Propensity to Selling Scale: Construction of a Short Instrument for Assessment of Propensity to Selling

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Abstract

Sales occupation is one of the most frequent in the job market, and selection of successful salespeople is typically among the highest priorities of their companies. Research aimed at explaining sales performance shows that traditional psychometric predictors are limited in achieving this goal. Common constructs that are typically related to work behaviour, such as abilities or personality traits, typically show non-significant or low relations with sales performance. Taking that into an account, we developed a new measure for assessing one's propensity for selling, based on motivational constructs that underlie successful sales job. In the first study, we developed an initial set of items and assessed its content validity using a sample of sales professionals. In the second study, we assessed the scale's dimensionality, divergent and predictive validity. A sample of 99 contact centre agents were asked to describe themselves using newly developed items and measures of personality and explicit motives. Besides psychometric measures, the data on agents' objective sales performance was provided by their employer. First, a unidimensional, three-item solution was shown to be the most appropriate in the exploratory factor analysis of initially developed items. Second, an aggregated result of these three items, representing a total scale score, showed to be largely independent of personality and explicit motives measures. Third, propensity to selling, compared to personality and motives measures, showed to be the most important predictor in explaining the variance of objective sales performance. The scale was labelled Propensity to Selling Scale, and its theoretical and practical implications were further discussed.

Keywords: propensity to selling, sales performance, objective work criteria, scale construction

Introduction

The sales occupation is one of the most common jobs around the world, with millions of people employed in different positions in selling. For example, sales and related occupations represent 9.8% of the US employed population (U.S. Bureau of Labor Statistics, 2020). The work performance of these women and men is among the highest priorities on the agenda of their organizations. Therefore, stable psychological factors that predict success in selling across different contexts are of great interest to sales and marketing practitioners, industrial-organizational psychologists, and researchers in social sciences.

The majority of the work on sales performance predictors come from marketing research, with the most recent meta-analysis by Verbeke et al. (2011), which identified five factors that contributed to sales performance: selling-related knowledge, degree of adaptiveness, role ambiguity, cognitive aptitude, and work engagement. Yet, the most recent meta-analysis in the domain of psychometric predictors was published more than two decades ago. In it, Vinchur et al. (1998) explained the role of personality traits, interest, cognitive ability, knowledge of the selling process, and biodata as predictors of sales performance. Their analysis point at cognitive abilities as a valid predictor of supervisor performance ratings in sales jobs. This is consistent with other research (Bertua et al., 2005; Salgado et al., 2003), and with their role as the best predictors of performance across different organizational settings (Ones et al., 2012). However, other research (Vinchur et al., 1998; Verbeke et al., 2008) indicate that cognitive abilities are just marginally related to an objective sales criterion, which makes them a weak predictor of objective sales performance. Therefore, when searching for stable human characteristics as general predictors of objective sales criteria, personality traits are the remaining option. In that respect, openness, agreeableness, and emotional stability show mostly low correlations to sales performance over the studies (e.g., Vinchur et al., 1998). Among exceptions, the Sitser et al. (2013) study identified a relatively high relation of openness to an objective sales performance, compared to other traits. Conscientiousness and extraversion, compared to other personality traits, show higher consistency in personality–sales criteria relations over the studies, although these correlations are also low (Barrick et al., 2002; Sitser et al., 2013; Vinchur et al., 1998).

Furthermore, the most widely accepted theories dealing with the relationship between personality and job performance consider work motivation as the key mediating mechanism (Penney et al., 2011). Barrick et al. (2002) suggested that status striving (obtaining power and dominance within a status hierarchy) and accomplishment striving (intention to accomplish tasks as a means of expressing individual attributes and preferences) mediate relationships of conscientiousness and extraversion with sales performance, respectively. Further, Judge and Ilies (2002) meta-analysis found robust multiple correlations of the Big Five personality traits

with the most accepted contemporary motivational constructs: goalsetting, expectancy, and self-efficacy.

In terms of psychological processes involved, we define selling as volitional activities performed through interpersonal communication from one party (seller), that are directed to initiating an exchange of value with another party (potential buyer) or in increasing gains of such a value exchange. Thus, agents that only receive purchase orders and perform value exchanging transactions are not selling per this definition, unless they engage in increasing their share of value in such an exchange. Accordingly, a propensity to selling represents one's predisposition to successfully perform selling in a repeatable manner and over extended periods of time.

