-assessment test called LEIMO (Leistungsmotivationstests – achievement motivation test). The online self-assessment test from Guttschick (2015) is founded on the theory of McClelland et al. (1953). The survey differentiates achievement motivation into four sub-dimension: performance demand, performance standard, anticipation of success and pride in achievement (Guttschick, 2015). For the measurement of the employees' achievement motivation

four questions or statements from each facet are selected, except for the variable pride in achievement, because Guttschick (2015) developed only the selected three statements. Similar to the development of the intrinsic motivation questionnaire, the four questions or statements give the opportunity to delete an item if necessary after the reliability verification. Similarly, some items are reversed to verify the attention of the participants during the survey response. The decoding of the achievement motivation questionnaire is also depicted in table 1.

Job enrichment questionnaire

In contradiction to the dimensions of intrinsic motivation and achievement motivation, which are focused on the current motivational state, the questions and statements of the job enrichment questionnaire request the personal will and desire of the employee to take over future tasks with different characteristics.

The job enrichment questionnaire is based on the short form of the job diagnostic survey (JDS) from Hackman and Oldham (1974). The JDS was developed to measure the individual's perception about its job (Hackman & Oldham, 1974). Hackman and Oldham (1974) designed two reliable versions of the JDS. The standard version takes around 25 minutes to complete and the

Table 1

Questionnaire overview: Dimensions, sub-dimensions and items

Dimension		
Sub-dimension	Abbreviation	Item
Intrinsic motivation		
Interest	IM_Interest	IM_4, IM_10, IM_13 (R), IM_17
Growth	IM_Growth	IM_2, IM_12, IM_14
Autonomy	IM_Autonomy	IM_3, IM_7 (R), IM_11 (R)
Value	IM_Value	IM_5, IM_8, IM_16, IM_18
Affiliation	IM_Affiliation	IM_1, IM_6 (R), IM_9 (R), IM_15
Achievement motivation		
Performance demand	AM_Demand	AM_6, AM_8, AM_11
Performance standard	AM_Standard	AM_1, AM_3 (R), AM_7 (R), AM_10
Anticipation of success	AM_Success	AM_2, AM_4, AM_12 (R)
Pride in achievement	AM_Pride	AM_5, AM_9, AM_13
Job enrichment		
Skill variety	JE_Variety	JE_6, JE_11
Task identity	JE_Identity	JE_3, JE_8
Task significance	JE_Significance	JE_4, JE_10
Autonomy	JE_Autonomy	JE_1, JE_9
Feedback from the job	JE_JobFeedback	JE_5, JE_12
Dealing with others	JE_Others	JE_2, JE_7

short version approximately 10 minutes (Hackman & Oldham, 1974). For this questionnaire, the short version was used and consists of three central parts. The first central part is called job dimension and refers to the factors skill variety, task identity, task significance, autonomy, feedback from the job itself and dealing with others, whereas the facet feedback from agents is excluded because of the external component. The second central part of the JDS is affective responses to the job and the third central part is individual growth need strength. Both are not used within this survey.

To follow the research question, the items of the defined sub-dimensions are adjusted because in this article the intent is focused on the desire for enriched future tasks. The questions and statements are modified to begin with the same statement that formulate the need to take over new and additional activities. For the job enrichment questionnaire two items per dimension are used because the third statement is only the negative formulation of one of the two positive constructions. Furthermore, the dimension of job enrichment is solely designed with positive items. The connection between the sub-dimensions and variable names of the job enrichment questionnaire is shown in table 1.

General questionnaire

The dimension of intrinsic motivation is used as the first part because of its simplicity. The part of achievement motivation follows as the second part of the combined survey. This one has more obstacles for the individuals because they need to reflect on their behavior. The job enrichment dimension is the third part of the survey because the items show the questionnaire's intent to examine the will of the individuals to take over enriched tasks and the questions are more complex. Finally, the sample descriptive questions are requested and it is asked for the name of the department and the duration of employment. The gender is not requested because almost the entire sample group consists of men. Within the three questionnaires, the single items of each sub-dimension are randomly distributed.

The complete questionnaire is introduced with the information that the survey is applied to collect the individuals' perception of their work tasks. The main intention to examine the will of the individuals to take over enriched tasks is not mentioned in the first two parts because the participants should only focus on their current attitude and behavior.

