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FOSTERING INNOVATION THROUGH CREATIVITY STIMULATION METHODS IN CROATIA

JEL classification: O31

Abstract

The essential prerequisite for an innovation to occur is creativity. Novel ideas, novel solutions of problems are the initial stage of innovation process, but they are also indispensable throughout the innovation process. Innovating firms thus must strive to foster creativity. Literature provides evidence that, apart from personal characteristic of individuals, other factors play important role in unleashing creativity inside firms. Those include, among others, creativity trainings and reward systems designed to encourage creativity of employees. The key question addressed in the paper is whether creativity fostering methods increase innovation output in Croatian firms. By utilizing the Community Innovation Survey 2010 data and propensity score matching methods, we estimate the average treatment effect of the treated (i.e. firms that employ creativity stimulation methods). Within this framework, our measured outcome is the innovation activity of the firm and the treatment is the creativity stimulation method used by the firm.

Keywords: innovation, creativity, Croatia.

1. INTRODUCTION

Firms that aim to grow through innovation need to encourage and unleash creativity of employees. Starting with idea generation and further throughout innovation process, creative thinking is indispensable part of innovating. Thus, firms strive to encourage innovation by employing several creativity stimulating methods.

The nature of creativity is rather complex as it requires many resources, such as intellectual skills, knowledge, motivation, personality, thinking styles and environment (Sternberg, 2006). Sternberg (2006) pointed out environment as one of the components relevant for creativity, but he also advocates that decision to use all the six abovementioned resources is more important than possessing them. This indicates that creativity is not just an intrinsic characteristic that cannot be developed and encouraged. Shalley, Zhou and Oldham (2004) argue the employees' creativity is a function of personal characteristics, the characteristics of work context and interactions among personal and contextual characteristics. These personal characteristics have important economic consequences. Through traditional channel, which according to Swann and Birke (2005) leads from creativity via innovation and productivity, to increases in business performance, firms are expecting to improve their relative position on the market. Both researchers and practitioners seek to find techniques that will foster and nurture creativity and hopefully through this process foster

innovation as well. Recent literature favors the notion that creativity can be stimulated, nurtured and even taught.

Fostering innovation is relatively more important in transition economies, for which the indicators on innovation activity reveal significant gap to more advanced market economies (Eurostat, 2013). The question is whether this gap can be narrowed by implementation of specific measures within the enterprises, and in particular within the innovative enterprises. Recent contributions in the literature on transition economies reveal that skill enhancement within the firm produces more results than improvements in general education. For example, Nazarov and Akhmedjonov (2012) suggest that further investments in education will not lead to improvements in firms' innovativeness, while on-the-job training will. Furthermore, Gashi and Adnett (2012) show that firms that undergo technological change are more likely to provide training and to a greater intensity. Thus, studies show that innovative firms seem to have recognized the importance of their employees in transition economies as well as in market economies.

In this paper we explore creativity enhancing methods used by Croatian firms. Our main interest is to evaluate whether the implementation of these methods affects innovation output. The structure of the paper is following. Section 2 provides study context within the related literature and discusses the data sources used in empirical analysis. Section 3 explains estimation strategy. Section 4 presents the results and discussion. Last section brings conclusions.

2. LITERATURE REVIEW AND PRELIMINARY DATA ANALYSIS

Eurostat (2013) data shows that innovative enterprises as a percentage of all the enterprises in Croatia are below comparative data for EU-27 average. At the same time, promotion of innovation seems to be one of the key policy goals, emphasized in public debates. This makes the issue of analyzing policy measures for increasing innovation performance in Croatian economy important. In this paper, we want to address this issue from the perspective of enterprises and their activities to increase innovation. One of such actions could be to promote the creativity of their employees.