A sales job consists of persuading others to act often without any prior intention, with regular rejections and drawbacks for the sellers (Vinchur et al., 1998). Selling is mostly a highly autonomous job, where salespeople need to self-motivate to repeatedly reiterate the process after successes or failures. Therefore, the seller's ability to foster proactive behaviour, as one's engagement in the subsequent initiative is of utmost importance. Gawke et al. (2018) found that proactive behaviour depends on individuals' sensitivity toward reward and punishment, where individuals sensitive to reward are more likely to focus on positive outcomes of the initiative and thus engage, and those high in punishment sensitivity will focus on the negative outcomes, which will result in their exhaustion. The aspect of the achievement motivation theory (Atkinson, 1957; McClelland et al., 1953) that differentiates the achievement motive between striving for success and striving to avoid failure is an important consideration when explaining selling-related behaviour. In the theory, the need for achievement anticipates pride evoked by a competence-relevant situation, and the motive to avoid failure anticipates shame (Conroy, 2017). Both motives produce self-propelling behavioural tendencies.

Another convention in selling jobs is the application of financial incentives that are directly related to the seller's performance (Condly et al., 2003; Gerhart & Fang, 2015). Thus, the process of selling, on the one hand, requires the seller to draw energy from motivational factors such as striving for success and extrinsic incentives, and, on the other hand, be resilient to setbacks and failure, as buyers often deny their proposal to start or alternate value exchange terms (Furnham & Fudge, 2008). The dynamics between intrinsic sources of motivation and extrinsic incentives has been explained well by the self-determination theory (Deci & Ryan, 1985). In the context of autonomous and controlled motivations, as the central distinction of the theory, intrinsic motivation in selling is autonomous because it is volitional and triggered by sources that can be attributed to curiosity, enjoyment, and personal interests. Meanwhile, extrinsic incentives that involve the sense of pressure to engage, belong to controlled motivation (Gagné & Deci, 2005). Accordingly, Grant et al. (2011) found that individuals who engaged in an initiative taking under highly autonomous motivation and low controlled motivation fuelled their psychological resources in a way that contributed to performance.

Previous findings indicate that broad psychological constructs, traditionally used as predictors of work behaviours, such as cognitive abilities or personality traits, have low to moderate success in explaining variance in sales performance. Therefore, we hypothesized that a new measure that specifically assesses one's propensity for selling would capture additional variance in sales-related behaviour. Hence, in this paper, we present two studies in which we (1) constructed and evaluated the content of the items for the new scale, and (2) tested its structure, together with the divergent and predictive validity. To adapt to the circumstances of work environments in which studies and assessments have been conducted, we opted for a short scale format (for more on short scales see Rammstedt & Beierlein, 2014). As the goal was primarily to construct a scale intended to measure propensity to selling in work environments, we named it Propensity to Selling Scale (PSS).

Study 1: Item Content Development

The aim of Study 1 was to develop items that measure propensity to selling end evaluate their content validity. The first version of the scale items was drafted based on more than 20 years of experience in sales of one of the researchers. Next, based on a literature review, we adapted the items so that their behavioural explanations matched achievement motivation (Atkinson, 1957; McClelland et al., 1953) and self-determination theories (Deci & Ryan, 1985). On the one hand, we considered the implications of the self-determination theory when addressing the dynamics between intrinsic sources of motivation and extrinsic incentives. On the other hand, we relied on the achievement motivation theory to explain striving for success and striving to avoid failure as determinants of one's proactive behaviour. The resulting six items that were developed in this phase are shown in Table 1, along with the behavioural explanations behind them.

Method

Participants

We contacted 40 sales professionals from different industries such as pharmaceutical, finance, machinery, leisure, telecommunication, and ICT. All of them had current sales jobs listed on their LinkedIn profiles, and their e-mails were available. They were also recognized by the researchers as subject matter experts (SME) in sales. Out of the 40 contacted sales professionals, 8 males and 6 females accepted to participate in the study. After elimination of the results from one male individual, due to his sales tenure of only 1 year, their experiences in selling jobs were between 9 and 28 years ($M = 17.85$; $SD = 5.29$), with ages between 33 and 55 years ($M = 44.08$; $SD = 5.98$). Most of the SME opted to participate in the survey anonymously.