The items are designed to respond on a seven point Likert scale based on the IMI from Ryan (1982) and the JDS from Hackman and Oldham (1974). Consequently,

the seven point Likert scale is also used for the LEIMO from Guttischick (2015). For the scale definition, the Likert scale is marked on both ends, whereas one is defined as strongly disagree and seven as strongly agree.

After the construction of the questionnaire, an anonymous online survey was created and the invitation link to participate in the survey was sent to the target group via e-mail.

Sample definition

The sample group to participate in the questionnaire consists of the employees of a mid-sized and family-owned machinery company in south Germany. It consists of engineers of the departments of electrical and mechanical engineering, project management, technical sales and sales, without a leadership position. Gender is not requested since the questionnaire is only sent to four women out of 102 participants.

Of 102 sent questionnaires, there was a response rate of 77 percent, equivalent to 79 answers. Eight questionnaires were omitted, as these were not fully answered. Additionally, five other questionnaires were excluded because the data analysis showed that the negative items were answered positively making the responses incongruous. Finally, 66 responses were used for the analysis.

Analytic procedure

The analysis of the responses is done by using IBM's SPSS statistics 25 program. To prove the items, reliability and confirmatory factor analyses are carried out for each facet of the three dimensions, intrinsic motivation, achievement motivation, and job enrichment. A confirmatory factor analysis instead of an exploratory factor analysis is performed as the items and their corresponding sub-dimensions are already defined.

After the verification and reliability check of the data and items, and the determination of the sub-dimension variables, the actual data analysis was conducted. First, the descriptive data was calculated, such as the number of participants, the total duration of employment and the employees per department. Following, a Pearson correlation analysis was done between the three dimensions and their 15 sub-dimensions. The Pearson correlation was selected because of the uniform interval of the Likert scale. Then a correlation analysis was performed between the sub-dimensions of intrinsic motivation with the facets of job enrichment, and of

course, the same calculation was made between the subscales of achievement motivation with the sub-dimensions of job enrichment. As intrinsic motivation, respectively, achievement motivation was expected to influence the demand of individuals to take over new and additional tasks, a one-tailed Pearson's correlation analyses was made. Furthermore, two-tailed Pearson correlation analyses were performed within the subscales of each dimension. Additional calculations were made to verify if there existed any connection between the sub-dimensions of one dimension. According to the results of the correlation analyses, a regression analysis was conducted to examine coherences and connections between the sub-dimensions.

Empirical results

Descriptive Statistics

After the verification, the responses of the online survey were examined, as shown in table 2. The participants of the online questionnaire ($N = 66$) were composed of the engineering department ($n = 27$), project management ($n = 13$), technical sales ($n = 14$) and sales ($n = 12$). The contribution of the engineering department ($n = 27$) was expectably higher because normally in machinery companies more people work in this department. Due to the small quantity of participants in the other departments, project management ($n = 13$), technical sales ($n = 14$), and sales ($n = 12$), analyses between the groups were not performed because the groups allow no solid and reliable result.

Besides the amount of participants, the duration of the employment is also shown in table 2. The average period of employment of the participants was almost of eight years ($M = 7.9$, $SD = 6.16$, $N = 66$) and the mean duration of employment of all departments was also relatively high. The engineering ($M = 9.52$, $SD = 6.44$, $n = 27$) and sales ($M = 9.33$, $SD = 6.72$, $n = 12$)

department show almost the same mean and standard deviation. A similar contribution is depicted for the project management ($M = 4.92$, $SD = 4.98$, $n = 14$) and technical sales ($M = 6.08$, $SD = 5.02$, $n = 13$) departments. The large standard deviation of employment in all departments show that both inexperienced and experienced employees participated in the online survey. The contribution of new and experienced employees is additionally shown at the duration of employment in the different departments of engineering ($Min = 1$, $Max = 20$), project management ($Min = 1$, $Max = 17$), technical sales ($Min = 1$, $Max = 17$), and sales ($Min = 1$, $Max = 24$).

Sub-dimension and item verification

The calculated results of the dimensions' subscales are shown in table 3. The test of Cronbach's alpha was performed for each sub-dimension to check the internal consistency. To increase the internal consistency, the adjusted alphas were reviewed and if necessary, an item was omitted.

