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Pro-Innovation Remuneration: ILSS Research

The purpose of this article is to present solutions in the area of remuneration, aimed at stimulating innovation on the part of employees, as well as assess the effectiveness of those solutions. The basis for this discussion is the applied practices of eighty-three listed companies that were encompassed by an ILSS study,¹ where special attention was devoted to companies with strategies clearly oriented at achieving a high level of innovation (30% of the test sample). They are shown against a backdrop of average results for the sample as well as confronted with practices used by companies with various levels of innovation—regardless of applied business strategy. The final section of this article presents suggestions for solutions that may give remuneration systems a pro-innovation character.

Introduction

In this day of pressure to increase company innovation, there is a plethora of factors identified as potentially stimulating such innovation. The weight of tangible factors, such as the need to increase financial resources earmarked for innovative activities as well as engendering close collaboration between practitioners and research and development entities, is universally stressed. The role of the worker as the “locomotive” of company innovation is only rarely appreciated. This research conducted by the Department of Human Resource Management of the Institute of Labor and Social Studies is intended to demonstrate the links between applied HRM practices and innovation in the organization.

1 The research is discussed in the article by S. Borkowska in this issue of *Human Resource Management*.

This article presents the results of the study in its section relating to the pro-innovation character of remuneration systems. Individual practices in the area of remuneration (or more broadly *motivation*) as well as “bundles” of such practices conveyed by synthetic indices—rewarding innovators, outcome rewarding, and intangible motivation—with respect to company innovation are presented. The statistical analysis assumes that the index for the given bundle is the unweighed sum of points assigned to specific practices. For reasons of clarity, the values of the indices received have been subdivided into quartiles.

Multilevel analysis on several planes of generality was applied in work on the acquired materials. Firstly, regressive analysis was used, which makes possible the identification and establishing of the strongest dependencies. Secondly, the dependencies among synthetic indices of HRM practice were examined. Thirdly, the dependencies among specific solutions and actions were investigated.

The special attention devoted to companies with strategies that were decidedly aimed at achieving a high level of innovation (30% of the eighty-three examined listed companies) is justified by the results of the conducted study. These are companies that often represent a high level of human resource management. They apply HRM tools that are specially selected in terms of freeing and stimulating innovation in workers. A total of 80% of such companies declared the promotion of creativity and innovation as primary company values. This is a result that significantly exceeds the average for the sample (61%).²

Applying another measure, one that is not based on strategy type, but on company innovation levels,³ it was discovered that this group of companies, for the most part, does not as yet represent the highest, fourth level of innovation. One-third of them was deemed innovative to only a small or moderate extent (see Figure No. 1).

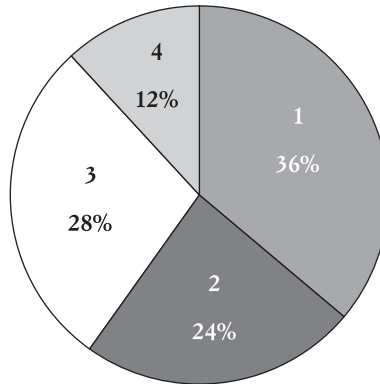
Remuneration Level

The ILSS research points to the major importance of high salaries in releasing employee involvement in the innovation process. This is probably emphasized by the overall low level of income in the country, the ability to contrast this with the situation of employers abroad, especially in the European Union, and the relative ease of migration.

2 Such values were declared by 45% of companies with the highest level of innovation.

3 The investigated companies were subdivided into quartiles in line with the four levels of innovation (Level 1 is the lowest, Level 4 the highest).

Figure No. 1. Level of Innovation of Companies with a Pro-Innovation Strategy



Source: Own studies based on ILSS results.

