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Winnowing Out High-PSM Candidates: The Adverse Selection Effect of Public Service Exam in an East Asian Context --Manuscript Draft--

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Abstract:	<p>It is generally agreed that people who have strong public service motivation (PSM) or prosocial tendency prefer working in the public sector, so accordingly, the public sector is able to hire employees with high PSM. This proposition may not hold in East Asia, where the public service exam is notoriously competitive. The present study, based in Taiwan, provides evidence showing that a competitive public service exam, along with its unique social symbolism in East Asia, can deter high-PSM people from entering the public sector. This adverse selection effect is more pronounced for male applicants as compared to their female counterpart, in part because entering public service is competitive and prestigious, and men are traditionally expected to bring honor and glory to the family name. We then discuss theoretical and practical implications in the conclusion.</p>

Winnowing Out High-PSM Candidates: The Adverse Selection Effect of Public Service Exam in an East Asian Context

Abstract

It is generally agreed that people who have strong public service motivation (PSM) or prosocial tendency prefer working in the public sector, so accordingly, the public sector is able to hire employees with high PSM. This proposition may not hold in East Asia, where the public service exam is notoriously competitive. The present study, based in Taiwan, provides evidence showing that a competitive public service exam, along with its unique social symbolism in East Asia, can deter high-PSM people from entering the public sector. This adverse selection effect is more pronounced for male applicants as compared to their female counterpart, in part because entering public service is competitive and prestigious, and men are traditionally expected to bring honor and glory to the family name. We then discuss theoretical and practical implications in the conclusion.

Introduction

Recruitment comprises both attraction and selection. In the literature of public employee attraction, it is generally agreed that people who have strong public service motivation (PSM) or prosocial proclivity prefer a public service career to one in the private sector, regardless of cultural differences. Western scholars find a positive relationship between college students' PSM and public sector preference in Belgium and the United States (Vandenabeele 2008, Tschirhart et al. 2008). Asian scholars obtain a similar finding among Chinese, Korean, and Singaporean students (Liu et al. 2011, Ko and Jun 2015). A very recent study using the International Social Survey Programme (ISSP) data from 26 countries concludes that PSM is indeed positively correlated with public sector preference (Van de Walle, Steijn, and Jilke 2015).

Does attraction lead to selection? Can public organizations eventually select/hire high-PSM candidates? Evidence based in the West seems to support this proposition. For example, some public-private comparison studies show that public employees demonstrate stronger PSM (Steijn 2008) and prosocial tendency (Bullock, Stritch, and Rainey 2015, Houston 2011) as compared to business employees. Of course, this approach is not impeccable as PSM can be nurtured through socialization after individuals enter public organizations. Research into sector switching provides some evidence as well; public servants who report weak prosocial motive are likely to leave the public sector for the private sector (Hansen 2014). Wright and Christensen (2010) also find that high-PSM individuals who do not initially select the public sector are likely to switch to the public sector eventually.

However, can public organizations still hire high-PSM people if the entrance bar is set high? In East Asia, the passing rate of the public service exam is generally around 5% and can sometimes go as low as 1-2%. In Korea, for example, the average rate in 2005 was 81 applicants

competing for one position, according to Kim (2009b). In Mainland China, the average rate in 2015 was 1.90% for the Central Government Public Service Exam¹. The exam is less competitive in Taiwan, but the passing rate is still low: the rate for the C3-Level Public Service Exam (open to college graduates and above) was 7.51% in 2013, 8.46% in 2014, and 9.78% in 2015². *Will high-PSM people pass the public service exam and eventually enter the public sector? Can public organizations select high-PSM people?*

An optimistic view suggests that high-PSM people, compared to those low in PSM, are more likely to pass competitive public service exams, because PSM may serve as an intrinsic motive (Taylor 2008), or at least an autonomous motive (Vandenabeele 2007), that propels people to conscientiously complete a public service-related task, such as passing the public service exam. However, an opposing view suggests that *a competitive public exam along with its unique social symbolism in East Asia (e.g., face, power, and prestige to the family) can actually dilute the value of public service in government jobs, crowd out applicants' time for volunteering, and cause an adverse selection effect. As a result, ironically, low-PSM people are more likely to pass the exam and be selected for public service.*