Instruments

In the first part of the study, the participants were asked to answer a single open-ended question: "What do you think are the attitudes of a salesperson towards selling or towards their role in selling that strongly impact their performance?"

In the second part, aimed to inspect the content validity of originally generated items, the participants were offered to score the content of the six individual items (Table 1) on a scale between -4 (*Statement has a strong negative influence on one's sales performance*) and +4 (*Statement has a strong positive influence on one's sales performance*), with the score of 0 meaning: "*Statement has no influence on one's performance in selling*". The scale had two purposes. First, to assess item validity through SME's individual feedbacks in form of a Likert scoring, where we anticipated relatively high average scores on items and a relatively high congruence among SME to support item validity. Second, the scale design allowed participants to score the level of impact of a statement in both directions. Thus, item scores oriented differently by different SME, or generally scored in the opposite direction of the original item's intention, would have indicated a content ambiguity and a flaw in the item's content design. We expected that the direction of the SME scores will match the original item design anticipating items 1, 3 and 4 to contribute negatively to the propensity to selling.

Procedure

We administered the survey using Google Forms and sent the request by e-mail to the group of 40 sales professionals. Answers from the open-ended question were analysed by tagging the colloquial sentences expressed by the SME with one or more psychological interpretations. For example, the expression "trust in the selling product" has been interpreted as striving to avoid failure. To reduce subjectivity, the survey results were analysed by each of the authors separately, after which the interpretations were agreed on a group discussion on each of the SME statements.

Results

The qualitative analysis from the open-ended question, where SME expressed opinions on salespeople's attitudes that impact their performance, had 12 interpretable answers. Out of those, 6 were pointing to conscientiousness (e.g., mentioning "persistence, credibility and trust"). Striving to avoid failure and striving for success were identified within 4 sentences each, and finally, both self-efficiency and "openness" were coded from two SME's statements. The results from the open-ended question were in line with the theoretical grounds behind the construction of the initial scale items, with exception of the two answers pointing to the personality trait of openness. We decided not to develop new items that would reflect openness,

since it might represent a valid sales predictor only in certain selling contexts (Furnham & Fudge, 2008; Vinchur et al., 1998).

Results from the second part of the study indicated low content validity of Item 1 since it was perceived ambiguously by the SME. Four participants scored the item as a positive contributor, three participants scored it as the one with no contribution, while the others scored it as a negative contributor to the sales performance. All SME scored the remaining items in the expected direction, with good inter-rater reliability expressed by the two-way random effects intraclass correlation coefficient (ICC = .83).

Table 1

Item Content in English and Croatian, its Explanations, and the Results of the SME's Scores on Items' Influences on Sales Performance

Item	Item content in English (Item content in Croatian)	Behavioural explanation	SME scores M (SD)
Item 1	I hardly bare rejection in sales. (Teško podnosim odbijanje u prodaji.)	A person scoring high in this item is striving to avoid failure. As rejection is part of any selling process, such striving inhibits motivation to sell [a].	-0.85 (2.23)
Item 2	I am thrilled when I close a sales deal, even when it does not mean additional financial gain for me. (Obožavam kad zatvorim prodajni posao čak i kada mi to ne znači dodatnu zaradu.)	The individual's achievement motive leads to self-efficacy and triggers intrinsic motivation that can compensate for lack of extrinsic incentives [a,b].	3.23 (0.83)
Item 3	I find selling uncomfortable. (Prodavanje mi stvara nelagodu.)	People attribute negative emotions to the process of selling that are likely to negatively influence their intrinsic motivation [b].	-2.54 (1.71)
Item 4	A sales job is not for me. It is rather for someone else. (Prodaja nije za mene, već za neke druge ljude.)	People express negative attitudes on sales occupations, reflecting low self-efficacy that undermines motivation [a,b].	-2.77 (1.69)
Item 5	I like persuading people to purchase something. (Volim nagovarati ljude da kupe nešto.)	Personal interest and enjoyment in an activity indicate intrinsic motivation, essential in sales initiative taking [b].	2.00 (1.35)
Item 6	A bonus is something that motivates me strongly to persist in selling. (Dodatna zarada (bonus) me jako motivira da ustrajem u prodaji.)	People scoring high in this item are motivated by extrinsic rewards and have positive beliefs about incentives as compensation for their sales effort [b].	2.62 (1.19)