The investigated companies with strategies aimed at achieving high innovation usually have a high level of total remuneration. Their salaries are competitive against the backdrop of the industry to which they belong. Moreover, their bonuses are significantly higher than the average for the examined sample. Bonuses greater than 50% of basic pay are given to the employees of 16% of the companies in this group, with 7% for the entire sample. A similar analysis of the examined companies in terms of their level of innovation demonstrates a very strong link between the level of remuneration and innovation. A total of 65% of companies that qualify to the highest innovation level (the Level 4 quartile) have wages that are higher than the industry average, with an average indication for the entire sample of 45.9%. However, bonuses there were much lower than in companies with pro-investment strategies (companies with bonuses in excess of 50% account for 10% of the sample), although somewhat higher than the average for the sample.

Outcome Remuneration

Indices developed for HRM practices were used in order to define ties between such practices and company innovation. The individual indices contain information regarding the level and range of utilization of many actions in the given field. In the case of remuneration for outcomes in the ILSS research, assessments of the efficiency of the practices, the share of employees encompassed by outcome remuneration, the degree to which they are taken into account in the worker assessment system, and whether or not the company applied bonuses regardless of work effects, were all taken into account. Regression analysis points to an important dependence between the *dynamics* of inno-

vation and remuneration for outcomes. Growth in the outcome remuneration index⁴ by one standard deviation increases innovation growth by 0.09 units (with an average growth index of 1.3). However, also demonstrated was the significant impact of other HRM pillars (training and development as well as recruitment and involvement). What is more, the significant role of alignment of all HRM practices was identified and it was demonstrated that a lack of such cohesion lowers the dynamics of innovation.

To a great extent, solutions in the realm of outcome remuneration in companies with pro-innovation strategies were aligned with company strategy (35% of such companies demonstrated complete alignment with strategy, where the average value for the sample was at a level of 18%). The opposite is true of companies with high innovation. There, a complete degree of alignment is only observed in 10% of such companies, which makes it almost twice as rare as the average.

Regression analysis defining ties with the *level* of innovation demonstrated the significance of outcome remuneration and involvement of workers. Calculations show that an increase in the outcome remuneration index by one standard deviation gives an increase in innovation level of three units (with an average innovation index of 33.8). Again, an increase in the involvement index by one standard deviation may result in growth in the level of innovation by 3.9 units. The impact of involvement turned out to be stronger. The purpose of showing the broad dependencies is to stress the importance of outcome remuneration, but also a simultaneous calling of attention to the need to apply comprehensive solutions in order to achieve fully satisfactory results. What is important from the point of view of the wage system is calling attention not to solutions that stimulate innovation directly, but those that build worker involvement, because it supports innovation strongly.

In the examined companies with pro-innovation strategies, differences in total remuneration are decidedly more frequent than average (48%), as justified by differences in work outcomes (the average for the whole sample was 36%). In this case, companies that are the most innovative were close to the average value (40%). However, as to rewards that are independent of work outcomes, they tended not to be used in highly innovative companies (in 65% of the companies), but were used much more often in the pro-innovation ones.

Companies with a pro-innovation strategy applied outcome-oriented remuneration at various levels of advancement, but approximately 50% of them achieved indices that were high or the highest. However, a very high level of outcome remuneration (the Level

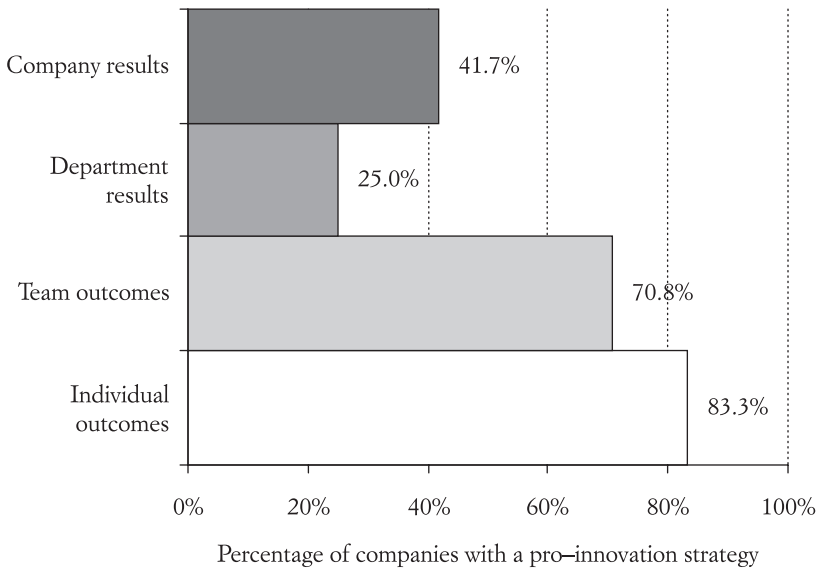
4 Data in line with one of the econometric models applied by Dr. Iwona Laskowska of the University of Łódź, who is also a member of the ILSS research staff.

