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# Gamification for Sales Incentives

Jacek Woźniak

## ABSTRACT

Gamification as the use of game mechanisms for motivation in non-game contexts has been gaining popularity and is considered one of the hottest topics in management. However, there is little research on gamification in remuneration systems, especially with regard to the sales force. The article discusses some problems posed by different types of incentives schemes for sales persons as well as two approaches that could be used for gamification in this area; the so called BLAP approach to gamification and gamification based on prize drawing. The results of two questionnaire-based opinion studies carried out on two groups of about 100 sales representatives show that the experience and knowledge in the area of gamification is low in this group of employees. Acceptance of gamification was studied taking into consideration institutional (i.e., the sales cycle length), organizational (i.e., satisfaction from the existing bonus scheme), psychological (i.e., risk averseness), and situational (i.e., the need for high regular income) factors. Both bonus draws among sales representatives who achieved targets and collecting points exchangeable for non-material rewards are accepted by some of traders, and such acceptance of either of the two types of gamification is correlated with a dissatisfaction with the existing bonus scheme.

## KEY WORDS:

gamification, sales force, compensation, incentives for sales force, gamification in sales force management

**JEL Classification:** J28, J29, J31, J33, M12, M52.

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## 1. Introduction

Gamification understood as the application of solutions from amusement games in business practice, which stimulates motivation to carry out certain tasks, has become present in the everyday experience of the customers of different companies. Numerous people participate in loyalty programs by collecting air miles, points for purchases, and – acting as authors – points for publications or obtaining higher academic qualifications. All of these examples of incentive programs that draw on the outer signs of success of an operation are currently classified as examples of gamifica-

tion that has been one of most vividly discussed topics in management at least since 2010. Suggestions that gamification solutions will have become widespread in companies somewhere around 2015 or that they will have been abandoned as prevalently dead solutions of low quality have already been put forward since the beginning of the period when gamification was fashionable and the author of both of them is an respected consulting firm – Gartner (Balcerak, 2015; Woźniak, 2015).

Currently, some solutions characteristic of gamification have simply become the management practice and gamification is applied in the management of human resources in training, encouraging healthy choices, or recruitment and selection processes. However, gamification is rarely adopted in remuneration

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systems understood in a strict sense, which implies that management boards are uncertain whether its introduction would be accepted by the workers. This paper was inspired by the desire to examine a selected professional group in order to verify whether such concerns against the introduction of gamification to remuneration systems may be legitimate.

The objective of the survey was to collect information on selected situational factors that might facilitate the introduction of gamification into remuneration systems. The study focused on the representatives of the sales force since, on the one hand, companies attach major importance to activities that motivate employees of this department and, on the other hand – traders show higher than average readiness to accept innovative solutions and a higher propensity to risk. It was assumed that the propensity to risk will encourage willingness to accept modifications in incentive schemes in a non-standard way and thus indirectly – contribute to the acceptance of gamification.

The text is based on the distinction between two types of gamification solutions that can be implemented in a sales department and which are built upon different mechanisms for increasing sales. To determine the potential traders' readiness to accept each solution mentioned above, a separate empirical study was carried out on the basis of opinion questionnaires that were collected from two groups of approximately 100 traders.

The text consists of four parts. The first part describes gamification and the potential it shows for human resources management, which has already been noticed. The second part deliberates on the fundamental scientific facts regarding remuneration of traders. The two successive parts present the study and its results.

## 2. Gamification, its Types and Application in Human Resources Management

Although gamification is a hot topic in management, there is no single definition of this notion in the relevant literature but the most widely cited one (Seaborn & Fels, 2015; Cardador, Northcraft, & Whicker, 2016) is "the use of game-design elements in non-game contexts" (Deterding, Dixon, Khaled, & Nacke, 2011). However, other definitions, which are

also widespread, emphasize different components of gamification. "Gamification is the use of game design-elements and game-design techniques in non-game contexts to engage people and solve problems" (de-Marcos et al., 2014, p. 75). "Gamification is the use of game thinking and game mechanics attached to work" (Zinger, 2014, p. 32). Gamification could be defined as "enhancing services with (motivational) affordances in order to invoke gameful experiences and further behavioral outcome" (Hamari et al., 2014, p. 2).

These examples of definitions show the problems that need to be faced in search of a comprehensible definition of gamification. All of them refer to the concept of a game and the mechanisms it makes use of. However, they have different ways of identifying the elements of game design or gaming areas which are to be used: the first one mentions game-design techniques, the second – thinking and the third – the opportunity to take action. They agree though that the application of the game-design element in specific activity is supposed to result in a desired outcome in another area (Cardador et al., 2016; Seaborn & Fels, 2015). If it is tentatively assumed that gamification is any use of game-design mechanisms to produce certain outcome of non-entertaining significance and the type of these elements merely introduces an internal differentiation as to the more or less typical application of this idea, then the basic difficulty in defining gamification is to determine what are the effectively motivating game-design elements.

Usually when game-design structures and mechanisms are implemented into other areas of human activity and so into structures that yield interest in playing a game and cause it to be attractive to people owing to the effect of familiar psychological mechanisms, the following elements are made use of:

1. points,
2. badges,
3. levels,
4. challenges,
5. rewards (Woźniak, 2015; Seaborn & Fels, 2015).

These elements are designed to stir engagement of the user so that they take action, which is supposed to produce change in their behaviour and make it possible to solve various problems. Some authors clearly highlight that equating the mechanisms that cause players to be motivated with points and competence

badges has little to do with gamification (Knapp, 2014; Seaborn & Fels, 2015) and call it BLAP gamification (Balcerak, 2015; Nicholson, 2015), which is intended to be a contemptuous name for the apparent and thoughtless implementation of "trendy" ideas without taking into account whether it makes sense. Indeed, the genesis of interest in gaming and the sources of motivation to try hard to achieve success are richer than the mere desire to obtain points (Dale, 2014); the best example of which is the occurrence of games with random set-ups (Balcerak & Woźniak, 2014).