Note: [a] achievement motivation theory (Atkinson, 1957; Barrick et al., 2002; McClelland et al., 1953); [b] self-determination theory (Deci & Ryan, 1985); [c] The SME assessed statements on a scale from -4 (*has strong negative impact on sales performance*) to 0 (*no impact on sales performance*), and from 0 to +4 (*strong positive impact on sales performance*).

Study 2: Scale's Dimensionality, Divergent and Predictive Validity

The aim of Study 2 was to assess the latent structure of PSS items, to assess the scale's divergent validity by exploring its relations to personality traits and explicit motives, and to assess its predictive validity by exploring its relation to objective sales performance.

Method

Procedure and Participants

A group of 205 contact centre agents, from a major Croatian company, were approached by e-mails, each containing a motivational letter from the researchers and a personalized link to the questionnaires, administered through a digital survey tool (www.questionpro.com). Hundred and ten ($N = 110$) agents had accepted the invitations, with the final sample size reduced to 99 due to random item choices detected by control questions (e.g., "select the last answer on the left"), and due to errors in data collection.

To motivate participation, the employer supported the study by allowing 10-minute work breaks to complete the survey, and researchers prepared an automated report with a summary of individual results that was presented to participants upon the survey completion.

All the participants of this study resided in a single location, with the same or very close job descriptions and performance indicators. Their jobs consisted of providing customer service in telecommunications, bounded with selling responsibilities. Details on participants' demographics are presented in Table 2.

Table 2

Demographic Characteristics of the Sample

		Total	Male	Female
N		99	36	63
Age *M* (*SD*)		29.68 (7.78)	26.22 (5.45)	31.35 (8.25)
Level/ status of education	High school	55	21	34
	University	28	7	21
	Students	16	8	8
Employment duration in years *M* (*SD*)		3.35 (4.62)	1.99 (5.28)	4.14(5.28)

Instruments

The propensity to selling items. Items generated and evaluated in Study 1 were presented to participants in form of a scale. They were instructed to rate themselves

on a 5-point scale for each item, ranging from 1 (*completely incorrect*) to 5 (*completely correct*).

Mini-IPIP (Donnellan et al., 2006; Mlačić & Goldberg, 2007) is a short version of the 50-item International Personality Item Pool – Five-Factor Model measure (Goldberg, 1999). Each personality trait was measured by 4 items, on a five-point scale, ranging from 1 (*completely incorrect*) to 5 (*completely correct*). Internal consistency values obtained in this study were acceptable: $\alpha_{extraversion}$ = .76, $\alpha_{openness}$ = .70, $\alpha_{agreeableness}$ = .70, $\alpha_{conscientiousness}$ = .66 and $\alpha_{neuroticism}$ = .66. Some sample items include: "I am the life of the party" (E), "I have a vivid imagination" (O), "I sympathize with others' feelings" (A), "I like order" (C) and "I seldom feel blue" (N, reverse coded).

Unified Motive Scales (UMS; Ružojčić et al., 2019; Schönbrodt & Gerstenberg, 2012). This is a measure that assesses explicit motives of achievement, power, and affiliation. Each motive is assessed by six items, split among two scales. The first, 10-item scale, assesses one's perceived importance of personal aspirations, with the proposed answers ranging from 1 (*not at all important*) to 6 (*extremely important*). Sample items from the first table are: "Be able to exert influence" (power), "Continuously improve myself" (achievement), "Engage in a lot of activities with other people" (affiliation). The second scale has 8 items evaluating personal values through congruence with the proposed statements, with scores ranging from 1 (*I completely disagree*) to 6 (*I completely agree*). Internal consistency values obtained in this study were good: $\alpha_{achievement}$ = .82, α_{power} = .80, $\alpha_{affiliation}$ = .88. Some sample items include: "I like to have the final say" (power), "I am attracted to situations that allow me to test my abilities" (achievement), and "I go out of my way to meet people" (affiliation).