4 quartile) occurs only in companies aspiring to high innovativeness, but which are currently rated as being innovative to a small (or moderate) extent. A suggested conclusion is that these are companies with a conviction as to the significant weight of outcome remuneration to achieve their target—high innovation—and this is the justification to act strongly towards developing outcome-oriented remuneration among companies that have as yet not achieved this status.

The correlation of the outcome remuneration index with company innovation level is relatively weak. However, the highest level of innovation is more often connected with a higher level of advancement in outcome remuneration.

The relatively broad questionnaire made possible the establishing of the priorities of companies aspiring to achieve high innovation by rewarding work outcomes. A particularly frequent linking of bonuses and individual outcomes was identified—over 83% of companies applied such a criterion—as well as with the effects of teamwork—in over 70% of companies (see Figure No. 2).

Figure No. 2. Bonuses Dependent on Effects in Companies with Pro-Innovation Strategies: Frequency of Application

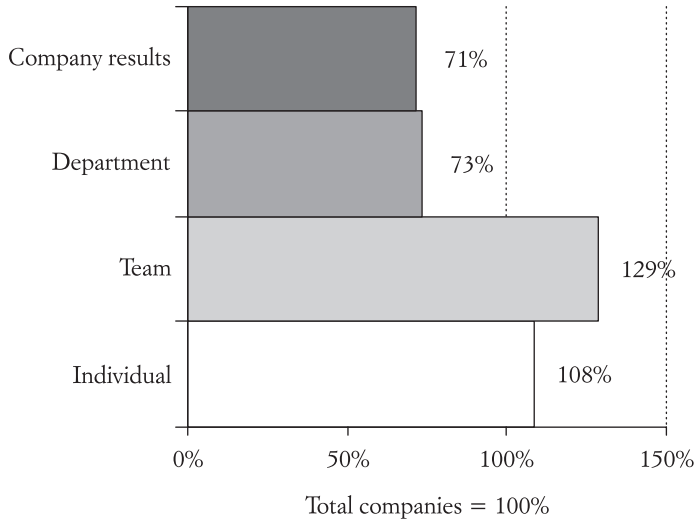


Source: Own studies based on ILSS results.

The frequencies are greater than average in the examined group (see Figure No. 3).

There, it is a greater appreciation for teamwork that is particularly visible. Bonuses linked with the effects of teamwork are applied more frequently (by 30%) in companies

Figure No. 3. Bonuses Dependent on Effects in Companies with Pro-Innovation Strategies against a Backdrop of the Entire Sample



Source: Own studies based on ILSS results.

with a pro-innovation strategy. Workers are rewarded very rarely in connection with the achievements of departments or the company as a whole in such organizations. These two instruments are used much more rarely than the average. However, companies with the highest level of innovation issue bonuses with the greatest frequency (in 80% of the companies) in connection with company results. Individual outcomes are in second place (70%), with teamwork in third, albeit with a high percentage (60%).

Various studies⁵ show that team-oriented forms of work foster innovation thanks to the fact that the effects of innovation applied in teamwork are the combined result of its members, not only of the originator of the idea. Thanks to this, the resistance to innovation is eliminated and a pro-innovation stance is generated. ILSS research confirms the large scope of application of team-oriented remuneration in companies with a pro-innovation strategy (in 54% of such companies), which was significantly more frequent than the average for the sample (47%). The use of team-oriented remuneration was applied with even greater frequency in the most innovative companies (65%).