The creativity stimulation methods used by the enterprises might be various in nature and form. In the present paper, we restrict our analysis to following six methods:

- Brainstorming sessions (brain)
- Multidisciplinary or cross-functional work teams (multi)
- Job rotation of staff (rotac)
- Financial incentives for employees to develop new ideas (fina)
- Non-financial incentives for employees (nefin)
- Training employees on how to develop new ideas (tren)

Although the choice of methods analyzed is partially guided by the data available for empirical analysis, it has to be emphasized that each of these methods has been widely discussed in the literature. We subsequently briefly discuss the most relevant findings in the literature.

Brainstorming is one of the most popular and well-known techniques in business practice. It is a creativity exercise (Trott, 2003) for generating ideas in group. This technique is often used in innovation development, in particular in early stages. Since it is wide-spread, we would expect that it is also frequently used by Croatian enterprises.

Innovative firms widely rely on cross-functional teams when it comes to new product development, because it has been found that they speed-up the product development process (McDonough, 2000). It has even been argued that identified dedicated cross-functional teams are one of the critical success factors of innovation projects (Cooper, 1999). Cross-functional teams contribute to innovation projects success, but they are not easy to implement. This is primarily due to different approaches and goals of team members as well as possible conflicts that occur among business functions. Strategic alignment of functions, team accountability and organizational

culture that encourages teamwork contribute to successful implementation of cross-functional teams (Holland, Gaston and Gomes, 2000).

Job specialization is frequently associated with attempts to avoid boredom and monotony of performing limited number of operations daily (Ferrell and Hirt, 2000). In those situations employing job rotation scheme to ensure better understanding of activities performed in other departments (Jones, George and Hill, 2000), might spur employees' creativity. However, job rotation might have many potential disadvantages, if workers consider some jobs less attractive or valuable. Additionally, those might be related to the question of adequate wage-rate for performing work other than previously agreed-upon.

At the first glance, it could be suspected that within transition economies, financial incentives would be most welcomed by employees. Remuneration can potentially ensure accomplishment of various organization goals, including innovation. However, it doesn't necessarily lead to desirable results and it is questionable if it will result in more ideas, inventions, innovations (especially radical innovation). Literature even suggests negative effect of rewards on creativity (Amabile et al., 1996). Therefore, Maella (2012) argued that financial reward scheme should not aim to achieve specific results but encourage desirable behavior that is especially relevant for innovation and creativity. Zhou and Shalley (2003) point out that rewards should strive to recognize competences, attempts and accomplishments in creativity. Ederer and Manso (2013 published online) find that pay- per -performance that tolerates early failure enables innovation.

Apart from financial incentives, non-financial incentives such as public recognition, promotion to more interesting job position, decision making autonomy, job security, and transfer to attractive location are used for rewarding employees (Thompson and Strickland, 1996). For example, Oldham and Cummings (1996) find that encouragement from supervisors plays important role for fostering employee's creativity. Since these comprise of intangible and sophisticated measures, without prior analysis it is hard to speculate how widespread such measures are in transition economies. In particular, as some of the measures might be viewed as incentives by employers, but remained unrecognized as such by employees.

On the contrary, training methods can encompass specific needs related to the specific innovation development, and could be most directly recognized by the employees. Basudur, Wakabayashi and Graen (1990) provide evidence that training programs positively affect creativity of employees. Naturally, we expect that these are also used in Croatian innovative firms.

The above-mentioned methods are some of the most prominent tools for fostering creativity. Extensive literature provides evidence of their relevance for stimulating creativity, and eventually for having positive influence on enabling innovation. However, the implementation of these methods requires skills and competences. Given the nature of creativity and complexity of innovation process, positive results are not guaranteed. Therefore, it is important to explore whether these methods have proven to be beneficial for innovation outcome in Croatian enterprises. In the remainder of this section we look into implementation of creativity stimulation methods in Croatian firms.

The empirical analysis in the paper is performed on the level of individual firms. The original database used for the analysis was the Community Innovation Survey 2010 (CIS 2010) for the period 2008-2010, as conducted by the Croatian Central Bureau of Statistics (CBS). CIS 2010 is conducted according to the same methodology in EU Member States, which enables comparison of certain indicators across European countries. In Croatia, the CIS 2010 sample consists of 4500 enterprises. Due to the relatively high response rate[1], the sample used in the present analysis comprises of 3390 enterprises.