The second simplification that BLAP gamification adopts is an idea that obtaining points is suitable for all types of players. While each player typology is based on the conviction that players are significantly different in terms of what motivates them and will, therefore, choose a game or its variants that are better suited to their sensitivity. One example of typology that is frequently cited in the literature is based on the division of players into four groups: striving for achievement; striving towards understanding the rules governing the world of the game; striving towards establishing contact with others; and striving for exerting influence on others (cf. Hamari & Tuunanen, 2014, for a more lengthy discussion and presentation of alternative typologies). Even this example of a typology shows that a player's activity may be stimulated by various needs and the content-related or structural features of a game, which are adequate for certain players, may be inappropriate for others. It should thus be pointed out that this remark challenges the legitimacy of so commonly invoking the psychological theory of Ryan and Deci (2000) as the main theoretical framework for explaining how a player's motivation to play and their satisfaction from continuing to play are generated (Przybylski et al., 2010; Seaborn & Fels, 2015) since this theory assumes a very short list of motives, which should be universal for all players.

Hence it can be said that each instance of implementation of certain game mechanisms into an area of actual activity, if it creates opportunities to take action that is relatively easy for certain types of players to engage in (Dale, 2014; Seaborn & Fels, 2015; Woźniak, 2015), can be treated as gamification. This means that incorporation of some elements characteristic of games into non-game areas of life should be understood as adding these elements to

tasks that are traditionally not considered fun and so apart from BLAP gamification based on points and badges, there is also gamification based on draws (Dale, 2014; Woźniak, 2015) and gamification based on creating opportunities to differentiate oneself during interaction with others (Dale, 2014; Hamari, 2017) – just to enumerate three clearly distinct types of motivation of potential players.

It would obviously be difficult to list all the areas of human resources management that are already gamified in organizations (see overviews and discussion in Seaborn & Fels, 2015; Woźniak, 2015). The fashion for gamification in management is, first and foremost, connected with its application in customer relations (Cardador et al., 2016; Deterding et al., 2011; Rodrigues et al., 2016; Seaborn & Fels, 2015), but setting targets and collecting points for achieving them are tools that are used not only in marketing. In human resources management, the use of games and some game-design elements in training was the traditional application of mechanisms that are currently considered gamification. In this context, two elements, i.e., game mechanisms, were particularly useful:

1. Introduction of the fun<sup>1</sup> factor into training, which serves to relax intense concentration and brings about new energy to continue learning, namely, icebreakers and quizzes, distracting attention from a monotonous ongoing task, which makes it possible to perform it longer without fatigue;

2. Introduction of simulating exercises allowing to practice complex skills, which require solving complicated problems with limited self-check of one's behaviour (and submerging in action), e.g., a decision-making game (Woźniak, 2015).

Another traditional area of application of gamification mechanisms was motivating people. Traditional boards with "leaders of work", which illustrate the outcome of competitions for employees achieving successes in designated areas (e.g., 'employee of the month' or 'the results achieved by all the network shops this week') or indicating the importance of some actions (e.g., 'joined us' or 'our employees are building a school after a tsunami'), had been using these mechanisms before the word 'gamification' was even invented. New applications of gamification make a broader use of points as a half-

material-half-symbolic form of rewarding success, and gamification methodologies are commonly adopted in the management of health promotion among employees (e.g., sportification programs as well as health & safety).

A historically unusual use of gamification in HR is its application for PR purposes and at various stages of the recruitment process. The first type is quite an obvious instance of transferring inspiration from marketing to another area of interest and the second is based on informative functions that both the players and those who observe them can use by analysing the activity and results obtained in the game. Hence games and contests may serve as a tool to widen knowledge on the requirements that must be fulfilled in a certain type of work; increase engagement and effectiveness of adaptation; and (on certain conditions) serve as a kind of training ground for collecting information about the competences of potential employees and so as a complementary selection tool.

It should be noted that gamification mechanisms are relatively rarely used in management of remunerations<sup>2</sup>. Although points are indeed used for rewarding, few organizations dared to add the awards to the kernel of the payroll system, even if nothing more than valuable material rewards are offered in exchange for these points.

### 3. Sales Force Remuneration Systems as a Possible Area of Application of Gamification

Fulfillment of the sales function takes different forms and thus traders' duties differ from one organization to another. The most common trader typologies described in the relevant literature are based on the way they contact the customer and for what purpose; hence, for example, traders whose goal is to make it easier for the customer to make a purchase (such as stationary sellers that wait for the customer at a sales point and shop assistants that hand over goods on demand at such points) are separated from people who support sales in various ways (e.g., the way the representatives of pharmaceutical companies work with doctors or people serving key customers such as hypermarkets) and those whose task is to develop sales through networking with new potential customers and inspiring them to feel the need for

new products (Woźniak, 2012). The classic problem posed by remunerating the sales force is linked to the situation where those employees must establish contact with customers and not strictly comply with their requests, which is the case for shop assistants. Analyses of incentives for the sales force attempt to answer the question of what procedural solutions can be used to increase sales and how to keep the expenditure meant to achieve this increase under control so that the economic effect of the whole operation is magnified (Albers, Raman, & Lee, 2015).

Remuneration systems for traders are based on the hidden assumption that traders can be motivated to work harder, if they are offered a financial reward for their results (Albers et al., p. 283). This assumption is rooted in the agency theory that still serves as the theoretical basis for explaining why one remuneration system is better than the other (Kräkel & Schöttner, 2016, p. 179). To simplify the matters a little bit; the point of departure for the agency theory is the need to create a management system in a situation where the principal (i.e., the business owner or – in our case – the sales manager) is unable to control the daily activity of the agent (where traders spend most of their working time unsupervised by the managers) and the agent's remuneration is the cost of the principal, which provokes conflict between the agent's endeavour to increase the remuneration without intensifying efforts for the benefit of the principal (cf. e.g. Woźniak, 2012 for a wider analysis). In accordance with this theory, the ideal solution to the problem of remunerating the sales force is commission. Since a remuneration system based purely on commissions carries the risk of high staff turnover resulting from the nonfulfillment of the traders' need for regular income, thus management practice shows that trader remuneration systems are built by juggling with three components:

(a) basic salary (i.e., monetary remuneration paid regularly regardless of sales results);

(b) a bonus which is a remuneration paid in the amount dependent on the results of a trader's work (whether measured – as in the case of commissions – with the direct result of work or against a previously established scale, e.g., targets the accomplishment of which automatically grants a sum fixed in advance (Kishore et al., 2014) or the result assessed on a more

or less discretionary basis by people who possess fragmentary knowledge on a trader's activity);

(c) rewards for participation in special events (such as contests or an opening bonus) or based on the long-term effects of work (e.g., an annual bonus) (Chun, 2015; John & Weitz, 1989).