To elaborate on this phenomenon, we begin with the introduction of Keju³, an older form of East Asian public service exam. As success in Keju can bring one enormous power, material rewards, pride, and enhanced family status, young men are often driven by social norms, family pressure, and sometime their own ambitions to compete for limited government positions. The situation remains similar even until today. The difficulty of exams, along with external rewards, social norm, and family pressure, may crowd out exam participants' PSM. We develop hypotheses based on modern theories of motivation, such as self-determination theory (Ryan and Deci 2000) and motivation crowding theory (Frey and Jegen 2001), and we also examine

whether the adverse selection effect is more conspicuous among men, as traditionally in an East Asian society the male is responsible for glorifying the family name and the clan. Data for hypothesis testing were collected in Taiwan. Respondents did the survey during the time between the completion of the exam and the release of the exam result. The dependent variable, passing the public service exam (1 = pass; 0 = fail), is an objective, non-survey item, which eliminates common source bias. T-test and regression results support the presence of adverse selection: high-PSM people are less likely to pass the exam, and we observe that this effect is particularly salient among men. Theoretical and practical implications follow in the conclusion.

From Keju to Modern Public Service Exams

Contemporary public service exams in East Asia are historically rooted in an older form of government entrance exam commonly known as Keju in Mandarin Chinese. It formally appeared in 605 A. D. in China (Liu 1995) and was later adopted by Japan, Korea, and Vietnam. For the purpose of this discussion, we focus on the development of Keju in China. Prior to the introduction of Keju, centralized governments in China relied heavily on other methods, such as order of succession and recommendation from local government, to select public officials. These methods failed to select genuinely competent people, and in fact resulted in corruption as well as aristocratism (Wang and Xu 2002). In this regard, Keju, a standardized public service exam, was introduced so as to rectify the aforementioned problems, enhance social mobility of candidates born into less privileged socio-economic classes, and legitimize the government's ruling power. Keju had the following features: it was hosted by the central government; a written exam (to avoid human bias in interviews and ensure absolute equity); could be taken by all keen applicants regardless of socio-economic status; and focused on Confucian knowledge (Tian 2004, Liu 2010). A Keju-based public service system, scholars argue, is China's most crucial

contribution to the world, and it is considered as the origin of modern civil service exams in both East Asia and the West (Kracke 1947, Liu 2001).

Benefits and Power Embedded in Keju

As mentioned, in addition to being a tool for selection of public officials, Keju was also wielded as a political instrument for central governments in China to legitimize their ruling power. To encourage citizens to participate in Keju and serve as a government official, Emperor Song Zhenzong, 968-1022 A.D., wrote the Essay of Encouraging Learning, in which it is revealed that extremely attractive material rewards accompany success in Keju (Wang 2007):

“You don’t need farms, because you find unlimited food in books. You don’t need raw materials for a house, because you find a golden one in books. You need not be alone when you go out, because you find horses and wagons in books. You need not worry about marriage, because you find a beautiful mate in books. You want to have dreams come true? Study and succeed in Keju!” (p.29)

While central governments introduced Keju with the purpose of attracting competent candidates, the use of material rewards to encourage citizens to take the public entrance exam resulted in citizens regarding Keju as a way to pursue selfish interests such as wealth, social status, and pride for their respective families and clans (Liu 2010). In fact, the most apparent benefit was power and privilege, especially when no check-and-balance was possible. In cases where government suppression and biased treatment had harmed their family, people hoped to succeed in Keju and gain power and privilege such that they could protect their family (Wang 2007, Lee 2003, Zheng 2007).

Because those who succeeded in Keju were considered more knowledgeable and culturally advanced (Wang 2007), and second, public officials enjoyed enormous power and

privilege (Wu 2006), an “official-centered culture” emerged. In such a culture, public officials are highly respected and honored, and citizens call a government official “the honorable big man” and rely on an official to mediate conflicts. Governmental officials, especially ground-level bureaucrats who interact directly with citizens frequently, see themselves as parents to ordinary people, taking care of them and making decisions for them based on their advanced knowledge (Zi 2001)⁴. Some common sayings such as “the higher the rank in government hierarchy, the more knowledgeable a person is” still exist in modern Chinese parlance, suggesting that people continue to believe that an official’s rank is commensurate with the knowledge he possesses. Scholars also argue that extensive immersion in Confucian values and Confucian knowledge has made Chinese public officials quite self-confident, but also somewhat authoritative and egocentric (Lee 2006). In this regard, public officials do little to serve the common people, but instead use (sometimes abuse) their power to perpetuate the perception that officials are more knowledgeable and capable.