Objective sales performance. A measure provided by the contact centre employer, for a period of six consecutive months. This measure was calculated based on the agent's successful sales events that influence agent's variable pay. Sales performance data was provided for 92 agents. These sales scores were monthly aggregates of weighted linear combinations of successfully closed sales events for the period from March to August of 2019. The weights reflected both the value and the complexity of a particular sales category, which added in criteria objectivity by differentiating relevance between "easy" and "tough" deals. For further analyses, sales performance over a six-month period was averaged for each participant.

Results

The analyses were conducted using a programming language for statistical analysis R v.6.6.0 (R Core Team, 2019), packages *psych* v.1.8.12 (Revelle, 2018), *correlation v.0.5.0* (Makowski et al., 2020) and *yhat v.2.0.3* (Nimon & Oswald, 2013), while the graphics were produced using package *ggplot2* v.3.1.1. (Wickham, 2016).

Descriptive Statistics and Inter-Item Correlations

After the exclusion of Item 1, upon the SME ratings, descriptive statistics and intercorrelations were calculated for the five remaining items as shown in Table 3. The normality of distribution of each item was assessed by interpreting values of skewness and kurtosis indices for each item. Kline (2011) suggests that values of skewness index greater than 3, and kurtosis index greater than 8 indicates that the normality of distribution assumption is not met. Here, all indices are below the recommended thresholds, and we proceeded with the parametric analysis of the data.

Table 3

Descriptive Statistics and Correlations of Five Remaining Items of PSS

	M	SD	SI	KI	SE	r 3	4	5	6
Item 2	3.25	1.26	-0.24	-0.98	0.13	-.27*	-.30*	.24*	.37*
Item 3	2.53	1.23	0.49	-0.71	0.12		.77*	-.48*	-.31*
Item 4	2.58	1.25	0.37	-0.88	0.13			-.48*	-.50*
Item 5	2.35	1.08	0.18	-0.91	0.11				.44*
Item 6	3.95	1.16	-0.98	0.06	0.12				

Note. M - mean; *SD* - standard deviation; *SI* - skewness index; *KI* - kurtosis index, *SE* - standard error of mean; *r* - Pearson correlation; *p* < .01.

Item 2 was the only one showing low correlations with other items, while intercorrelations among other items were moderate to large. Positive and negative values of the correlation coefficients reflected the wording of the questions. For some items, higher ratings reflected preferences for the selling process, while for others, higher ratings meant discomfort with the sales.

Exploratory Factor Analysis and Reliability

We conducted exploratory factor analysis (EFA) to understand if the five initial items could aggregate to represent a scale. Both KMO (.68) and Bartlett's sphericity test ($\chi^2(10) = 170.26$, $p < .001$) suggested that the correlation matrix is suitable for factorization. Next, we conducted a parallel analysis (PA, Horn, 1965) as a criterion for factor retention. For each EFA we conducted 10.000 simulations, following the recommendations by Hayton et al. (2004). Furthermore, all factors in PAs and EFAs were extracted using Maximum Likelihood estimation, where we considered factors obtained on actual data meaningful if their eigenvalue was greater than the 95th percentile eigenvalue of simulated data. PA suggested that only the first factor should be retained, with only 45% of the items' variance explained, which was less than the 60% considered acceptable in social sciences (Hinkin, 1998). In the next iteration, we excluded Item 2, which had the lowest factor loading. Again, only one factor was retained as meaningful, explaining 52% of the items' variance. Furthermore, we excluded Item 6 which had the lowest loading in the second iteration. The final PA

and EFA iteration (Table 4) resulted in one retained factor and 61% of the items' variance explained, with all item loadings greater than .30, which made the final solution of the EFA. We calculated the Cronbach's alpha coefficient of .81, which indicates a good and acceptable scale reliability (Tavakol & Dennick, 2011). Finally, we calculated an overall scale's score as a sum of three items.

Table 4

Three Exploratory Factor Analyses of Initial Items' Structure

Initial items	FA iteration					
	1		2		3	
	λ	h^2	λ	h^2	λ	h^2
Item 2	-0.34	0.12				
Item 3	0.82	0.67	0.80	0.63	0.88	0.77
Item 4	0.93	0.87	0.90	0.81	0.88	0.78
Item 5	-0.55	0.30	-0.60	0.36	-0.55	0.30
Item 6	-0.52	0.27	-0.52	0.27		
Explained variance	45%		52%		61%	

Note. λ - factor loading; h^2 - communality.