[1] More details on methodology can be found in Croatian Bureau of Statistics, INNOVATION ACTIVITIES IN CROATIAN ENTERPRISES, 2008 – 2010, First release NUMBER: 8.2.2, 13 JULY, 2012 http://www.dzs.hr/.

Eurostat data on successful implementation of creativity stimulating methods generally finds that percentage of Croatian enterprises using the method is close to the average of other European economies for which the data exists. For example, if we consider the method of training employees, we will find that 24 percent of innovative Croatian enterprises have used this method successfully, comparing to the average of 22 percent in EU countries. The same applies to other methods, and we can conclude that innovative firms in Croatia generally do not lag behind EU countries in implementation of creativity stimulating methods. Thus, raising awareness of the existence of these methods does not seem to be a relevant policy recommendation.

Next, we explore presence of each of the methods in firms in Croatia based on sample data. It is worth noting that following table gives the data on implementation of creativity stimulation methods in all firms in the sample as well as in innovative and non-innovative firms regardless of the success assessment reported by respondents. This is because success of methods can be assessed in various terms that correspond to individual perception of creativity and goals they expect to achieve employing particular method. In this study we don't want measure of creativity to interfere with respondents' measure of creativity. Thus, it is relevant only that creativity stimulating method was implemented during the three-year period.

The most implemented method is job rotation (22.12 percent) followed by training programs (20.29 percent). It appears that firms in Croatia still don't sufficiently recognize potentials of cross-functional teams for fostering creativity. This method is implemented in 17.05 percent of respondents. Furthermore, financial and non-financial incentives are not strongly favored when it comes to stimulating creativity. Creativity stimulation is built around more sophisticated methods.

Table 1 Implementation of methods for stimulating creativity in firms in Croatia, in percent

	All	Innovators	Non-innovators
Brain	19.29	34.23	6.99
Multi	17.05	31.22	5.38
Rotac	22.12	37.10	9.79
Fina	18.41	32.40	6.89
Nefin	18.47	32.58	6.84
Tren	20.29	37.49	6.13

Source: authors' calculation based on CIS.

As for the innovators, data reveal that the most used methods are job rotation and training programs for stimulating creativity (Table 1). Job rotations are widely used method in non-innovative firms as well. As for financial and non-financial incentives, they are almost equally popular methods for fostering creativity in both innovative and non-innovative firms. Furthermore, 12.5 per cent of all firms and 21.94 per cent of innovators implemented both financial and non-financial incentives simultaneously. As previously mentioned, cross-functional teams are the least used method in Croatian firms, both innovative and non-innovative.

The method to assess whether these activities of the Croatian firms have resulted in more innovation activity is discusses in following section.

3. ESTIMATION STRATEGY

The key question that we want to address in this paper is whether the enterprises that use creativity enhancing methods for their employees are having greater probability of innovation than enterprises that do not use these methods. For the purpose of obtaining quantitative answer to this question, we estimate the average treatment effect on the treated. The basic concepts are following. If Y_0 is the outcome without treatment and Y_1 is the outcome with treatment, D is an indicator of the recipient under the treatment (thus equals 1 if under the treatment and zero otherwise), the overall observed outcome is following:

$$Y = DY_1 + (1 - D)Y_0 \quad (1)$$

The treatment effect, which we cannot directly observe and thus must estimate with appropriate method, is:

$$\Delta = Y_1 - Y_0 \quad (2)$$

We would like to estimate whether there is a desired effect of specific creativity enhancing method, and whether it is significant. Thus, we are interested in average treatment effect of the treated (ATT), which theoretically is derived for N enterprises from the following:

$$E(Y_1 - Y_0|D = 1, X) \quad (3)$$

The best theoretical approach for evaluation of such effect would be to have the access to the random sample of enterprises that either received treatment (i.e. used the creativity enhancing method) or not. Since we are not conducting the experiments, but rather rely on the existing data sources, we have to recreate the control group that would allow us to estimate the effect. To that end we rely on matching. When using matching procedure, we have to check if our sample consists of enterprises that are under treatment and those that are not (in our case we have the data on enterprises that used the creativity enhancing methods and those that have not used those from CIS). Another assumption is that we have the data on a set of variables X whose distribution is not affected by the decision (D) to use the creativity enhancing methods. In our case, we have the variables resulting from the CIS survey which correspond to questions answered both by the treated and control groups of enterprises. In that case, matching estimators match up the treated enterprises with observably (according to the X set of variables) similar untreated enterprises. In cases when there is a large set of X variables, we could have various points of similarity and dissimilarity. To reduce this to a single measure, propensity scores - $\Pr(D = 1|X)$ - can be assessed following Rosenbaum and Rubin (1983) theorem.

The propensity score matching algorithm entails estimation of probabilistic or logistic function of the treatment variable, resulting from the specific observable characteristics of the program participants (X variables). In our case, the goal is to determine the factors behind the probability to utilize a specific creativity enhancing method specified in Section 2.

For each of the six treatment variables, a propensity score matching algorithm was applied using the same set of initial potential explanatory variables. Since there are no prior empirical estimates of these phenomena in Croatian literature, we have included a larger set of independent variables in our specifications in order to be able to detect the counterfactuals with similar characteristics. That implies that we resolve to use all the possible variables. In terms of CIS questionnaire, this means all the answers that all the participants had to provide. Additional reason for this approach can be found in Heckman, Ichimura, and Todd (1997), who warn against omitting important variables in the procedure, since this can seriously increase bias in resulting estimates.

The dependent variable in propensity score matching algorithm is binary, with obtaining value 1 if the method was used in the enterprises (regardless of its successful implementation or not) and value 0 if the method has not been used. The choice of independent variables in our probit

equations is guided by the data source (i.e. CIS), and consists of variables specified in Appendix A1.

For each of the six treatment variables, a separate probit model was used to identify propensity scores, due to the fact that propensity score matching algorithm requires that the balancing score property is satisfied[2]. The propensity scores when then used to identify the enterprises belonging to the control group and to estimate the average treatment effect of the treated based on the differences between treated and control groups. The outcome variable in our case is defined as overall innovation activity of the enterprise[3]. This is also dummy variable which obtains value 1 if enterprise had any type of the innovation activity:

- Products innovation: new or significantly improved products, new or significantly improved services
- Process innovation: new or significantly improved methods of manufacturing or providing services, new or significantly improved logistics, delivery or distribution methods for inputs, goods or services and new or significantly improved supporting activities for the processes
- Ongoing innovation projects (product and process innovation)
- Organizational innovation: new business practices for organising procedures, new methods of organising work responsibilities and decision making and new methods of organising external relations with other firms or public institutions
- Marketing innovation: significant changes to the aesthetic design or packaging of a good or service, new media or techniques for product promotion, new methods for product placement or sales channels and new methods of pricing goods or services.

Due to the fact that this issue has not been analyzed previously in Croatian literature, we have estimated the ATTs based on two methods: nearest neighbour matching and kernel matching. The nearest neighbour algorithm iteratively finds pair of subjects with the shortest distance. We also use Epanechnikov kernel function[4], which allowed us to perform post-estimation diagnostics. For example, to further elaborate the relevance of our independent variables selection, we have performed matching covariates balancing property test[5]. The purpose of the test is to identify the differences between the treated and control group before and after the matching, with the desirable result that reduction of the bias in the difference of the mean between target and control group is large as a consequence of the performed matching. Similarly, even though the number of treated and control variables were large enough to utilize analytical standard errors, we have also checked whether bootstrapping of standard errors might result in less significant treatment effect. Since bootstrapping only confirmed the results obtained from analytical errors, we do not present additional data here as well[6].