The Impact of Keju on the Chinese

After 1300 years of living with Keju and the social mobility it brought, the Chinese have developed a profound faith in education, perceiving education to be “the royal road to the honors and emoluments that the State has to bestow, and it is by means of it that the wildest ambition that ever ran riot through a young man’s brain can ultimately be satisfied” (Macgowan 1912, 76). Some scholars even claim that China before the 19th century was a mono-occupational society: only positions in government are worthy of pursuit, and all other occupations serve as consolation or a last resort when applicants fail to secure a position in government (Zheng 2007). Contrary to Western education which stresses individual unique talent and a variety of conception of success, Chinese education defines success very narrowly: successful citizens are

those who succeed in exams and are able to improve their social status (Wang and Xu 2002, Yen 2014). Therefore, unsurprisingly, public schools (shuyuan) which appeared in 718 A.D. gradually became tailored for Keju preparation (Liu 2010). When public schools were inadequate to satisfy the increasing need for education and exam preparation, clan-based private tuition schools started to flourish in the 11th century (Lee 2006). Even today, in order to pass competitive public service exams, participants continue to rely on learning tips prepared by private tuition schools, although most of them are owned by private businesses.

The fanaticism of Keju peaked in the 19th century, as Wang (2007) succinctly represents the public sentiment then as such: “If a man does not take the Keju exam in the age of 15, the father and brothers should consider him useless; if a man fails to do that in the age of 20, everyone in the community can despise him” (p.41). In line with their deeply entrenched understanding of social mobility, Chinese showed greatest respect to those who studied hard and eventually succeeded in Keju, and meanwhile, hoped that at least one in their family clan could do so and accordingly glorify the family (Yen 2014). This created enormous pressure for those who took the exams, as their happiness or sorrow was entirely hinged on the result of taking the Keju; when they failed, their family urged them to keep trying until they eventually succeeded. Those who failed in several attempts were very likely to lose dignity and confidence and feel abandoned by the society (Zheng 2007). Some extreme phenomena such as developing schizophrenia due to success in undertaking Keju, and suffering a broken family or a runaway bride due to failure in Keju all appear in classic Chinese stories.

Keju and Today’s “Exam Society” in China and East Asia

Keju was officially abolished in 1905 in China mainly because the required Confucian knowledge and writing skills dating back to the 14th century had gradually become obsolete and

instead stifled exam participants' creativity and problem-solving ability (Liu and Li 2006). However, the abolishment of Keju failed to eliminate the Chinese fanaticism with exams. The long-term influence of Keju across many generations has culminated in the emergence of an "exam society" and even though the exam itself has been abolished, its social and cultural effects continue to reverberate strongly in modern society (Elman 2013). People's faith in the function of exams as an objective selection tool is deeply ingrained; they take it for granted that exams can best ensure fairness and social justice, and performing well in exams can tremendously enhance their quality of life (Zheng 2007, Yen 2014). In fact, the strong belief in the function of exams is also related to the Confucian notion of *guanxi*, which emphasizes the maintenance of harmonious relationships. The Chinese dislike interpersonal tension and often feel embarrassed when they decline others' requests, such as a request for government positions. Exam results with absolute standards can best buffer one from such embarrassment (Zheng 2007). In addition to China, the "exam society" also exists in places where Confucianism dominates, such as Japan, Korea, Taiwan, and Vietnam (Zheng 2007).

As mentioned, public officials' power and prestige stem from their victory in exams, so we should expect little change of a government official's high social status and the "official-centered culture" in an exam society. Some recent public administration studies support the view that public officials continue to enjoy prestige in Korea today (Kim 2009a, Lee and Choi 2016). A China-based empirical study about young public officials' job choice motivation also shows that family honor, power, good reputation, a decent status for marriage, and family expectation all significantly contribute to their determination in taking the public service exam, despite its difficulty (Xu 2016). In fact, some common sayings such as "Be patient for ten years when you study alone, but you will be famous world-wide once you succeed in exams" and "The worth of

other pursuits is small, the study of books excels them all” are still frequently used to encourage young candidates to pursue a public service career today.

In sum, the legacy of Keju is twofold. Externally, power, material rewards, pride, and enhanced family status can stimulate the young applicants’ ambition to compete for limited government positions; their families and friends may also pressure them to do so. Internally, the cult of exam also drives young applicants to prove themselves to be worthy and capable in this cut-throat competition. These conditions have important implications on public exam participants’ PSM.

Hypotheses

We are interested to know whether high-PSM people can eventually pass the public service exam and enter the public sector. Our hypotheses are founded on self-determination theory (SDT) developed by Ryan and Deci (2000). In SDT, there are four types of motivation, namely intrinsic motivation, identified regulation, introjected regulation, and external regulation (shown in Figure 1 below).