Divergent and Predictive Validity

Table 5 shows descriptive statistics for propensity to selling, personality traits, explicit motives, and sales performance, together with their intercorrelations. These results indicate that only the achievement motive and extraversion were correlated with PSS and both correlations were low and positive. We further tested how much of the variance in PSS could be explained by personality and motives, by using linear regression in which propensity to selling was entered as the outcome and personality traits and explicit motives as predictors. The regression model was statistically significant ($F(8, 90) = 2.15$, $p = .039$), but the adjusted $R^2 = .086$ suggested that personality and motives have a low contribution in explaining variance in propensity to selling. Next, we calculated relative weights (ε^2, for a detailed explanation, see Nimon & Oswald, 2013) for each predictor to examine the contribution of individual predictors to propensity to selling. To calculate relative weights, predictors are transformed into a new set of variables, which are not correlated one with another while they keep maximum possible correlation with original predictors. This procedure is used to assess the relative contribution of a set of predictors to a criterion, and to avoid issues in interpreting multiple regression caused by correlations among predictors. In this case, relative weights indicated that the largest contribution to explaining variance in propensity to selling comes from achievement motive ($\varepsilon^2 = .034$), conscientiousness ($\varepsilon^2 = .027$) and extraversion ($\varepsilon^2 = .020$), and all of these effects are positive and small.

Table 5

Descriptive Statistics and Intercorrelations for Personality Traits, Explicit Motives, Propensity to Selling and Sales Performance

	N	M	SD	SI	KI	SE	r								
							IPIP-N	IPIP-O	IPIP-A	IPIP-C	UMS-AC	UMS-AF	UMS-PW	PSS	Sales
IPIP-E	99	14.38	2.97	-0.18	-0.26	0.30	-.14	.26*	.00	-.16	.14	.45**	.07	.22*	.12
IPIP-N	99	10.39	2.88	0.33	-0.31	0.29		.12	.02	-.10	-.03	-.17	.28*	-.19	.02
IPIP-O	99	15.66	2.85	-0.55	-0.30	0.29			.06	-.15	.21*	-.05	.06	.19	.12
IPIP-A	99	15.65	2.62	-0.44	0.25	0.26				.10	-.04	.05	-.27*	-.03	-.03
IPIP-C	99	14.32	2.92	-0.34	-0.41	0.29					.24*	.11	.08	.07	.16
UMS-AC	99	28.17	4.74	-0.25	-0.61	0.48						.30**	.46**	.21*	.21*
UMS-AF	99	20.99	4.67	-0.26	-0.03	0.47							.29**	.16	.01
UMS-PW	99	19.52	5.63	-0.19	-0.70	0.57								.15	.03
PSS	99	9.25	3.04	-0.26	-0.65	0.31									.39**
Sales	92	35.30	21.07	0.57	0.15	2.20									

Note. IPIP-E - extraversion; IPIP-N - neuroticism; IPIP-O - openness; IPIP-A - agreeableness; IPIP-C - conscientiousness; UMS-AC - achievement motive, UMS-AF - affiliation motive; UMS-PW - power motive; PSS - Propensity to Selling Scale; Sales - objective measure of sales performance; M - mean; SD - standard deviation; SI - skewness index; KI - kurtosis index, SE - standard error of mean; r - Pearson correlation; * p < .05; ** p < .01.

Lastly, we tested the relative contribution of PSS in predicting objective sales performance on top of personality and explicit motives measures using hierarchical regression which is shown in Table 6. In the first step, we added IPIP and UMS variables as predictors, and sales performance as criteria to examine their total contribution in predicting sales performance. This model turned out not to be statistically significant ($F(8, 83) = 1.176$, $p = .323$) and accounted for only 2% of the variance in sales performance. In the next step, we included PSS together with personality and motivational predictors from Step 1, which led to a significant reduction of residual sums of squares in Step 2 ($F(1) = 12.18$, $p < .001$). Furthermore, Step 2 yielded a statistically significant model ($F(9, 82) = 2.54$, $p = .013$) with an increase in the explained variance of sales performance ($\Delta_{\text{Adjusted}}R^2 = .12$), and PSS as the predictor with the highest relative contribution within the model ($\varepsilon^2 = .13$).