4. RESULTS AND DISCUSSION

The results of average treatment of the treated effect estimated according to the nearest neighbour and kernel matching algorithms are presented in Table 2 and subsequently discussed.

[2]Estimated probit for each creativity enhancing method is shown in the appendix A2.
[3] The method used relies on rather strong assumption that all variables that influence treatment assignments (i.e. covariates in probit regression) and potential outcomes are observable and available in dataset (Caliendo and Kopeinig, 2005). Yet, there might be factors that affect both innovation and creativity, which are not covered by Croatian CIS dataset. To deal with this potential endogeneity issue, we would require a richer dataset.
[4]This has been obtained by following psmatch2 procedure in STATA 11.
[5]Results available from the authors upon request.
[6]It could be obtained from the authors upon request.

Table 2: Average treatment of the treated effect

Method	Nearest Neighbour Matching		Kernel Matching	
Treatment	Number treated/control	ATT (standard error)	ATT (standard error)	Γ (Q_mh+)
Brain	654/2398	0.162*** (0.033)	0.179*** (0.028)	> 5.9
Multi	568/377	0.194*** (0.035)	0.224***(0.024)	> 7.0
Rotac	740/899	0.156*** (0.030)	0.177*** (0.021)	> 4.7
Fina	612/664	0.194*** (0.031)	0.193***(0.021)	> 5.8
Nefin	613/634	0.131*** (0.032)	0.163*** (0.023)	> 5.9
Tren	675/755	0.189*** (0.030)	0.230*** (0.021)	> 8.3

Notes: *** denotes significance at the level of 1 percent. For testing Mantzel-Haenszel bounds we report the value of Γ associated with p-values larger than 10 percent.

Source: authors' estimates.

The results confirm that using each of the creativity enhancing methods has a positive impact on innovation activity in Croatian enterprises. It is reassuring that the treatment effect is found positive and significant by two alternative methods. To confirm these results, we have also performed sensitivity analysis to check if there are unobservable variables that affect assignment into treatment and outcome simultaneously. If such hidden bias existed, it might reduce the robustness of matching estimators (Becker and Caliendo, 2007). To examine this possibility, Mantzel-Haneszel bounds test was performed, which lets the researcher determine how strongly an unmeasured variable must influence the selection process to undermine the implications of selection process. Given that the estimated effect is positive, we are more interested in the possibility of overestimating the treatment effect and the presented Gamma values in Table 2 refer to that case. Our results typically imply that it would require high values of Gamma for the result not to be significant. Thus we conclude that the estimated models provide enough evidence to draw some conclusions.

So, what can we infer from these estimates? The comparisons of the estimated treatment effects are presented in Figure 1. First, it seems that we can fairly conclude that non-financial incentives to employees are the least likely to result in more innovation. Brainstorming sessions as well as job rotation schemes seem to be the next two with slightly higher innovation performance. For the last three methods – multidisciplinary teams, financial incentives and training – we cannot give clear answer which is the most effective. On average, it seems that financial incentives are the least effective of these three. However, they are most consistent across the different methods of treatment effect estimation. The other two – multidisciplinary work teams and training methods – have higher average and also higher variation in estimated treatment effect.