⁵ Studies by the INES team of the Warsaw University of Technology, for example. www.wortal.malbork.pl/stary_wortal/prace/484.doc, dated December 7, 2008.

Evaluation of work outcome among the investigated companies was clearly supported by a system of periodic worker assessments, which is, to a great extent, aligned with the company strategy. Such alignment is particularly frequent in companies with a pro-innovation strategy (44% of companies with an average of 30%). In highly innovative companies, alignment was declared in 35% of the cases.

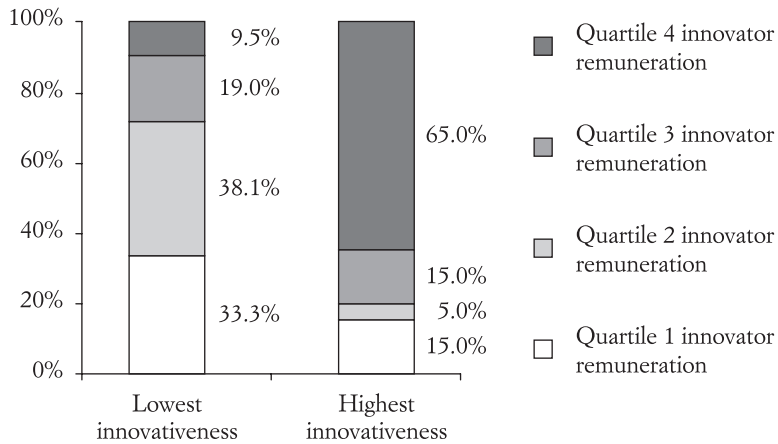
In summarizing this section devoted to outcome-oriented remuneration, worth considering is the essence of the effects of work itself in innovative activities. Such actions are coupled with a certain risk of failure. There is a conviction among specialists in the question of innovation that companies that are open to risk have greater chances of success. Such an approach frees the worker to develop a desire to undertake efforts at developing and submitting suggestions for improvement without fear of criticism or risk of becoming inefficient. It is good to keep in mind that among the examined companies the understanding of the effects of work might be different. The effects might be evaluated differently. An outcome might take on the form of an implemented innovation, but it might also be a carefully conducted effort at bringing about such innovation. What is important is if the company is oriented at settlement of work outcomes and provides rewards for them as well as the establishing of employee targets.

Rewarding Innovators

In speaking of innovators in this study, it is understood that these are workers who actively take part in the company's innovation process, in all of its phases. The basic question is: Does the company facilitate such participation by all workers? Can anyone forward an idea, not necessarily an idea tied with major implementations, but also proposals for minor improvements? Such procedures are present in most of the examined companies, but they are particularly popular in companies with pro-innovation strategies (in over 38% of the companies).

The synthetic "rewarding innovators" index captures many aspects of this question—e.g. level of remuneration, types of awards planned for proposals for improvements, and participation in company benefits by virtue of implementing innovation. This is, in fact, a particular directing of forms of financial influence, although certain non-financial instruments are also present. An analysis of the breakdown of the values of this index brings to mind two general conclusions:

- For the most part, companies with the lowest overall level of human resource management usually apply the lowest level of reward for innovators.
- Higher remuneration for innovators is strictly correlated with a high level of company innovation (Figure No. 4).

Figure No. 4. Rewarding Innovators and the Level of Company Innovation

Source: Own studies based on ILSS results.