The proportion of remuneration derived from each of these components is varied in different organizations, though in line with the agency theory it should depend on the costs of exercising control over the individual trader incurred in the process of generating sales; which is often organised into types based on the length of the sales cycle (since a higher proportion of the fixed salary is a more effective way of increasing sales in an organization where sales cycles are longer), the level of technical knowledge that a trader is required to have (and the higher it is – the higher the fixed salary), and whether selling operations are performed as a team (i.e., the more important the teamwork, the higher the fixed salary) (see overviews in: John & Weitz, 1989; Woźniak, 2012). Nevertheless, organizations create their incentive systems by trial and error (i.e., as decided by the manager, e.g. Kishore et al., 2014) since on the basis of this theory, specific parameters are rarely obvious in a particular situation. Another important factor is also the management practice on a particular market and managerial experience of the executive staff, and so it is common to adopt simple remuneration systems on new markets, which are based on a fixed remuneration and small commission (Chung, 2015), and on markets with more mature management – systems that are built upon individual and team targets.

In contrast to traditional research on incentive systems for traders, which was characterised by little sophistication in terms of methodology and carried out primarily as laboratory experiments, modern studies on sales force remuneration are more and more commonly based on a field experiment to analyse the concrete proposals modifying the traditional solutions (Chung, 2015; Kerstin & Backes-Gellner, 2013; Kishore et al., 2013; Larkin, 2014). However, the condition for a meaningful experiment leading to consequences influencing the actual results of a company is prior analysis of the chances for success offered by specific solutions, which should be based

on benchmarking analyses and opinion surveys. Hence there is a need not only for field tests with typical gamification solutions but also for prior analysis of expectations and opinions serving as the premise for adopting such solutions.

Therefore, while the usefulness of the agency theory as justification for trader remuneration systems comes under more and more serious criticism (Albers et al., 2015, p. 284) – due to concentration exclusively on individual and financial means of keeping traders motivated – the search for innovation continues. The need for an increasingly common use of more complex ways of rewarding becomes clear – and there we have group bonuses (which are reasonable where an increasingly larger proportion of the sales is achieved by teams with different competences and various degrees of contact with the customer, e.g. in complex business-to-business services – from logistics to design and construction – Lim & Chen, 2014) or bonuses arising from the necessity to balance the different 'seasonal' dynamics in the potential of a territory (Caldieraro & Coughlan, 2009), bonuses for long-term results (e.g., quarterly bonuses that are awarded on condition that the total aggregate target from all previous quarters is achieved) (Chung, 2015), and bonuses depending on the assessment of one's activity by different stakeholders. It can be said that new theoretical impulses are awaited and gamification may become one of them.

The use of trader remuneration schemes based on the results of their work that only partially depends on the trader's effort may seem unreasonable and awake the sense of injustice. Both the potential of the area where a trader makes sales as well as the target set in relation to this potential (which is not precisely quantifiable and depends on fleeting events in a billing period) contribute to a sense of injustice arising from comparison with others (Caldieraro & Coughlan, 2009; John & Weitz, 1989). Additionally, extraordinary events whether on some of the areas (e.g., bankruptcy of a large customer) or the entire market (such as recession or a new strong competitor) (Jiménez et al., 2013) radically affect the capability of achieving the targets, regardless of the amount of effort that a trader puts in. However, the simplicity of such systems (based on easily measurable short-term effects of work), tradition, and high demand for

risk among traders (Chung, 2015) are not conducive to the implementation of clearly different solutions in this area. Seeking innovative solutions in this area may turn out to be an important element of a competitive advantage since the role of a motivated sales force, especially if successfully canalized towards tasks that actually lead to a sales success, can hardly be overestimated.

The relevant scientific literature is already showing that the first attempts to apply gamification have produced promising results. Conference papers describe attempts to apply gamification, which demonstrated that the application of points exchangeable for non-monetary awards of substantial value (e.g., TVs or holiday packages) brings about greater benefits than the use of cash prizes of the same value in dollars (Chung, 2015, p. 61). This result should not be surprising as it is traditionally stressed that a material prize offered in contests for traders, if only it is selected in accordance with certain rules, is a stronger motivator than the corresponding amount of money (Jeffrey & Shaffer, 2007).

The present text proposes to focus on two separate ways to implement gamification as a tool motivating traders to perform better at work. One of the types is concerned with wanting to win an entertainment game in which the player increases their chances of success by better arming his or her avatar. This means that points are introduced, which can be spent on arming the avatar and the points are awarded to a trader for real successes in daily work, ranging from simple tasks such as washing the car through sales calls and actual sales. A mechanism controlling activities fostering sales is observable here; its implementation pays off for a trader as a step towards receiving material rewards for success in the entertainment game. So there we have a typical example of BLAP gamification where points that a trader gains both contribute to the sense of psychological success increasing their self-esteem and serve as a tool for increasing the chances of success in a game where the prize is material. One of the companies operating on the Polish market of implementing gamification in businesses advocates the usefulness of this kind of solutions by arguing that, since traders in Poland were not enjoying high social prestige due to low qualifications and requirements for this pro-

fession in socialism, actions aimed at raising traders' self-esteem will now cause the effects of their work to magnify (Łebkowski, 2015). An assumption that the fact of accomplishment of minor goals and feedback allowing to compare one's own results with the effects of the work over the past days and performed by other people will have a positive influence on the efforts made to achieve such effects is based on a belief that traders are characterised by the desire to compete and achieve greater and greater results (in each even negligible area of comparison), which would not appear to be contrary to the knowledge on the psychological profile of certain groups of traders.