[Insert Figure 1 Here]

Scholars consider both intrinsic motivation and identified regulation to be forms of autonomous motivation as people who fall into these two categories perceive a high level of autonomy and self-endorsement of the behavior (Sheldon et al. 2003). Intrinsic motivation means that people act out of their interest in the activity or the joy derived from carrying out the activity. Identified regulation means that people act because social or cultural norm dictates that the activity is valuable, although they may not genuinely like the activity (Gagné et al. 2010, Vallerand and Ratelle 2004). These two types of motivation are clearly illustrated in the following simple example: in the learning of math, some students study out of their interest

(intrinsic motivation), whereas some students do it because acquired skills in math may give them an advantage when seeking jobs in the future. Scholars contend that in job selection, PSM functions as an autonomous motive (Vandenabeele 2007, Andrews 2016) that drives one to choose a public service career. As autonomous motives at the workplace can lead to positive working attitudes such as job involvement and organizational commitment (Gagné et al. 2015), it is reasonable to conjecture that PSM also functions as an autonomous motive that propels individuals to invest effort and perform well in public service exams.

H1: PSM is positively related to the likelihood of passing the exam. That is, compared to those who fail in the public service exam, those who pass the exam exhibit stronger PSM.

On the opposite side of autonomous motivation is controlled motivation; individuals act out of controlled motivation experience reluctance, unwillingness, and a low level of perceived autonomy (Gagné and Deci 2005). Controlled motivation comprises external regulation and introjected regulation. External regulation means that individuals feel compelled to act to avoid physical punishment as a result of non-action or to receive reward for taking action, whereas introjected regulation refers to people's feelings of anxiety, guilt or shame if they fail to take action (Gagné et al. 2010, Vallerand and Ratelle 2004). To borrow the example of learning math again, some students study hard because they are afraid of being punished by their teachers or because they desire additional pocket money as a reward from their parents (external regulation), whereas some want to prove that they are capable and not a loser (introjected regulation). With regards to taking the public service exam, sources of external regulation may include prestige, fame, power and the privilege that helps to protect one's family. Introjected regulation may originate from both family pressure (parents urging children to take public service exams) and

peer pressure (many cohorts taking public service exams), resulting in a situation where young applicants take public service exams simply because they do not want to disappoint their parents, or they do not want to risk social criticism or ridicule for not attempting to compete for a government position. Similar to autonomous motives, controlled motives can generate strong work morale, driving participants to invest serious effort in exam preparation.

Autonomous motivation and controlled motivation often crowd out each other. According to SDT (Ryan and Deci 2000), controlled motivation increases when individuals perceive external rewards or constraints such as fame, power, social norm, family pressure, and other aforementioned factors. These rewards and constraints undermine individuals' perception of autonomy and thus reduce the strength of autonomous motivation such as PSM. This process, which is analogous to motivation crowding-out (Frey and Jegen 2001, Weibel, Rost, and Osterloh 2010), is referred to as value externalization⁵. If controlled motivation is decisive to exam success, and meanwhile, it undermines PSM, we suspect that those who pass the public service exam should have a lower level of PSM than those who fail. Related to this proposition is a study by Lee and Choi (2016), who argue that PSM is less important than social status in predicting public sector preference in Korea.

Alternative H1: PSM is negatively related to the likelihood of passing the exam.

That is, compared to those who fail in the public service exam, those who pass the exam exhibit weaker PSM.

The discussion of altruistic value should never be independent of altruistic behavior. If Alternative H1 is true, where public service exams select low-PSM people, we also expect a negative relationship between frequency of volunteering and the likelihood of passing the exam; more specifically, those who pass the exam spend less time on volunteering than those who fail.

The first reason is that volunteering and PSM reinforce each other. According to Perry and his colleagues (2008), those who have participated in volunteering are more likely than those who have not to report high PSM in post-volunteering surveys. In addition, PSM as an altruistic value can promote volunteering behavior (Ertas 2014). If those who pass the exam are lower in PSM, it is likely that they spend less time volunteering too. The second reason concerns the difficulty of the exam. Difficult and competitive exams require participants to invest more time and effort in preparation. A very typical practice is studying in a private tuition school (also translated as “cram school” in some places) to acquire updated learning techniques. In our sample, 70% of the participants studied in the private tuition school before the exam in 2015. Indeed, evidence supports that tuition schooling positively predicts students’ academic performance (Liu 2012). If the final success of exams relies on preparation and tuition that take place over a long period of time, and preparation time and volunteering time mutually crowd out, we should expect less volunteering among those who pass the exam.

H2: Volunteering is negatively related to the likelihood of passing the exam. That is, compared to those who fail in the public service exam, those who pass the exam spend less time on volunteering.