High remuneration for innovators (in the Level 4 quartile) is mainly applied in companies with the highest level of innovation (in almost 62% of companies). It occurs relatively rarely at companies with a pro-innovation strategy (20% of companies) where it is a percentage that is below the average level (the Level 4 quartile, where in line with principles for assignment to quartiles this is approximately 25% of companies). The companies with a pro-innovation strategy that had the highest indices for rewarding innovators were also companies with the highest innovation. A total of 32% of pro-innovation companies had merely the lowest level of rewarding innovators, but this was the result of the breakdown of the level of innovativeness in this group. As was noted in the introduction, this category of companies was a major group with the lowest innovation level. As was pointed out above, there is a very strong link between level of innovation and the innovator remuneration index.

Also visible are differences between forms of rewarding innovators in companies aspiring to achieve a high level of innovation and companies already qualified to the most innovative group. The preferences of various types of companies are synthetically presented in Table No. 1.

Highly innovative companies prefer “hard” financial awards, although they also have an appreciation for their intangible dimensions, as in the case of the presenting of the prize by the superior. These tools are used there with greater frequency than the average. Companies with a pro-innovation strategy combine finances with the psychological aspect and usually (significantly more frequently than the average) apply awards presented by the boss. Bonuses are their successive significant instrument for motivating

Table No. 1. Awards for Innovators: Frequency of Application in %

Award type	Companies with high innovation-oriented strategies	Average results for the sample	Highest (4) level of innovation	Lowest (1) level of innovation
Award presented by the boss	54.2	43.4	55.0	33.3
Bonus	37.5	60.2	75.0	52.4
Award presented during a meeting with the participation of company authorities	29.2	20.5	5.0	23.8
Letter of congratulations	25.0	19.3	5.0	23.8
Participation in company benefits	16.7	12.0	10.0	9.5

Source: Own studies based on ILSS results.

innovators, but it is used much less frequently than the average for the sample. Other awards are used more frequently than the average, however. The relatively frequent participation of workers in company benefits is worth noting. Although it is very common in this group, it is much more frequent than in other company categories depicted in the table.

Intangible Motivation

Intangible motivation is an excellent supplement to motivation that is clearly material in character. It allows for the satisfying of needs of a higher level as well as to show appreciation to the worker in an additional way. What is important is that often, the employer achieves worker involvement without incurring any costs, where worker involvement brings tangible benefits.

ILSS research has made it possible to establish that out of eighty-three listed companies, a relatively large share apply intangible motivation on a marginal level. Companies with a pro-innovation strategy come out decidedly better in this case. A total of 24% have a motivation index in the Level 4 quartile, while a successive 36% in the Level 3 quartile, which give 60% for the highest indications.

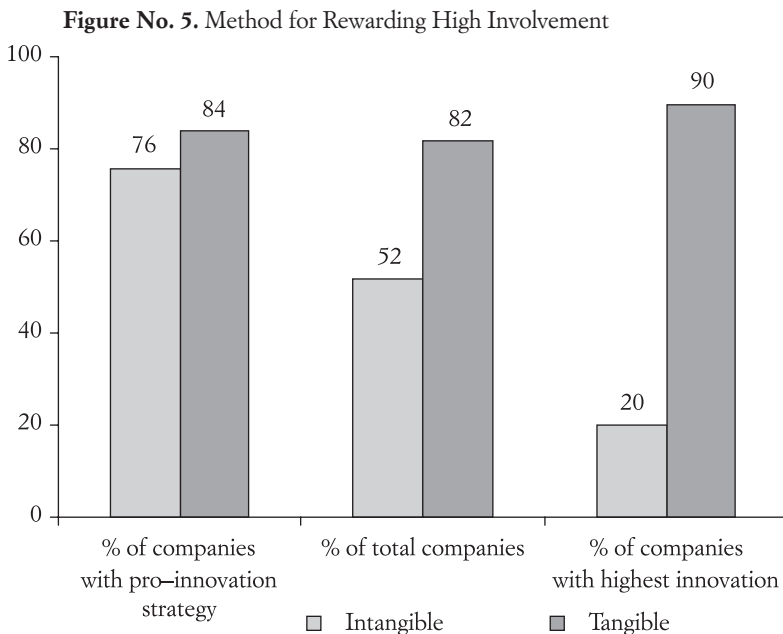
What is characteristic in this case is the almost complete absence of this form among companies with the highest level of innovation (70% in the lowest level, with 90% in both lowest together). When it is noted in this group then it applies to highly innovative companies that have a pro-innovation strategy. For their part, companies qualified as

being the least innovative have a high share of non-financial motivation. However, it is most developed in companies on innovation Level 3.