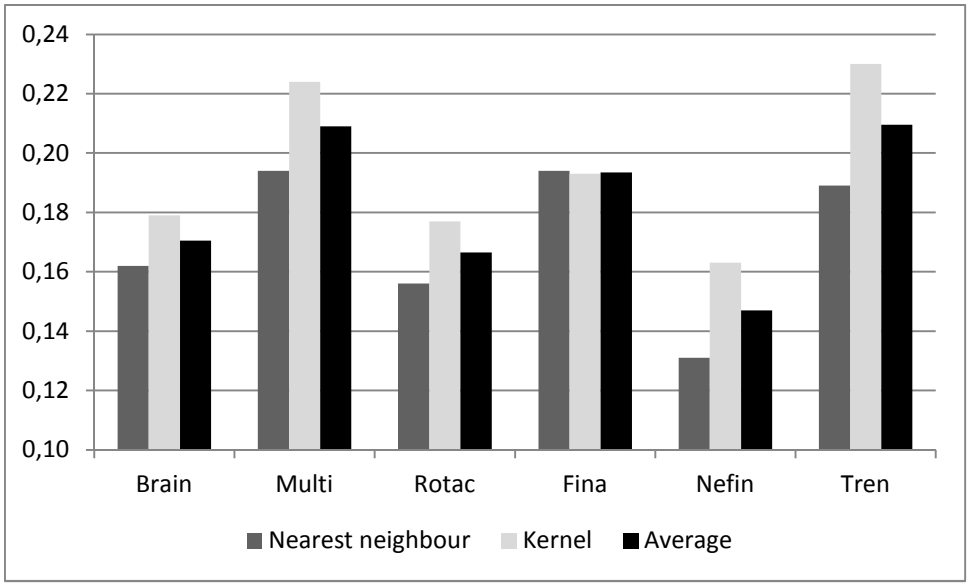

Figure1 Comparing estimated ATT's

Source: authors' estimates.

If we reconsider the data presented in Table 1, we will notice that innovators use job rotation methods relatively less than non-innovators (i.e. both types of enterprises find this method favourable). Yet, relatively least effective is non-financial stimulation, which has approximately the same relative usage ratio as financial stimulation. The fact that the ranking of effectiveness of methods used is different than rankings of relative usage of the same methods, points to the additional information obtained from the empirical estimates.

It can be speculated that within Croatian business-culture domain, methods such as training and job rotation, are well-established and recognized by the employees as those with strictly defined goal. Another well-established and recognized measure is related to financial incentives. Yet, our results seem to be in concordance with the literature claiming that financial incentives are less appropriate for creative tasks (Ariely, Kamenica and Prelec, 2008), than for less creative tasks.

Similar explanation could be related to the relative least effectiveness of the non-financial methods. Although they are frequently emphasized in the literature as being neglected, but still important social incentives (Heyman and Ariely, 2004), they might not be clearly enough communicated to the employees. So, the effects of these methods might be smaller.

Even though we have speculated some of the reasons for the ranking of the effectiveness of the analyzed methods, we have to emphasize that these are far from being firm conclusions. Additional research efforts, which are beyond the scope of the present paper, are required to be able to support these arguments. Thus, this offers a roadmap for future research on this interesting topic.

5. CONCLUSIONS

The analysis of Croatian enterprises has revealed that the relative frequency of creativity stimulation methods resembles those in other European economies. Thus, it seems that Croatian enterprises are familiar with methods used by the enterprises in their geographical vicinity.

Awareness of importance of such measures is thus established, so the main contribution of this paper is on the effectiveness of the methods implemented.

The creativity enhancing methods have been considered as treatment variables in the empirical analysis, while the outcome has been the innovation activity of the firm. The analysis of effectiveness of such methods for innovation activity has proved that each of the method analyzed in the paper has been associated with positive and significant effect on the innovation performance. This finding is not surprising as positive effects of these methods are proven in business practice and confirmed in studies in other countries. However, in the context of Croatian firms this is an important finding because it indicates that firms are capable to implement these methods adequately to foster innovation.

The empirical analysis of average treatment effect of the treated across two different estimation algorithms applied reveals that the most effective measure seems to be training, followed closely by multidisciplinary working teams. On the other hand, non-financial creativity enhancing methods seem to be least effective. Though, these rankings slightly differ when each estimation method is considered, it could be argued that the results that we have obtained follow some stylized facts related to Croatian enterprises. However, since this paper provides first attempt of the analysis of these issues, future research efforts are required to substantiate our findings. One possible extension should take into consideration factors affecting simultaneously creativity and innovation, such as management style, exposure to various business practices, and general business environment. Another extension would be related to incorporating time factor into the analysis.