Affective PSM vs. Non-Affective PSM

PSM is comprised of four factors: attraction to policy-making, commitment to public values and the public interest, compassion, and self-sacrifice. The first two are referred to as non-affective PSM, and the last two are affective PSM (van Witteloostuijn, Esteve, and Boyne 2016). Affective motives relate to the intrinsically altruistic sources of PSM, whereas non-affective motives refer to instrumental or rational reasons for the pursuit of public good (Perry 1996, Perry and Wise 1990). The two types of PSM have different behavioral implications. For example,

Chen and Hsieh (2015) find that in predicting knowledge sharing, one of the many organizational citizenship behaviors, affective PSM has a stronger impact than non-affective PSM. The reason is that affective PSM resembles intrinsic motivation in SDT, whereas non-affective PSM resembles identified regulation. Although both are referred to as autonomous motivation, intrinsic motivation is grounded in an even higher level of self-determination and a stronger internal locus of control (Ryan and Deci 2000).

We anticipate that a negative relationship between PSM and the likelihood of passing the exam is more pronounced for affective PSM than non-affective PSM. As has been mentioned previously, autonomous motivation and controlled motivation crowd out each other. Compared to identified regulation, intrinsic motivation along with higher levels of self-determination is even more distant from controlled motivation and less compatible with controlled motivation, as shown in the SDT motivational spectrum (Figure 1). By the same token, compared to non-affective PSM, affective PSM should be even less compatible with controlled motivations such as family pressure, social norm, and participants' desire for power and privilege.

H3: The negative relationship in Alternative H1 (PSM and the likelihood of passing the exam) is more significant for affective PSM than non-affective PSM.

Gender Difference

The role of gender is considered in the present study. We expect that the negative relationship between PSM and the likelihood of passing the exam is more salient among male participants than female participants. Our speculation hinges on the belief of male dominance, one of the many Chinese traditions (Farh, Earley, and Lin 1997, Yang, Yu, and Yeh 1991). Confucianism singles out three types of relationships that are fundamental to families and societies: the husband-wife relationship, the father-son relationship, and the emperor-minister

relationship (i.e., “sangang” in Mandarin, meaning the three bonds). These relationships form the basic structure of a society. To ensure social order, these relationships follow a master-follower hierarchy (Tu 1998, Hamilton 1990). Male dominance stems from this belief.

Although some elements of male dominance such as “the wife should unconditionally obey the husband” are diminishing quickly in recent years (Yang, Yu, and Yeh 1991), many remain unchanged even today. One that pertains to the present study is the expectation of men, instead of women, to glorify the family and the clan. A stark example can be found in naming male newborns: Chinese prefer names that carry the meaning of illuminating the ancestors and bringing honor to the family name (Li 2012). Such thinking is also reflected in public service exams. According to Sun (2013), historically, Chinese men have been encouraged to succeed in Keju so they can obtain/maintain a dominating status in a family. Indeed, taking public service exams is no longer the privilege for men today, but compared to women, we expect that men are still more likely to take the exam due to external pressure such as an expectation to bring glory to the family. Consequently, the crowding-out of PSM should be more obvious among men than women. In a similar vein, we expect that the negative relationship between volunteering and the likelihood of passing the exam is more obvious among men than women.

H4a: The negative relationship between PSM and the likelihood of passing the exam is more significant for men than for women.

H4b: The negative relationship between volunteering and likelihood of passing the exam is more significant for men than for women.

Data and Variables

Data for analyses were collected in Taiwan, where the influence of Confucianism is strong and the Chinese culture is dominant. We surveyed exam participants of the 2015 College-

Level (C-Level) Public Service Exam in Taiwan. C-Level exam comprises three types and each type is carried out at a different time: C3 is open to all college graduates and higher; C2 is open to master degree holders and higher; C1 is open to PhD degree holders and/or equivalent. There are significantly more participants in C3 as compared to C2 and C1, thus we choose to focus on C3 participants in this study, which provides us with a greater sample size. The sampling process is as follows. In 2015, there were 35015 participants in the C3 exam. As soon as the exam was over, the Ministry of Examination sent an email invitation to all 35015 participants on our behalf, seeking their participation in the survey. In total, 3651 accepted our invitation. We then surveyed these 3651 people using an online tool, SurveyMonkey, between August/19/2015 and September/22/2015, right before the exam result was released. At the end of the survey, we collected 3153 responses with a success rate of 86.36%. We found 78 out of 3153 inadequate for analysis as the answers in the PSM section were missing. We thus conducted analysis using 3075 valid cases⁶.