As claimed by Gary Hamel, it is important to awaken and respect innovation in all possible ways among workers (Hamel, Breen, 2007). A large range of intangible motivation is certainly in agreement with this recommendation.

Very important in efficiency of motivation is the alignment of all non-financial instruments with company strategy. It proved particularly large in companies with a pro-innovation strategy (44% with an average indicator of 37%). Again, noticeable is the major difference in companies that are highly innovative, where significant alignment with strategy is only had by 20% of the examined entities. Where innovators have the highest remuneration is also where the level of non-financial motivation is the lowest. The opposite is also true: where innovators have low remuneration the level of non-financial motivation is the highest. This dependency is a natural consequence of the ties between innovativeness and rewarding innovators. However, there are cases where the highest remuneration for innovators is combined with the highest level of intangible motivation. Such cases account for 18%.

The discussed research also illustrates methods of rewarding high involvement in the discussed groups of companies. The data are visible in Figure No. 5.



Source: Own studies based on ILSS results.

High utilization of intangible instruments for this purpose has its place in companies with strategies targeted at achieving high innovativeness and is low in companies with the highest level of innovation. The first have programs for building involvement significantly more frequently than the average, which is rare in companies that have achieved the highest innovativeness.

The level of involvement of workers as assessed by employers is interesting against the backdrop of the above information. In 87.5% of the examined pro-innovation companies, workers were considered as being involved, but this was the case in only 25% of the most innovative companies (an average of 71%). Received information made it possible to conclude that this is the result of a different approach to motivation and suggests the major role of non-financial motivational instruments in building involvement.

In selecting pro-investment instruments for motivation, it is important to keep in mind the phases of the innovation process. According to the INES team of the Warsaw University of Technology:⁶

- All forms of recognition, respect, and support are very important in the first phase of innovative activities (scientific work and research),
- In the second phase (development work), effects may be achieved through intangible stimuli such as creating the possibility of visiting other companies that are involved in similar matters at home or abroad and facilitating the consultation of ideas with specialists and scientists, and
- It is not until the third phase (implementation) that material stimuli take on prime importance.

In as much as it is difficult to agree to any bypassing of the significance of material motivation in the first phase of the innovation process, the above conclusions are worth looking at. They may serve as something of a warning against any quick assigning of tangible and intangible motivation as characteristic of the pro-innovation form of remuneration without a clear reference to the current phase of innovation processes underway in the company.

Final Remarks: A Few Recommendations Relating to Pro-Innovation Remuneration

Table No. 2 synthetically presents the basic results of the ILSS research in the realm of remuneration. These results make possible the formulation of certain recommendations relating to pro-innovation remuneration systems.

6 www.wortal.malbork.pl/stary_wortal/prace/484.doc, December 7, 2008.