Additionally, the confirmatory factor analysis was performed for each sub-dimension to verify whether the items coincide with the originally assumed facet of a dimension. For the individual items and sub-dimensions, the correlations, the significances, the similarities and the adequacy of the items were proved in the results of the factor analysis. The verification was also done under consideration of the critical items unveiled by Cronbach's alpha.

The verification of the results from the factor and the reliability analysis, found that four items had to be deleted. The results showed that the internal consistency noticeably increased and the factor analysis supported the small influence of these questions or statements. The removed items were one item of each of the factors growth and autonomy within the intrinsic motivation dimension and one statement of each of the facets

Table 2
Survey participants and duration of employment

Sample		<i>N, n</i>	Duration of employment			
Department	<i>M</i>		<i>SD</i>	<i>Min</i>	<i>Max</i>	
Mean sample groups		66	7.9	6.16	1	24
Sample group	Engineering	27	9.52	6.44	1	20
	Project management	14	4.92	4.98	1	17
	Technical sales	13	6.08	5.02	1	17
	Sales	12	9.33	6.72	1	24

performance demand and anticipation of success within the dimension achievement motivation.

The results of Cronbach's alpha for the dimension of intrinsic motivation show, in general, a satisfactorily internal consistency, whereas the facet affiliation ($\alpha = .59$) depicts bigger deviations. This internal consistency of the intrinsic motivation dimension is also depicted if the mean alpha .74 between the sub-dimensions is calculated. Furthermore, the Kaiser-Meyer-Olkin measure of sampling adequacy was at least higher than .6.

On the contrary, the reliability results of the sub-dimensions of achievement motivation are to be considered critical since the mean alpha is .59, and all facets do not show a high consistency. Especially the subscale performance demand ($\alpha = .48$) shows a very critical result, with already one omitted item. In fact, the elimination of another item would have increased the alpha to .51, but this improvement of .03 is insignificant compared to the omission of an item and its loss of information. Additionally, the Kaiser-Meyer-Olkin measure of sampling adequacy would also have been reduced to .5 because of two items within the sub-dimension.

The reliability results of the job enrichment dimension depicted, as well as, the intrinsic motivation dimension a solid consistency with a mean alpha of mostly .7 between all facets. The most considerable deviations are shown in the sub-dimensions skill variety ($\alpha = .58$) and

feedback from the job itself ($\alpha = .56$). The other subscales show good results, whereas the factor of dealing with others ($\alpha = .9$) shows the highest reliability within the questionnaire. Of course, the Kaiser-Meyer-Olkin measure of sampling adequacy is .5 since all sub-dimensions of the job enrichment dimension consist of two items due to the template used and the reversed items excluded as described above. Completing, Bartlett's test of sphericity was significant ($p < .01$), and the other results showed suitable and significant data for all sub-dimensions of all dimensions.

The means and standard deviations are almost similar between the dimensions of intrinsic motivation and achievement motivation, and especially within each of the three dimensions. The mean results of the intrinsic motivation dimension and the achievement motivation dimension are between the facets performance demand ($M = 4.86$) and pride in achievement ($M = 5.84$). The standard deviation results of these two dimensions are between the subscales growth ($SD = 0.77$) and interest ($SD = 1.09$). On the contrary, the dimension of job enrichment shows more differences between the survey participants. On the one hand, the average mean is, in general, lower than the average means of the dimensions of intrinsic motivation and achievement motivation. On the other hand, the same applies for the average standard deviation which is higher at the job enrichment dimension.

Table 3

Descriptive statistics and Cronbach's alpha of sub-dimensions

Dimension	Sub-dimension	No. of items	<i>M</i>	<i>SD</i>	α	<i>N, n</i>
Intrinsic motivation	IM_Interest	4	5	1.09	.8	66
	IM_Growth	3	5.36	0.77	.73	66
	IM_Autonomy	3	4.9	1.08	.74	66
	IM_Value	4	4.96	1.04	.83	66
	IM_Affiliation	4	5.2	0.81	.59	66
Achievement motivation	AM_Demand	3	4.86	0.93	.48	66
	AM_Standard	4	4.89	1.02	.64	66
	AM_Success	3	5.52	0.81	.59	66
	AM_Pride	3	5.84	0.88	.63	66
Job enrichment	JE_Variety	2	4.95	1.27	.58	66
	JE_Identity	2	4.67	1.47	.69	66
	JE_Significance	2	4.38	1.65	.79	66
	JE_Autonomy	2	4.86	1.33	.65	66
	JE_JobFeedback	2	4.42	1.26	.56	66
	JE_Others	2	4.44	1.63	.9	66