The dependent variable, the outcome of the exam, is a dichotomous variable (1 = pass, 0 = fail). Response to this variable is not derived from self-report in the survey, thus the concern for common source bias is reasonably reduced. The main predicting variable, PSM, is composed of four sub-dimensions: attraction to policy-making (AP), commitment to the public interest (CP), compassion (CO), and self-sacrifice (SS). Regarding measurement, we extract 12 items (3 for each dimension) in recent PSM studies by Kim and his colleagues (Kim et al. 2013, Kim 2009a). A few items in these studies are especially suitable for Taiwan as Confucian values are incorporated in measurement. To ensure convergent validity (the extent to which indicators of a specific construct share a high proportion of variance in common) and discriminant validity (the extent to which a construct is truly distinct from other constructs) of PSM constructs, we employ

confirmative factor analysis (CFA). The results show that CFI = .960 (suggested cut-off > .90), NFI = .956 (suggested cut-off > .90), GFI = .958 (suggested cut-off > .90), SRMR = .039 (suggested cut-off < .08), Chi-square/df = 11.178, and RMSEA = .041 (suggested cut-off < .06). In addition, SMC (squared multiple correlations, R square) value for each factor exceeds 0.50, ranging between 0.578 and 0.965. These results confirm acceptable convergent validity as well as discriminant validity. Supplemental analyses demonstrate that other alternatives (three-factor, two-factor, and one-factor model) are worse than the four-factor model. Please refer to Appendix A for the measurement of PSM items.

Regarding volunteering, the second predicting variable, we asked respondents “In the last year, how much time did you spend on voluntary help to the following organizations, groups, or people?” We prepared nine types of voluntary work, such as helping in religious organizations, helping in schools and educational organizations, helping in political parties and governmental agencies, providing transportation support to friends or strangers, providing childcare support to friends or strangers, etc. For each type of volunteering, we allowed respondents to choose among the following options: 1 = less than an hour, 2 = one to nineteen hours, 3 = twenty to thirty nine hours, 4 = forty to seventy nine hours, 5 = eighty to a hundred and fifty nine hours, and 6 = over a hundred and sixty hours. To obtain an average value, we summed up the nine items and divided the numerical value by 9.

We controlled for the following variables. First, as mentioned, fulltime preparation and enrollment in tuition schools are common exam preparation practices. Evidence also shows that enrollment in tuition schools positively predicts academic performance among high school students (Tsai and Kuo 2008, Liu 2012). We anticipate that the two variables are positively correlated with the likelihood of passing the exam. In addition, we considered several

demographic variables such as gender (1 = male; 0 = female), education (1 = college; 2 = university; 3 = master; 4 = PhD), age, marital status (1 = married; 0 = not married), and religion (1 = yes; 0 = no). Gender is also used as a moderation variable in analysis. We also controlled for the number of children and the extent to which the respondent's family relies on his/her income (1 = 0%; 2 = 1-20%; 3 = 21-40%; 4 = 41-60%; 5 = 61-80%; 6 = 81-100%). These two conditions may motivate exam participants to strive harder in the exam. Please refer to Table 1 for descriptive statistics.

[Insert Table 1 Here]

Findings

We first employ t-tests to examine whether the level of PSM differs between those who passed the exam and those who failed in the exam. We conduct t-tests using three samples: the full sample, the male sample, and the female sample. Please refer to Table 2 for the results⁷.

[Insert Table 2 Here]

Regarding results of the full sample, the level of PSM among those who passed the exam is not significantly lower or higher than that of those who failed the exam. However, by looking at non-affective PSM (AP + CP) and affective PSM (CO + SS) separately, we find that affective PSM of those who passed is significantly lower than that of those who failed. Therefore, Alternative 1 is partially supported. The difference in amount of time spent on volunteering is statistically significant too, with those who passed the exam reporting a much shorter duration. This finding supports H2.

We also find sharp discrepancy between results in the male sample and those in the female sample. For example, for male exam participants, their overall PSM, non-affective PSM, affective PSM, and amount of time spent on volunteering are all significantly lower among those

who passed the exam as compared to those who failed. However, for female exam participants, those who passed and those who failed reported fairly similar levels of PSM and hours spent on volunteering. Interestingly, female participants who passed the exam exhibited much stronger non-affective PSM, in contrast to the result obtained from the male sample. The aforementioned findings are quite in line with H4a and H4b, where we stated that the negative relationships between (i) PSM and the likelihood of passing the exam and (ii) volunteering and the likelihood of passing the exam are more significant for men than for women.