1. All company actions in the area of motivation should be aimed at building worker involvement.
2. Molding the level of total remuneration at a relatively high competitive level on the regional labor market makes possible the attracting of workers with the relevant professional qualifications and predispositions to the company. This has a major impact on the level of involvement.
3. It is important for the motivation system to take into account the principle of “paying for achieved effects.” With ever increasing frequency, it seems that the introduction of innovation in the company is not the result of the appearance of single, unprogrammed cases of the disclosure of high creativity on the part of workers and their creation of new knowledge that can find application in the company. Generally, innovative activities are programmed and organized in character, which was already noted by Peter Drucker (Drucker, 1993, pp. 133–134). They are the result of the procurement of a license for new technology, the development of a new product, or the planning of changes in the management of processes involving the implementation of information solutions supporting management such as Enterprise Resource Planning (ERP), for example. Thus, innovative activities are becoming operations that can be treated as classic design ventures with a defined duration, team, budget, and outcome.
4. It seems that further studies should be planned for the future on the degree to which innovativeness can be supported by a simple system of bonuses based on the concept of management by objectives (MBO). Such systems are relatively easy to develop, but an excessively narrow formulation of targets on the basis of MBO may discourage workers from experimenting and devoting time for work on new methods. The result may be that in the long-term company results in the area of the creation and implementation of innovative solutions may worsen. It is important that innovative companies accept behavior tied with experimentation and the quest for more innovative solutions as well as actions that by definition involve the risk of failure and decrease the traditional understanding of efficient utilization of work time.
5. The broad application of teamwork and rewards linked with the effects of teamwork are recommended as they create possibilities for the development of a pro-innovation stance as well as collaboration inside the team, away from the typical concentrating on individual effects, which may generate excessive rivalry within the team as well as problems with sharing knowledge within it.
6. Flexibility is becoming an increasingly important quality in the management of people. This principle is also worth incorporating in the building of remuneration systems.

Table No. 2. Summary of Major Research Results in the Context of Pro-Innovation Remuneration in Companies Aspiring to Achieve a High Level of Innovativeness against a Backdrop of the Average Results of the Sample and Companies if the Highest Innovation Levels

	Decidedly high innovation-oriented strategy companies	Examined sample average results	Companies with the highest level of innovation
Remuneration level	High	Not overly high (46% of companies have remuneration that is higher than the industry average)	Very high
Bonuses	High	Low	Not overly high, but above average
Outcome remuneration	Usually, the outcome remuneration indices are in the Level 2 quartile (36%) and the Level 3 quartile (28%)	Average results were the basis for subdivision into quartiles	Poor correlation of outcome remuneration and innovation level indices, but more frequent high remuneration for outcomes, where 35% of companies have the highest outcome remuneration and 35% have a high level
	Outcome remuneration is in the Level 4 quartile only in companies with the lowest level of innovation	—	—
	Differences in wages reflect differences in work outcomes more frequently than the average in the study (48%)	Wages are dependent on outcomes in 36% of companies	Wages are dependent on outcomes in 40% of companies (like the average indicator)
	Awards independent of work outcomes are not applied in one-quarter of companies	Awards independent of work outcomes are not applied in 29% of companies	Awards independent of work outcomes tend not to be applied

	Bonuses are strongly dependent on individual and team outcomes, with minimal ties to departmental and company results	Bonuses are strongly dependent on individual outcomes	Bonuses are strongly dependent on company results and individual outcomes, more rarely on team outcomes
Team forms of remuneration	Applied more frequently than the average (45% of companies in this group)	Applied in 47% of companies	Applied very frequently (in 65% of companies)
Innovator rewards	Rarely applied highest level of rewarding innovators, where the highest levels of innovator rewards are mainly found at the most innovative companies	Average results were the basis for subdivision into quartiles	High remuneration for innovators strictly correlated to a high level of innovativeness
Intangible motivation	The most frequent innovator award is one presented by the boss (54% of companies) and bonuses (37%)	Most frequent awards: bonus (60%) and award presented by the boss (43%)	The bonus is of prime importance (three-quarters of companies) and awards presented over by the boss (55%)
Worker involvement	Very developed, significantly above average level	Average results were the basis for subdivision into quartiles	Almost none
	Very high (above average) share involved	Employees assessed as involved in 71% of companies	Very low share of involved

Source: Own study.

7. The broad application of diverse intangible instruments adapted to the expectations of beneficiaries, combined with material instruments, gives motivation systems pro-innovation qualities. All actions aimed at large or small innovations within the company should be noticed and appreciated. This necessitates an appropriate sensitizing of managers. It will most certainly work well if the managers are participants in specific programs for motivating innovation.
8. A comprehensive approach to human management and the application of mutually cohesive HRM practices, and especially alignment with the company strategy, is recommended.

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