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APPENDIX

Table A1 Independent variables in propensity score matching

Variable	Definition
Gp	=1, if enterprise belongs to a group
Market	=1, if the enterprise established sales on EU and other international markets
Univer50	=1, if the share of employees with university degree is larger than 50 percent
Emp_ch	= employment change 2010/2008
Turn_ch	= turnover change 2010/2008
In-house and external skills available in the enterprise 2008-2010 period:	
Sgala1	=1, graphics, layout, advertising – within enterprise
Sgala2	=1, graphics, layout, advertising – external sources

Sdos1	=1, design – within enterprise
Sdos2	=1, design – external sources
Smed1	=1, multimedia – within enterprise
Smed2	=1, multimedia – external sources
Swds1	=1, web design – within enterprise
Swds2	=1, web design – external sources
Sswd1	=1, software development – within enterprise
Sswd2	=1, software development – external sources
Smkr1	=1, market research – within enterprise
Smkr2	=1, market research - external sources
Senap1	=1, engineering, applied sciences – within enterprise
Senap2	=1, engineering, applied sciences – external sources
Smsdm1	=1, mathematics, statistics, database management – within enterprise
Smsdm2	=1, mathematics, statistics, database management – external sources

Source: Central Bureau of Statistics, CIS.

Table A2 Probit estimates for propensity scores

	Dependent variables					
Variable	brain	multi	rotac	fina	nefin	tren
Gp		.53*** (.06)		.05 (.06)	.02 (.07)	.07 (.06)
Market		.22*** (.06)		.23*** (.06)	.09 (.06)	
Univer50	.39*** (.11)	.19 (.12)	.23** (.11)	.29*** (.11)	.22* (.12)	
Emp_ch			.02 (.01)	.01 (.01)	.02** (.01)	.02* (.01)
Turn_ch		-.00 (.00)				
Sgala1	.45*** (.08)	.13 (.09)				
Sgala2	.32*** (.08)				.08 (.07)	-.03 (.08)
Sdos1		.40*** (.08)		.25*** (.08)	.29*** (.08)	.38*** (.08)
Sdos2	.38*** (.08)		.28*** (.07)		.49*** (.08)	.35*** (.09)
Smed1				.20** (.10)	.39*** (.10)	.38*** (.10)
Smed2	.21** (.08)		.19** (.08)			.14 (.09)
Swds1			.17** (.08)	-.01 (.09)	-.01 (.09)	-.06 (.09)
Swds2	.23*** (.07)	.40*** (.06)				.10 (.08)
Sswd1	.66*** (.08)		.53*** (.08)	.57*** (.09)	.43*** (.09)	.50*** (.09)
Sswd2			.47*** (.06)	.51*** (.06)	.45*** (.07)	.35*** (.07)
Smkr1	.13* (.07)		.36*** (.06)	.29*** (.07)	.18** (.07)	.49*** (.07)
Smkr2	.57***			.18**	.05	.21**

	(.08)			(.09)	(.09)	(.09)
Senap1	.27*** (.07)	.24*** (.07)	.24*** (.06)	.30*** (.07)	.31*** (.07)	.23*** (.07)
Senap2	.03 (.10)		.34*** (.10)	.16 (.10)	.17 (.10)	.33** (.10)
Smsdm1	.33*** (.08)	.73*** (.07)			.22*** (.08)	
Smsdm2		.51*** (.09)	.03 (.09)	.06 (.09)	.10 (.10)	-.02 (.05)
Constant	-1.66*** (.05)	-1.81*** (.05)	-1.36*** (0.04)	-1.61*** (.05)	-1.70*** (.05)	-1.57*** (.05)
Diagnostics						
N	3390	3303	3308	3306	3305	3306
Pseudo R2	.25	.22	.14	.15	.20	.20
LogL	-1249.28	-1180.51	-1514.82	-1343.25	-1275.17	-1343.37

Notes: Standard errors in parentheses. Coefficients marked *** are significant at level of 1%, ** at level of 5%, and * at level of 10%. Restricted to common support. The balancing property of the propensity score procedure is satisfied.

Source: authors' estimates.