In addition to t-tests, we employ logistic regression with several controls to test hypotheses⁸. Results are reported in Table 3. In Model 1 (M1), when PSM is treated as a 12-item index variable, it is not a statistically significant predictor of the outcome of the exam (i.e., pass or fail). By contrast, the coefficient of volunteering is both significant and negative, which supports H2. Second, in Model 2 (M2), we test whether non-affective PSM and affective PSM have disparate impacts on the outcome of the exam. We find that the coefficient of affective PSM is negative and statistically significant, but the coefficient of non-affective PSM is positive and insignificant. This partially supports Alternative H1. As we are interested in the comparison between non-affective PSM and affective PSM, we conduct post-regression tests by making the null hypothesis: $H_0: Non - affective PSM = Affective PSM$. The result rejects the null hypothesis and provides support to H3 with a statistically significant p value ($p < .02$).

[Insert Table 3 Here]

To test whether gender plays a moderating role as stated in H4a and H4b, we add two interactive terms “PSM \times male” and “volunteering \times male” in Model 3 (M3). A negative and statistically significant coefficient of the interactive term “PSM \times male” provides support for H4a. However, the coefficient of “volunteering \times male” is not statistically significant, although

the sign is negative. Finally, we separately add “non-affective PSM \times male” and “affective PSM” in M4 and M5, and collectively add them in M6. We further find that the male-female difference on non-affective PSM is more obvious than on affective PSM.

Regarding controls, enrollment in tuition schools and engagement in fulltime preparation significantly increase the likelihood of passing the exam. The coefficient of education is statistically significant as well. Perhaps the design of public service exam questions is more suitable for individuals who received rigorous academic training. It may also be related to the postgraduate system in Taiwan (and most East Asian countries): written entrance exams are required for postgraduate studies, and those who have a master degree or a PhD degree may have an advantage when taking the public service exam.

Conclusion

The major focus of this article is the interface between PSM and a competitive public service exam. We obtained the following important findings: those who passed the exam contributed less to society through volunteering and exhibited a lower level of PSM, particularly affective PSM. In addition, this adverse selection effect (i.e., selecting low-PSM people) is more obvious among men than women. The implications are two-fold: theoretical and practical.

Theoretical Implications

This study adds to the literature of public employee selection, an underdeveloped topic in public administration research. In the Western literature of public employee recruitment, scholars lay disproportionate emphasis on attraction and the decline of young generations’ interest in public service (see Bright and Graham 2015 as an example) perhaps because culturally and historically, Westerners are relatively more interested in private sector jobs. In East Asian countries such as China, Korea, Taiwan, and Vietnam, where the majority’s strong demand for a

public service position exceeds the supply, selection through a centralized, unbiased, and competitive public service exam becomes a much more crucial concern as compared to attraction of public service candidates. In fact, some South Asian countries such as India, Pakistan, and Bangladesh also select public service employees through very competitive public service exams. We encourage Asian researchers to replicate our research design and examine if they obtain the same finding in various Asian countries. We believe this pioneer study is a start to a more generalizable theory of public service exam in East Asia, maybe including South Asia.

This study also echoes the call for international PSM research (Kim and Vandenabeele 2010). Different from previous cultural studies that emphasize construct (Vandenabeele, Scheepers, and Hondeghem 2006), measurement (Kim et al. 2013), social desirability in different cultures (Kim and Kim 2016a), cultures as antecedents (Kim 2015, Vandenabeele and Van de Walle 2008), and consequences of PSM in different cultures (Lee and Choi 2016, Liu et al. 2011, Liu, Tang, and Zhu 2008), we treated public servants' PSM as a correlate of institutional setting in a specific culture (i.e., public service exam in East Asia). Our study contributes to the PSM literature in the following aspects.

First, existing evidence in general shows that public organizations are more likely than their private counterparts to attract high-PSM people (Vandenabeele 2008), and high-PSM people are more interested in a public service career than a private one (Van de Walle, Steijn, and Jilke 2015). We agree with this proposition, but question whether attraction leads to eventual selection of high-PSM people. The mismatch is particularly likely in an exam society, where public service jobs attract young people who (i) long for power, an authoritative social status, and privilege, and (ii) are motivated to take exams due to family expectation, peer pressure, and personal ambition to succeed in obtaining a government position. These factors may crowd out

PSM. We encourage researchers to pay attention to this theoretical loophole, and in addition, make more effort to investigate public employee selection in the future.

We also addressed the role of gender. In fact, the research on gender is not absent in existing PSM literature. For example, Vandenaabeele (2011) argues that gender may affect PSM due to social expectation on different genders (e.g., caring). Kim and Kim (2016b), in studying social desirability of PSM, claim that the relationship between gender and PSM is not conclusive in the literature, and they attribute the inconsistency in findings to different social expectations on men and women in different cultures. We added new evidence on how social expectation of the respective genders in a given culture influences PSM. However, different from previous studies that examine the gender-PSM relationship directly, we looked through the lens of institutional setting and examine the moderation role of gender. Finally, we tackled the difference between non-affective PSM and affective PSM. Indeed, evidence shows that the two types of PSM may lead to disparate work attitudes (Giauque et al. 2012) and behavioral outcomes (Chen and Hsieh 2015), and they are predicted by different personalities (van Witteloostuijn, Esteve, and Boyne 2016). Our findings support the treatment of PSM as a composition of various prosocial values, which is a more precise and desirable approach as compared to treating it as a single value category.