The second gamification model – but not conflicting with this first one – is based on the introduction of an element characteristic of many games – uncertainty whether one's operations and success are sufficient to obtain desired results. It consists in incorporating a rule – within the bonus scheme – of drawing rewards from a pool of people that satisfy the criterion of 'achieving a high level in a game', i.e. the result of work assessed in various ways. An analogous gamification system that is actually in use in a Polish trade company was already described in the literature (Woźniak, 2015), however, a broader context where it is accepted by traders was not tested. The advantage of such a system is the possibility to put up rewards of high value, which makes it significant for the person receiving it. In accordance with Vroom's theory of motivation, the value of the potential reward is proportional to the motivation it generates, as long as the person who is motivated is aware what actions can increase their chances of getting it (Woźniak, 2012). Since the introduction of a prize draw allows to raise its value and enables a company to estimate the cost of a bonus remuneration at the time of setting targets, businesses may find such a solution convenient to use in their management practices.

Both these motivational solutions – if they turn out to be accepted by salespeople – would increase the range of an organization's incentives, by adding tools that have significant advantages over solutions that are currently in use. Firstly, these solutions are relatively inexpensive; and especially the costs of the second may be calculated in advance. The possibility of assessing personnel costs makes the

management of remuneration systems far simpler (Woźniak, 2012). Secondly, the search for innovative personnel management solutions is of significance not only for day-to-day management, but also for company image and gaining an edge in recruitment. Employer branding research has shown that young people especially are sensitive to signals that a company is attempting to introduce innovative solutions (Woźniak, 2013; Wołodźko & Woźniak 2017), hence increasing the range of incentives may be helpful for the recruitment of salespersons. Thirdly, sales representatives are a professional group that features high levels of readiness to take risks. Hence we may expect that gamification tools, where the results of the activity undertaken are always to a certain degree uncertain, will be better suited to the specifics of this professional group than the typical motivational tools. We assume there should also be a better fit between the individualism and competitiveness characteristic of a significant proportion of sales representatives working independently in the field, and competition-based motivational tools. This would make the gamification-type solutions analysed here better suited to the sensitivities of at least some groups of salespeople. In this respect, the analyses of how gamification tools are perceived may help organizations to identify incentives that are better than those used to date, or which at least supplement them well

#### 4. Assumptions and Research Hypotheses

Below is a description of two studies concerned with the acceptance of solutions based to the introduction of different types of gamification – one of the two types provided above – into the bonus scheme. The studies are built upon traders' opinions collected with e-questionnaires and pertain to the potential interest in thinking about implementing certain changes to the remuneration system but not the actual response to such changes. Since it was expected that gamification solutions would be unknown to the people under examination (which was later verified in study 2), it was concluded that limitation of the scope of hypothetical questions to a single type of innovation described in the questions contained in each questionnaire would make the expressed opinions more credible. The research

was exploratory in character so it was decided to use the methodology allowing to fulfil its objectives – by recording the respondents' opinions on the acceptance of different types of gamification and their dependency on certain contextual factors – and conduct the study on two separate research samples, which allowed to limit the scope of hypothetical situations that the respondents expressed their opinions about.

Another non-standard methodological decision was concerned with the type of prizes used in gamification systems. In practice, there are usually in-kind prizes awarded in contests for traders, which are of high value but not precisely known to traders. Nevertheless, studies on the effectiveness of prizes in kind should be experimental in character since opinions on this matter are formed based on circumstances that are highly hypothetical from the perspective of the respondent whose subjective perception of the usefulness of specific rewards is determined by its specific features such as usability and symbolism (as well as the reactions of other important people to the prize); hence credibility of opinions collected with the survey questionnaires would be undermined. Therefore, a decision was made to refer to unspecified 'rewards in kind' of indeterminate material value (for study No. 2) or to financial prizes (for study No. 1).

The studies were carried out in May and June 2016 on two groups of 100 and 102 traders (referred to as the first and the second sample, respectively), who work mainly in companies selling technical and telecommunication services (i.e., almost 100% of the first sample and 50% of the second). This type of trade sectors is a typical example of working with services based on knowledge and thus – on the one hand – companies representing it should potentially welcome innovation in trade because of high qualifications of the management staff and – on the other hand – this sector is often considered the key to economic development. However, both industries are characterized by a different structure of the sales process; hence only 25% of the first sample worked with a sales cycle shorter than one month (in companies selling b-to-b technical services and mainly technological lines for factories), which was the case for 90% of the second sample. The differ-



ences between the samples resulted from the manner of compiling them – the technique of snowball sampling was used and so an invitation to the study was sent out to the acquaintances of two traders who recruited the respondents from among the traders they knew and so in practice – colleagues from the same industry. Thus the samples are not representative of any particular trade sector, which does not limit their value in an exploratory study. Since there were differences between the industries and selection was incidental, the samples also differed in demographic terms. Almost half of the respondents in the first sample were women aged 25-35; worked as traders for between half a year and five years (and fewer than every fifth respondent was a beginner trader working for less than 1 year). The majority of the second sample were men (75%), worked in trade for longer than 1 year (75% of the sample) and almost 60% of them were aged 25-35 (though nearly 30% were older than this range). All the people under examination had higher education or were in the course of their studies, which is typical for traders in such industries. Both samples, despite the differences between them, show examples of dissimilarities among groups of traders with average job seniority. The first sample was rather oriented at institutional sales of technological services among enterprises and in the second sample half of the respondents traded with individual consumers.

The objective of the study was to find out whether the selected psychological, circumstantial, and contextual factors contribute to the acceptance of a bonus drawn at random – in the first case or BLAP gamification – in the second.