Table 6

Hierarchical Linear Regression Results of Relative Contribution of PSS over Personality and Motives

	Step 1			Step 2		
	β	ε^2	*p*	β	ε^2	p
IPIP-E	.206	.020	.126	.140	.014	.268
IPIP-N	.108	.003	.362	.168	.009	.137
IPIP-O	.032	.007	.787	-.011	.004	.921
IPIP-A	-.082	.002	.474	-.043	.002	.684
IPIP-C	.185	.027	.108	.167	.024	.121
UMS-AC	.209	.034	.105	.149	.026	.220
UMS-AF	-.108	.004	.425	-.121	.005	.341
UMS-PW	-.087	.002	.512	-.121	.004	.336
PSS				.376	.130	.000
F(df)	1.176 (8, 83)			2.539 (9, 82)		
p	.323			.013		
R^2	.102			.218		
Adj. R^2	.015			.132		
ΔR^2				.116		
ΔAdj. R^2				.117		

Note. IPIP-E - extraversion; IPIP-N - neuroticism; IPIP-O - openness; IPIP-A - agreeableness; IPIP-C - conscientiousness; UMS-AC - achievement motive, UMS-AF - affiliation motive; UMS-PW- power motive; PSS - Propensity to Selling Scale; β - standardized regression coefficient; ε^2- relative weight; Adj. R^2- adjusted R^2; $^*p < .05$; $^{**}p < .01$.

Discussion

The presented studies aimed to construct and validate a new scale that measures propensity to selling. In the first study, a sample of SME confirmed content validity, with a high inter-rater agreement, for five of the six initially generated items. In the

second study, we examined the scale's structure and its divergent and predictive validity. First, it has been shown that a three-item version constitutes the best factor-analytic solution. Second, the three-item scale has been largely independent of personality and motives measures, which has been shown through correlational and regression analyses. Lastly, correlational, and hierarchical regression analyses indicated that propensity to selling explains more variance in objective sales performance, compared to measures of personality and motives.

The content of the final three items indicates that the scale measures of propensity to selling can be best interpreted as a function of intrinsic motivation that arises from the dynamics between striving to success and striving to avoid failure. After eliminating Item 1 in Study 1, due to an ambiguous interpretation of the content, two more items were eliminated based on low loadings in EFA. Item 2 ("I'm thrilled when I close a sales deal, even when it does not mean additional financial gain for me") was excluded despite the highest SME scores on the content validity survey. The high SME scores, along with the low communality indicates the possible existence of a second factor that we missed to capture due to the constrained number of scale items. On the one hand, the exclusion of Item 6 put into question the importance of extrinsic incentive rewards as an element of propensity to selling. On the other hand, it is possible that the low number of initially generated items did not capture extrinsic motivation for selling sufficiently, and that a larger number of such items would load on a different factor. The contemporary psychological thought is not undivided on the dichotomy of human motivational sources. Some authors claim that the direct extrinsic rewards have a major positive impact on one's motivation (e.g., Gerhart & Fang, 2015), while others claim that those are mostly put in the context of the expense they make to the genuine interest and self-generated intrinsic motivation (Legault, 2016). However, the final content of the scale items indicates that the scale captures a more intrinsic and self-determined side of the self-determination theory continuum (Deci & Ryan, 1985; Gagné & Deci, 2005).

While empirical findings from our study showed significant correlations of the achievement motive, and the PSS scale with sales performance, it did not confirm roles of extraversion and conscientiousness in predicting individual selling performance as explicated through the literature review. This could be explained by the Vinchur et al. (1998) finding that, actually, subdimensions potency of extraversion and achievement of conscientiousness from Hough's (1992) personality theory have the major contribution to such a relationship, while the Mini-IPIP scale, due to its reduction, was unable to capture such effects. These subdimensions lexically overlap with the achievement motive as an important element of the achievement motivation theory. Further, our findings show that PSS explains variance in sales performance above personality and explicit motives. This leads to the conclusion that PSS captures cognitive processes that are in closer proximity to the motivational dynamics that define propensity to selling than the existing antecedents in form of personality and explicit motives.