Hypotheses verification

Finally, after the verification of the sample, the results of the participants and the questionnaire itself, the collected data were used to perform the correlation and regression analyses. To find if a correlation exists between the intrinsic motivation dimension, respectively, the achievement motivation dimension with the job enrichment dimension, a Pearson correlation analysis was carried out. As the intention of this article is to examine the influence of the subscales of intrinsic motivation and achievement motivation regarding the factors of job enrichment and not vice versa, the analyses were performed one-tailed. Accordingly, the subscales of intrinsic motivation and achievement motivation are the predictors. Table 4 shows the results of the Pearson correlation analysis between the sub-dimensions.

The results of the correlation analysis show three significant correlations between the subscales of the intrinsic motivation dimension and the facets of the dimension of job enrichment. It is indicated that the intrinsic motivation factors, interest ($r = -.21$, $p < .05$) and autonomy ($r = -.21$, $p < .05$) have a negative, and coincidentally the same, correlation with the job enrichment facet of autonomy. Furthermore, it is depicted that affiliation of the sub-dimension of intrinsic motivation ($r = .25$, $p < .03$) has a positive correlation with the facet feedback from the job itself of the dimension job enrichment. All other results have no

significant correlation between the sub-dimensions of intrinsic motivation and the facets of job enrichment. Three significant results out of 30 possible correlations between the dimensions intrinsic motivation and job enrichment, reject the hypothesis that an overall correlation exists between the sub-dimensions of intrinsic motivation and the sub-dimensions of job enrichment. Summarizing, based on the given data the statement of the hypothesis, (1) *the sub-dimensions of intrinsic motivation are related to the sub-dimensions of job enrichment, to predict the will to take over enriched tasks*, is rejected. Accordingly, the results suggest it is not possible to predict the individual's willingness to take over enriched tasks based on its current intrinsic motivation profile.

It is also shown in table 4 the results of the correlation analyses between the sub-dimensions of the achievement motivation dimension and the facets of the job enrichment dimension. The output depicts six significant results out of 24 possible correlations. It is shown that the significant correlations are triggered by two of the four sub-dimensions of achievement motivation. The sub-dimensions are performance standard and anticipation of success. The achievement motivation factor performance standard positively correlates with the three job enrichment sub-dimensions skill variety ($r = .21$, $p < .05$), task identity ($r = .26$, $p < .02$), and feedback from the job itself ($r = .35$, $p < .01$). The achievement motivation facet anticipation of success also shows positive and significant correlations with the job enrichment subscales skill

Table 4

Pearson correlation (1-tailed) between sub-dimensions of intrinsic and achievement motivation correlated to the facets of job enrichment

Dimension	Job enrichment					
	JE_Variety	JE_Identity	JE_Significance	JE_Autonomy	JE_JobFeedback	JE_Others
Intrinsic motivation						
IM_Interest	-.06	-.12	-.12	-.21*	.06	-.13
IM_Growth	.11	.03	.11	.05	.06	-.01
IM_Autonomy	-.06	-.04	-.01	-.21*	.18	-.18
IM_Value	.05	-.07	-.04	-.1	.09	.04
IM_Affiliation	.16	.07	.01	.06	.25*	.1
Achievement motivation						
AM_Demand	.01	.09	.1	.1	.08	.03
AM_Standard	.21*	.26*	-.01	.06	.35**	.07
AM_Success	.22*	.1	.14	.13	.27*	.21*
AM_Pride	.03	.06	-.02	-.02	.19	-.02