Study 1 concentrated on assessing the influence of the propensity to risk (measured in various ways) on the increase of acceptance of bonus draws. The assumption underlying the adopted operationalizations was to treat the propensity to risk as an individual characteristic that may be the consequence of not only psychological but also contextual factors. It was presumed that willingness to take risk that is posed by drawing for a bonus is easier to accept for people who take risky actions in neutral situations (i.e., they have a higher psychological propensity to risk) and by people whose current cir-

cumstances (i.e., no urgent need for high regular income) allow them to take risks associated with prize drawing. It was assumed that the propensity to take risk (measured on the basis of declarations about driving a car too fast – in the opinion of witnesses – and doing extreme sports); lack of a pressing need for high regular income (operationalized as people who choose – from among the multiple-choice answers – the options weaker than: ‘Every month – in addition to ongoing maintenance expenses – I have to repay less than PLN 500’ so by way of asking directly); and the length of the sales cycle (greater than 1 month and thus indicating people who receive smaller bonuses from time to time owing to the natural course of a sales cycle, i.e. indirectly operationalizing the opportunity to take risk) would contribute to acceptance of bonus draws (H1.).

H.1. Higher propensity to risk fosters traders' acceptance of gamification (in the form of a bonus draw).

This hypothesis is consistent with the assumption that the propensity to risk, which is relatively widespread among traders, may promote readiness to the introduction of changes in bonus schemes. At the same time, since a new solution results in alteration of the tradition, reluctance to accept the change, which could modify the impact of the propensity to take risk, was to be expected. Whereas working with long sales cycles – despite the instability of the proportion of the bonus in one's remuneration – likely causes people to get used to having a higher fixed component of the remuneration, which may increase reluctance to accept novelty but also – due to the lower significance of the bonus component of the remuneration of such workers – may contribute to a greater openness to risky (and new) solutions in this area among such employees.

The second hypothesis was concerned with dissatisfaction with the existing remuneration system, which might foster acceptance of change, i.e., bonus draws. Dissatisfaction was operationalized in two ways: as a declaration of dissatisfaction and as having received no bonus in the previous year (or receiving it rarely).

H.2. Dissatisfaction with the existing bonus scheme promotes traders' acceptance of gamification.

The data provided below (which were derived from a Master's dissertation of A. Wiczorek, executed under my direction at the University of Finance and Management) illustrate the dependence of employee satisfaction with the bonus scheme based on a bonus draw (that complements the standard individual bonus scheme based on targets), upon three types of factors: psychological (i.e., the propensity to risk), contextual (i.e., the length of the sales cycle), and situational (i.e., satisfaction with the bonuses received so far, measured with a general attitude towards the bonus scheme and declaration on receiving the bonus in the previous year). In addition, the relationship between the degree of acceptance of gamification and the need for income, which is a non-organisational contextual factor, was analysed. This means that the small need for regular income was operationalized in two ways – as a non-organisational contextual factor with the straightforward question about income and as a contextual factor determined by the structure of a trader's work – the length of the sales cycle.

The methodology of the second study was slightly different. It's objective was to verify traders' knowledge on gamification as well as the thesis that dissatisfaction with the existing bonus scheme promotes readiness to accept a solution from the BLAP gamification group, which was described in the questions as a specific procedure for remunerating. In this sense, study 2 verifies hypothesis No. 2 (put forward for the purposes of study 1) but gamification is operationalized differently. In addition, the study confirmed that the traders under examination have little knowledge on gamification. Data used in this study are derived from a Master's degree dissertation of J. Bolbut (which was also written at the University of Finance and Management). I would like to express my gratitude towards both authors for granting access to their data for the purposes of analyses described in this paper.

## 5. The Results of Study 1

The straightforward question (Would you be interested in introducing the elements of prize draw into bonus schemes and so in replacing rewards with a system that involves drawing prizes of considerably higher value among people who have met the criteria

for rewarding (at the same cost for the company)?) served to single out the respondents who are more optimistic towards introduction of prize draws to the bonus scheme. Only 7% of the respondents had a positive attitude towards a proposition formulated in such a way so the respondents replying 'depends what rewards and of what value' (i.e., 19%) were also included in the group of people with a positive attitude towards prize drawing (the answer 'depends what rewards and of what value' was the second next to 'difficult to say' – indicated by 25% of the respondents – most frequently chosen replay (which was in the middle of the Likert's type scale used for this question). It is thus noticeable that the traders' overall tendency to accept prize draws is small (as half of them were against this novelty, though only 9% strongly opposed it).

The table provided below shows data that allow to verify hypotheses 1 and 2 with operationalizations presented above. For the purposes of this analysis the answers 'yes' and 'yes under certain conditions' were combined and treated as acceptance of bonus drawing; 'No' and 'definitely not' were combined and treated as rejection of bonus drawing. The answers 'I have no opinion' were removed from the table and so it presents data obtained from 75 respondents;

On the basis of data presented in the table, one can notice that although all the described factors that generate dissatisfaction are conducive to more frequent acceptance of the bonus draws (while the groups not influenced by this factor – the two bottom lines – are almost equally divided in terms of this acceptance), this correlation is statistically significant only with regard to having received no bonus in the previous year ( $p=0.001$ ) and it is weaker in the case of dissatisfaction with the bonus scheme ( $p=0.01$ ). This suggests that situational factors distinctly more strongly than psychological (i.e., the propensity to risk) and organizational (i.e., the length of the sales cycle) ones affect readiness to seek new innovative solutions. At the same time, the obtained data do not confirm hypothesis No. 1 in either operationalization but hypothesis No. 2 – which was examined in this study for gamification based on bonus draws – was confirmed in both operationalizations of dissatisfaction with the bonus scheme.