Lastly, when considering the validity and applicability of the newly developed scale in future research, we should address some limitations of the presented findings. First, instead of starting with a large number of items (e.g., Tellegen & Waller, 2008), and then eventually reducing it to a lower number with higher factor loadings, we opted for an experiential method, relying on subject matter expert inputs and a thorough theoretical and logical analysis of the content to create the initial set of items. While such an approach allowed us to cope with the constraints of studies in the workplaces, it also implied consequent limitations, such as the potential omission of important content domain components of a complex construct, and possible lower reliability in individual assessments comparing to scales with item content redundancy, both common limitations of short scales (Rammstedt & Beielein, 2014).

Second, the sample size might be considered small for the application of dimension reduction techniques. Comrey and Lee (1992) suggested an adequate sample size for applying factor analytical procedures, ranging from 100 (poor) to 1000 (excellent). However, these heuristics were not supported by Monte-Carlo studies in which population-level communalities and the number of true underlying dimensions were varied together with sample sizes (MacCallum et al., 1999). Accordingly, larger sample sizes are necessary when communalities are low and when a greater number of underlying dimensions are extracted. In Study 2, communalities of the final solution were fairly high and only one factor was extracted, indicating an adequate sample size for concluding. Furthermore, we conducted Study 2 on the sample of contact centre agents in the telecom industry, whose job did not include sales exclusively. Construct and predictive validity of the scale should be further examined among sales representatives in different industries, and different types of sales jobs. Lastly, the scale itself is probably vulnerable to socially desirable answers, which limits its usage in practice. Therefore, further development of the PSS scale or its future alternatives should focus on the creation of implicit measures of the construct.

However, findings presented in this paper indicate that the newly developed scale is largely independent of the established measures of personality and motives, and it provides additional predictive power in explaining sales performance, and as such it might be a valuable addition in future sales research.

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Skala sklonosti prodaji: Razvoj kratkoga instrumenta za procjenu sklonosti prodaji

Sažetak

Zanimanje prodavača je jedno od najčešćih zanimanja na tržištu rada, a odabir uspješnih prodavača među najvećim je prioritetima tvrtki koje se time bave. Istraživanja usmjerena na objašnjavanje učinkovitosti u prodaji pokazala su da tradicionalni psihometrijski prediktori u tome nisu uspješni. Uobičajeni konstrukti povezani s radnim ponašanjem, poput sposobnosti ili crta ličnosti, nisu značajno povezani s uspješnošću u prodaji ili su pak nisko povezani s njome. S obzirom na to, razvili smo novu skalu koja ispituje sklonost prodaji, a koja se temelji na motivacijskim konstruktima koji se nalaze u podlozi rada uspješnih prodavača. U prvome smo istraživanju generirali početni skup čestica upitnika, a njihovu su sadržajnu valjanost procijenili stručnjaci u prodaji. U drugome su istraživanju proučene dimenzionalnost skale te njezina divergentna i prognostička valjanost. Nove čestice i ranije korištene mjere ličnosti i eksplicitnih motiva primijenili smo na uzorku od 99 agenata, zaposlenika kontaktnoga centra. Pored toga, korišteni su podaci o objektivnim pokazateljima uspješnosti u prodaji koje je ustupio poslodavac. Prvo, eksploracijskom je faktorskom analizom utvrđeno da je jednofaktorsko rješenje koje uključuje tri čestice najprikladnije. Drugo, regresijskom je analizom pokazano da je agregirani rezultat na trima česticama, koji predstavlja ukupni rezultat na skali, nisko povezan s osobinama ličnosti i eksplicitnim motivima. Treće, hijerarhijskom je regresijskom analizom pokazano da sklonost prodaji, u usporedbi s crtama ličnosti i eksplicitnim motivima, znatno bolje predviđa objektivnu uspješnost u prodaji. Nova je skala nazvana Skala sklonosti prodaji te su raspravljene njezine teorijske i praktične implikacije.

Ključne riječi: sklonost prodaji, uspješnost u prodaji, objektivna radna uspješnost, konstrukcija skale