* $p < .05$; ** $p < .01$

variety ($r = .22$, $p < .04$), feedback from the job itself ($r = .27$, $p < .02$) and dealing with others ($r = .21$, $p < .05$). Although, there are some correlations, taking into account the real intention of this article, of finding predictors of the employee's current motivational profile for the willingness to take over specific characteristics of enriched tasks, a universal conclusion cannot be drawn for the dimension achievement motivation. Furthermore, the reliability of the achievement motivation questionnaire itself is also not very solid, whereas the prediction of the job enrichment sub-dimensions cannot be expected as very reliable. Recapitulating, the combination of the weak reliabilities of the sub-dimensions of the achievement motivation questionnaire and the relatively small number of found correlations, also rejects the hypothesis (2), *the sub-dimensions of achievement motivation are related to the sub-dimensions of job enrichment, to predict the will to take over enriched tasks*. Indeed, based on the given data, there is a connection between the sub-dimensions of achievement motivation and the subscales of job enrichment, but it is not clear enough to deduce, from the achievement motivation profile, the will of an individual to take over certain kind of enriched task.

Additional results

Besides the correlation analyses already mentioned, a Pearson correlation analyses were performed between the duration of employment and the facets of job enrichment. The correlation analyses were conducted as a one-tailed test because the influence of the duration of

employment on the willingness to take over enriched tasks is the connection of interest. Significant correlations were found between the period of employment and task variety in job enrichment ($r = -.223$, $p = .042$) and the period of employment and autonomy in job enrichment ($r = -.299$, $p = .01$). On the one hand, the negative correlation between duration of employment and job enrichment's task variety indicates, the longer the employees are engaged, the fewer the employees require more task variety in their jobs, or to develop themselves. On the other hand, the correlation between the period of employment and autonomy in job enrichment suggests that the longer employees are in a company, the employees have more and more the perception that they have little influence on their work tasks. The assumption for this attitude or change in mind could be that employees with more experience gain more autonomy and, therefore, they do not need it anymore. This possibility would refer to the fewer need for task variety, with a longer duration of employment, respectively, fewer development needs because the personnel with longer experience have these benefits already. Another possibility for the decreasing need of autonomy of the sub-dimension of job enrichment for employees with a longer period of employment could be that the individuals have given up the idea of getting more autonomy, which could also be a reason for the decreasing need of task variety.

As the collected data provide the opportunity to perform further analyses to find possibilities that can support the general idea of this paper, which is the prediction of the individual's willingness to take over enriched tasks,

correlation analyses were performed within the job enrichment dimension. The result of the Pearson correlation showed in all sub-dimension high significance, as shown in table 5. In addition, linear

regression analyses were performed for the subscales of job enrichment. As the results of the correlation analyses are identical to the standardized beta, the linear regression analyses were performed to calculate the

Table 5

Linear regression analysis with standardized beta between the sub-dimension pairs of job enrichment

Sub-dimension	JE_Variety		JE_Identity		JE_Significance		JE_Autonomy		JE_JobFeedback	
	R ²	β	R ²	β	R ²	β	R ²	β	R ²	β
	JE_Identity	.43	.66***							
JE_Significance	.41	.64***	.17	.42***						
JE_Autonomy	.44	.66***	.29	.54***	.49	.7***				
JE_JobFeedback	.38	.61***	.41	.64***	.26	.51***	.21	.46***		
JE_Others	.53	.73***	.23	.48***	.47	.68***	.45	.67***	.30	.55***

*** p < .001

explained variance between two sub-dimensions. Thus, linear regression analyses were performed for each facet separately because the interest is on the influence of a sub-dimension to another sub-dimensions within the dimension of job enrichment. The results show a highly significant and positive correlation gradient between each pair of sub-dimensions.

The highest correlations with the highest explained variance are depicted between the sub-dimensions task variety and dealing with others ($r = .73$, $R^2 = .53$). This connection proposes that if an individual's willingness to take over a new task with a lot of variety is high, most probably, its willingness to take over an additional task with a lot of personal interaction is also high, and vice versa. Similar results were found for all other pairs of subscales within the dimension of job enrichment. The lowest, but still high significant connection was found between the sub-dimensions of task identity and task significance ($r = .42$, $R^2 = .17$). The comparably most critical results were found in the explained variance of the pair factors task identity and task significance ($R^2 = .17$), autonomy and feedback from the job itself ($R^2 = .21$), and task identity and dealing with others ($R^2 = .23$) since it depicts the percentage of the explained variance.