**Table 1. The Traders' Attitude Towards Bonus Draws Depending on the Individual Characteristics (n=75)**

	<b>Propensity to risk</b>	<b>Need for (high) income</b>	<b>Long sales cycle (of more than 1 month)</b>	<b>Dissatisfaction with the existing bonus scheme</b>	<b>Having received no bonus in the previous year</b>
Accept bonus draws and have the characteristic provided in the column header	19	7	18	19	22
Accept bonus draws and do NOT have the characteristic provided in the column header	6	18	7	6	3
Do not accept bonus draws and have the characteristic provided in the column header	31	28	22	22	25
Do not accept bonus draws and do NOT have the characteristic provided in the column header	19	22	28	28	25
Chi square for df 1	*p<1.470 **p<0.225	5.250 p=0.022	5.250 p=0.022	6.887 p=0.009	10.287 p=0.001

Note: based on data derived from a dissertation (Wieczorek, 2016)

## 6. The Results of Study 2

The straightforward question demonstrated that the respondents' knowledge on gamification is limited; merely 3 out of 102 people under examination declared that 'they have heard enough [about gamification] to be able to voice their opinion about this phenomenon' and fewer than 24% chose the answer: 'I have heard something about this but nothing specific', whereas 73.5% have never heard of it. In an additional question concerning personal experience with gamification, the same three people also declared that they had already participated in a programme based on gamification while others indicated that they had not. These results confirm the validity of the

methodological assumptions – accepted at the stage of planning research – that questions about gamification will be highly hypothetical for the respondents.

To obtain a declaration about the potential that can be attributed to BLAP gamification for traders, a fairly complicated question was asked: 'Let us assume for the purposes of this survey that gamification in trade is the use of game-design elements (esp. those characteristic for computer games) to better engage workers so that they achieve better results at work. It consists in granting traders access to an application in which they role-play an imaginary character (similarly to many computer games) and obtain points, awards, and badges for real achievements at work, which

are used to develop their virtual character as well as bring them closer to winning the game, and may be redeemable against various real-world rewards not connected with one's remuneration. To what extent do you find the application of such a solution in the processes of motivating traders and awarding bonuses (please select one answer for each point by checking off the relevant field in the table)' and the answers to this this question are presented in the table below.

Additional Spearman's correlation analysis revealed that there are certain weak (but significant at level 0.21-0.35) statistical correlations between the above mentioned dimensions, especially as regards the attractiveness, encouragement of engagement, experiencing pleasure, and motivation to achieve better individual results. This means that the respondents who deemed gamification to be an attractive tool, slightly more frequently than others described this solution as engaging, pleasant, and motivating to improve results. However, further reliability analysis revealed that there are no statistical grounds to treat these dimensions as a separate global measurement scale of personal attitude to the application of gamification in the work of traders (Cronbach's  $\alpha = 0.233$ ); hence in further analysis, these dimensions are analysed separately. The process of correlating the assessments in these subdimensions with the trader's declared level of interest in gamification with the use of the nonparametric Spearman's rank method confirmed the correlation of this trait with:

(a) the general assessment of the remuneration system – the worse the respondent's evaluation of the remuneration system currently in use at their workplace, the (slightly) higher in comparison to others their interest in participating in gamification ( $r=0.45$ ,  $p=0.01$ );

(b) the evaluation of the match between the bonus scheme in place at a trader's company and his or her personal expectations – the correlation was preceded by a minus sign in this case as well: the responders who evaluated this match more critically were interested in this solution more frequently than others ( $r=0.52$ ,  $p=0.001$ ).

Additionally, this study used the declaration offered in response to a straightforward question provided below as a variable describing interest in gamification: 'Would you be personally interested in joining such

a game in the course of your occupational duties?'. As expected, the respondents expressed a positive attitude to such a possibility, which is illustrated in Table 4.

However, analysis of the circumstances surrounding this decision has not delivered the expected results. Only dissatisfaction with obtaining a bonus, measured as having constantly received no bonuses weakly correlated with the desire to add gamification to the pool of motivating tools (chi square 3.723 for  $df 1$  – the significance was 0.054 for the correlation between having constantly received no bonuses and a positive or negative attitude to gamification), which is consistent with the results of study 1 where dissatisfaction with receiving a bonus contributed to the willingness to accept gamification. No correlation was found between the acceptance of gamification understood in such a way and the length of the sales cycle measured with the number of transactions carried out in a month and the frequency of meetings for the purpose of concluding a transaction (as direct evaluation of the length of the sales cycle was not available in this study, thus it was assessment based on answers to two questions concerning facts known to the respondents who might not have been familiar with the term 'sales cycle length').

## 7. Discussion of the Results

Although only hypothesis 2 was confirmed by the results of both of the studies (and, therefore, it should be accepted that dissatisfaction with the current bonus scheme encourages approval of each gamification type under analysis), the research made it possible to find out which psychological, contextual, and institutional attributes are characteristic of people who have a more positive attitude towards gamification solutions than other people. Existing research on limitations as to the usefulness of gamification in an organization is concerned with creating tensions among employees, a hidden compulsion that taking part in the game produces (Dale, 2014), loss of motivation arising from the prolonged use of this methodology (Seaborn & Fels, 2015; Cardador et al., 2016), and a specific psychological profile that characterizes a player (Hamari et al., 2014). Specific conditions that may facilitate or hinder introduction of gamification under particular circumstances determined by the

**Table 2. Assessment of the Motivating Aspects of BLAP-type Gamification Solutions, Described in the Straight-forward Question (n=102)**

Factors	To a very high extent		To a rather high extent		To a neither high nor low extent		To a rather low extent		To a very low extent or none at all	
	L	%	L	%	L	%	L	%	L	%
Attractive	13	12.7	64	62.7	18	17.6	4	3.9	2	2.9
Engaging	24	23.5	52	51.0	14	13.7	7	6.9	5	4.9
Pleasant	15	14.7	66	64.7	15	14.7	4	3.9	2	2.0
Encouraging healthy competition	9	8.8	46	45.1	29	28.4	11	10.8	7	6.9
Offering clearer and more equitable bonus scheme rules	11	10.8	42	41.2	31	30.4	12	11.8	6	5.9
Effective in improving the results of the entire sales team	8	7.8	36	35.3	43	42.2	11	10.8	4	3.9
Encouraging development and raising qualifications	6	5.9	26	25.5	55	53.9	10	9.8	5	4.9
Encouraging to achieve better individual sales results	18	17.6	55	53.9	20	19.6	6	5.9	3	2.9

Note: based on data derived from a dissertation (Bołbut, 2016)

propensity to risk or the specific working procedures in an organization have not been analysed.

On the other hand, research on alteration of remuneration systems for traders focused on the effects of the new solutions. The studies were rather concerned with analysis of specific parameters of the newly introduced means of remuneration (i.e., commission size, the threshold for awarding a bonus, e.g. Kishore et al., 2013; Lopez et al., 2006), the fairness

of the system in relation to the one applicable to other groups of employees (Backes-Gellner &, Kersin, 2013), additional requirements for the material rewards (Jefferey & Shaffer, 2007), and the nature of the environment an organization operates in – e.g., volatility of technology and fierceness of competition on the relevant market (Johnson et al. 2016). It has not been analysed what is the potential that under certain circumstances – whether arising from the

**Table 3. The Correlation Between the Evaluation of the Motivating Power of the Proposed BLAP-type Gamification System with the Assessment of the Existing Bonus Scheme and Remuneration System (n=102)**

Dimensions	Assessment of the remuneration system at the respondent's workplace		Assessment of the degree to which the bonus scheme in an organization is matched to the expectations	
	<i>R</i>	<i>p</i>	<i>R</i>	<i>p</i>
Attractive	0.05	insignificant	0.09	insignificant
Engaging	-0.36	0.01	-0.31	0.03
Pleasant	0.001	insignificant	0.11	insignificant
Encouraging healthy competition	0.09	insignificant	0.09	insignificant
Offering clearer and more equitable bonus scheme rules	-0.21	insignificant	-0.29	0.05
Effective in improving the results of the entire sales team	0.32	0.03	0.29	0.05
Encouraging development and raising qualifications	0.14	insignificant	0.01	insignificant
Encouraging to achieve better individual sales results	0.45	0.01	0.32	0.04

Note: based on data derived from a dissertation (Bołbut, 2016)

profile of the workers or the procedures in use in the company – might be unlocked by way of introducing non-material rewards or draws of material prizes of high attractiveness.

As expected, in both samples, dissatisfaction with the existing bonus scheme promoted a more positive attitude towards innovation that could potentially be implemented into the system. The sense of injustice caused by the existing bonus scheme also encouraged the respondents to see gamification solutions as fair and transparent. From the perspective of analysis of the possibilities offered by the use of gamification in traders' bonus schemes, it should be noted that although acceptance of a system based on prize draws

is not too high in any of the situations described with the independent variables under analysis, it is also nevertheless non-zero in each case. This means that using gamification in bonus schemes has been shown to be possible, as chosen traders will accept it either in the form of prize draws or as BLAP--type systems with non-material rewards. Simultaneously, the study suggests that traders' initial dissatisfaction with the bonus scheme in use is sufficient to increase their openness towards that type of solutions complementary to the bonus scheme.

The factors under analysis allow to suggest in what types of companies it would be the easiest to introduce gamification. The literature referring to the agency

**Table 4. The Distribution of the Answers to the Question: 'Would you be personally interested in joining such a game in the course of your occupational duties?' (n=102)**

interest in participation in gamification	L	%
definitely yes	19	18.6
rather yes	52	50.9
neither yes nor no	13	12.7
rather not	7	6.9
definitely not	11	10.8

Note: based on data derived from a dissertation (Bołbut, 2016)

theory usually highlights that risk aversion among traders is one of the factors that advocate reduction of the changing component of remuneration, treating this aversion as a variable describing a group of traders, whose value is dependent not only on the personality profile but also on specific market conditions (e.g., fierce competition or previous experiences). The division into psychological variables (i.e., psychological propensity to risk measured with the opinion of others about driving at excessive speed) and contextual variables (i.e., need for high regular income owing to external financial liabilities) that was adopted in the study allows to treat the factors affecting aversion to risk as additional – apart from dissatisfaction with the existing bonus scheme – conditions conducive to acceptance of gamification not only as a new solution to a problem that presents itself but also as a specific idea for an additional component of a bonus scheme.

The two solutions described in this study can be treated as inconsistent with Vrooms' expectancy theory, which is not only one of the leading theoretical conceptualizations for analyses of motivation at work (Pepper et al., 2012), but also the most common basis for research on traders' remuneration (Johnson et al., 2016; Lopez et al., 2006; Segalla et al., 2006). In accordance with this theory, it can be understood that the high value of the prize that a company may

offer for a prize draw among traders who have met the requirements for rewarding and whose perceived value is additionally increased because of its character (Jeffrey & Shaffer, 2007) will serve as an effective motivator. Interest in prizes of no material value, analysed earlier in study 2, requires the assumption that their usefulness arises from the willingness to act effectively in an entertainment game. This requires us to refer to Ryan and Deci's Self-Determination Theory with its striving for achievement motive (Przybylski et al., 2010; Ryan & Deci, 2000) – irrespective of these achievements material bring a financial reward. In line with Vroom's theory, it should be assumed – treating declarations of interest in both gamification solutions as equivalent – that contemporary traders may also be motivated by non-material (and non-prestigious) rewards. This is contrary to the typical conclusions drawn from Vroom's theory in research on sales force, which suggest that cash prizes are the strongest motivators for traders (Segalla et al. 2006, p. 422). This allows us to consider the result – that non-material rewards are seen by traders as motivating even if prizes are useful only in an entertainment game – as a voice in the discussion on whether bonus schemes and commissions are directive or informative for traders and hence – whether they might be producing a demotivating effect associated with perceiving them as a manipulation (Turner, 2006). Since the

willingness to play and succeed in an entertainment game is sufficient to accept non-material rewards as motivators, the use of gamification may allow to increase, even if for a limited period of time (until the attractiveness of the entertainment game wears off), the traders' willingness to take action desired by the organization at almost no cost. Despite the fact that gamification is a tool of limited usability and its mechanisms cannot be applied to stir engagement in each and every task needed in an organization (Spencer, 2013; Cardador et al., 2016), attempts to adopt it in traders' remuneration systems may turn out to be particularly promising in view of the specific nature of the psychological profile of this group.