However, the positive connections between all sub-dimensions of job enrichment suggest that the employee's willingness to take over one specific enriched task directly shows its will to take over all other kinds of enriched tasks. Consequently, people with a high need for job enrichment can be motivated through a variation of different and complex tasks.

Whereas, excessive task enrichment for people with a low or medium desire for job enrichment might be overwhelmed, and consequently amotivated. Therefore, it can be suggested that if the desire of the employee for job enrichment is requested and examined, the general will of the individual to take over enriched tasks can be assumed for each sub-dimension.

Conclusions

Upcoming new and additional work tasks could be assigned effortlessly and motivationally to employees, if the willingness of the employees to take over enriched tasks could simply be predicted. Certainly, for the assignment of new tasks it is also necessary to know to what extent individuals would like to take over enriched tasks to increase their motivation, without boring or overwhelming them. This was the basic idea of this article and was intended to increase the satisfaction and thus, the performance of the employees based on Maslow's (1943) hierarchy of needs, Herzberg et al. (1959) two-factor theory, Murray (1938), respectively, McClelland's (1961) need for achievement, Deci and Ryan's (1980, 1985, 2000) self-determination theory, and Hackman and Oldham's (1976) job characteristics theory.

To examine the employee's willingness to take over enriched tasks, the idea was developed that the current motivation profile could predict the willingness of an individual to take over enriched tasks. Therefore, two different motivation dimensions, intrinsic motivation and achievement motivation, were used to measure the

current motivation profile. Sub-dimensions were formulated for each dimension to distinguish between the different facets. Furthermore, to measure the willingness of the employee to take over enriched tasks, the same framework and the dimension of job enrichment was defined.

Based on the gathered data from the online survey the data analyses suggested that both developed hypotheses (1) *the sub-dimensions of intrinsic motivation are related to the sub-dimensions of job enrichment, to predict the will to take over enriched tasks* and (2) *the sub-dimensions of achievement motivation are related to the sub-dimensions of job enrichment, to predict the will to take over enriched tasks* were rejected. This means that the willingness of an individual for job enrichment activities cannot be predicted from the current intrinsic motivation profile or from the current achievement motivation profile.

The additional analyses within the job enrichment dimension and its sub-dimensions showed highly significant and positive correlations among all sub-dimensions of job enrichment. The strong correlation between all sub-dimensions suggests another way of predicting the individual's willingness to take over enriched tasks. The positive connection proposes that the level of desire to take over enriched tasks is particularly similar in all subscales of job enrichment and, therefore, no specific facets need to be requested. Of course, more research is needed to support this idea. The limitations of the correlation found are the one-sided sample and the long questionnaire with the request for job enrichment dimension at the end. However, the result suggested an easier and generalized method to measure and predict the level of willingness of the employee to take over enriched tasks.

An additional finding was the negative correlation between the duration of employment and the employee's willingness to take over enriched tasks. It was found that the longer the individuals are employed the lower it is the desire for job enrichment activities. The reason for the negative correlation could be that more experienced employees already have sufficient control over their work tasks and, therefore, do not need enriched tasks or have simply given up on being more autonomous. As many companies have employees who have worked there for a long time, verification of the correlation found in this paper would be a possibility for future research.

The main and unexpected finding in this article was the highly significant and positive internal correlation of the job enrichment dimension or, more precisely, its sub-dimensions. Since the focus of this essay was not on this correlation, future research is needed to support or reject these results. If the findings are supported, an additional task would be to develop a simple and brief questionnaire to determine the willingness of the employees to take over enriched tasks.

To broaden the examination between the sub-dimensions of job enrichment, another possible topic of research could be the verification between the motivation level and the employee's need for job enrichment. For this, a possible research question could be: Will the intrinsic motivation decrease, remain or increase if the employee's level of desire for job enrichment activities is diminished, fulfilled or exceeded?

About the Author

Adrian Tobias Teuber started his professional life with an apprenticeship as toolmaker, followed by an engineering technician. Currently, he works as group manager for automation solutions in a machinery company, where he first studied mechanical engineering part time and received the degree as Bachelor of Engineering. Then he enlarged his education with an additional part time study at the Professional School of Business and Technology at the University of Applied Sciences Kempten, where he extended his management and leadership skills and graduated successfully with an MBA in International Business Management and Leadership.

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