## 8. Conclusions

The above text analyzed the potential possibilities offered by the application of gamification in traders' remuneration systems. The theoretical section presented the specific problems posed by the attempts to create a sales force remuneration system that would be adequate for a particular company and indicated the current research trends in this area. It was also pointed out that the criticism of the agency theory for having a limited value as a theoretical base for creating traders' remuneration systems implies the potential fruitfulness of new systemic solutions that the concept of gamification might offer.

In the course of analysis of the possibilities for introducing gamification into incentive schemes for traders, two different ways of incorporating gamification into the bonus schemes were described – a system based on a prize draw among people who have met the requirements for receiving a reward and BLAP systems based on points, badges, and rewards obtained for reaching a high level in a competition constructed in such a way. Two examples of application of BLAP gamification in traders' bonus schemes were illustrated; i.e. the use of points for fulfilling specified tasks, which are redeemable against rewards in kind (described on the basis of the American literature) and introduction of an entertainment game where additional tools are obtainable through achieving the targets of a BLAP gamification system. The benefits of these methods were indicated – as long as the introduction of prize draws allows to raise the value of the reward (which can make its motivating power

stronger) and enables the company to predict the cost of bonus remuneration at the time of setting targets – and, therefore, it is expected that such solutions may be convenient for companies, especially considering the fact that the second type of gamification, which was examined in terms of traders' reactions to it, is based on almost no-cost solutions.

The part presenting the empirical study verified two hypotheses concerning the positive influence of the factor describing the context surrounding the solution (i.e., a trader's propensity to risk interpreted as a psychological variable and a variously measured variable precluding rational decision-making on the part of the trader, which might lead to the risk of lowering their income) and the situation in which it would be introduced (i.e., dissatisfaction with the existing bonus scheme) on the acceptance of gamification solutions in incentive schemes for traders. For each type of gamification solution under analysis, i.e. based on prize drawing and BLAP, a questionnaire survey was conducted on two separate groups of approximately 100 traders operating on the technology services sales market. The studies showed that both the psychological variables such as the propensity to risk and the non-organizational individual characteristics (i.e., need for relatively high regular income) and the attributes of the work itself (e.g., sales cycle length), which could make the risk of lowering one's remuneration rational under specific circumstances surrounding an organization (such as dissatisfaction with the existing bonus scheme) may influence the level of acceptance of gamification solutions. Despite the fact that the results of the study only confirmed the statistical significance of the correlation between acceptance of gamification (of both types studied in this paper) and dissatisfaction with the existing bonus scheme (i.e. hypothesis 2 was confirmed but not hypothesis 1), all the expected relations assumed the anticipated direction, which suggests that larger research samples are needed in order to verify these correlations.

The results obtained in a questionnaire survey carried out on an incidentally selected group of about 100 traders also revealed that the respondents' knowledge and experience in the area of gamification are marginal. Therefore, although the data obtained from such a survey cannot be generalized onto



other groups of traders, it can be concluded that a methodological recommendation for further opinion studies is to assume that the respondents have little knowledge of possible gamification solutions.

Furthermore, the paper presented the correlations among the characteristics of people who have a more positive attitude towards gamification solutions than others. As expected, in both samples, dissatisfaction with the existing bonus scheme promoted a more positive attitude towards innovation that could potentially be implemented into the system. The sense of injustice caused by the existing bonus scheme also encouraged the respondents to see gamification solutions as fair and transparent.

From a practical perspective of application of gamification in traders' bonus schemes, it should be noted that although acceptance of a system based on prize draws is not too high in any of the situations described with the independent variables under analysis, it is also nevertheless non-zero in each case. This means that a possibility to use gamification – in a form of prize draws – in bonus schemes has been recognized as it is accepted by some traders. Simultaneously, the study suggests that traders' initial dissatisfaction with the bonus scheme in use is sufficient to increase their openness towards bonus draws.

The second practical consequence of this study is an indication of what contextual factors imply which companies would find it easiest to implement bonus draws – the companies where the sales cycles are long. At the same time, it should be noted that even under such circumstances some individual factors may hinder acceptance of the solutions that are being implemented.

The empirical study that was carried out should be treated as exploratory in character since its form poses a range of limitations on drawing practical conclusions. The incidental character of the research samples and the specific type of sensitivity that might have been characteristic of the traders operating on the technological market in Poland are major limitations as far as implementation of gamification on the basis these research results is concerned and not the only ones. The key limitation to drawing practical conclusions from this study, even if its results could be generalized onto a broader population, is the fact that

it does not offer data on what traders' response would actually prevail and what would be the consequences of such an innovation in the remuneration system in terms of traders' motivation. The reason for that is that the survey is based on opinions regarding hypothetical situations and, therefore, could merely serve as an argument for experimental verification whether the results that were obtained would be consistent with the actual assessments arising from experience in working with such a bonus scheme. Owing to the fact that the study is based on hypothetical opinions, the results of this survey should be treated as an invitation to the actual experiment. The purposefulness of such an experiment is supported by the positive experiences brought about by other applications of gamification in incentive schemes as well as the conviction about traders' readiness to act in situations of uncertainty, which could reduce resistance to novelties in the remuneration system, and the specificity of the psychological profile of this group of workers.

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## Endnotes

1. *Armstrong & Landers (2019) distinguish between gamification in the training content and in methodology. Adding “fun” is an example of gamification in training methodology, similar to adding anecdotes, stories or elements of fantasy (Armstrong & Landers 2017). Adding simulation or memory board games changes the content of the training, as does adding other immersion based exercises. Both types of gamification can be poorly executed, as interactive training with anecdotes and stories does not motivate to participate if the content is mistargeted (Landers, 2018). For wider discussion see (Woźniak, 2015).*
2. *This can be seen in review articles, for example (Armstrong, Landers & Callmus, 2016; Collmus, Armstrong, & Landers, 2016) and then later in (Landers et al 2018), where there is no mention of gamification applied to remuneration systems.*