Practical Implications

As our findings show that a competitive public service exam may winnow out high-PSM people, practically, we invite researchers to consider the following questions: What are the goals of a competitive exam? How important are these goals, and how important is PSM? Should we sacrifice one to save the other (e.g., abolishing the exam)? If not, can we keep the exam, and meanwhile, find other methods that restore employees' PSM?

We begin with the goals of a competitive public service exam. Competitive exams were originally introduced for the purpose of preventing patronage and political spoils (Sundell 2014), not for the employment of high-PSM candidates. The paramount concerns are competence and equity: using objective and unbiased criteria to hire competent public employees who have skills and merit, especially in countries where the risk for patronage is expected to be high (Sundell 2014). In East Asia, where people overly stress informal interpersonal ties through reciprocity (also known as “guanxi” in Mandarin Chinese, see Su and Littlefield 2001 as an example), patronage is very likely if an unbiased exam is not present. In addition, in East Asian cultures where a majority of young people long for a public service career, a competitive and written exam seems to be the most efficient and acceptable approach (Elman 2013). In this regard, a competitive public service exam is still irreplaceable, although it compromises flexibility, discretion, and as we found in the present study, public employees’ PSM.

Then, is sacrificing PSM a bearable result? Indeed, PSM is not without its drawbacks. For example, high-PSM people can easily experience frustration if the organizational culture is perceived as incompatible with their prosocial values (Steen and Rutgers 2011). High affective PSM can lead to resigned satisfaction, a phenomenon in which “a person feels indistinct work dissatisfaction and decreases the level of aspiration in order to adapt to negative aspects of the work situation” (Giauque et al. 2012, 177). Compassion may be in conflict with neutrality, a crucial public value (Vandenabeele, Scheepers, and Hondeghem 2006). However, a systematic review of PSM research in the last two decades reveals that PSM tends to be in most cases positively related to many outcome factors such as job satisfaction, individual and organizational performance, organizational and job commitment, person-environment fit, and organizational citizenship behavior (Ritz, Brewer, and Neumann 2016).

Given the importance of both exam and PSM, sacrificing one to save the other may not be ideal. Therefore, we propose to employ some post-exam practices that either (i) help managers to select individuals who have relatively higher PSM among candidates who perform well at the public service exams, or (ii) help academically high-performing candidates acquire greater PSM. In the first scenario, managers may consider post-exam interviews, in which they conduct personality tests for the selection of high-PSM people, as evidence shows that personality traits are predictive of PSM (van Witteloostuijn, Esteve, and Boyne 2016). In the latter case, we may consider post-exam training activities, through which individuals enhance their PSM. Specifically, using SDT, Vandenberghe (2007) argues that PSM as a type of autonomous motivation may increase when employees are satisfied with three psychological needs: autonomy, relatedness, and competence. For example, public managers may consider introducing community-based volunteering, through which employees retrieve relatedness to people and accordingly regain PSM (Perry et al. 2008). Formal training for skill upgrading, especially skills required for policy making or public problem solving, may enhance employees' perceived competence and consequently improve their PSM. Indeed, scholars argue that the change of value through training is possible (Warr, Allan, and Birdi 1999). Finally, practices that contribute to employees' perceived autonomy, such as participation in decision making, should also be considered by managers.

Future Research Directions

We face a few limitations in this study, and encourage future studies to address these limitations so as to improve the quality of research. Regarding methodology, as mentioned, we did not manage to obtain the list of participants from the Ministry of Examination before the exam in 2015, so random sampling was not permitted. Seeking the government's approval in

releasing exam participants' contact information is an important task for researchers who are interested in replicating our research design in other countries. In addition, limited budget only allowed us to conduct survey in a single country. A large-scale, multi-national survey will certainly improve the generalizability of our findings.

As we are mainly interested in the interface between PSM and the public service exam in East Asia, it is unavoidable that we omit multiple variables that determine the success in public service exams. In addition to fulltime preparation and enrollment in tuition schools, two factors covered in the present study, we discussed a few controlled motives that may contribute to the outcome of the exam (i.e., pass or fail). Which ones are more decisive? Family pressure, peer pressure, power, privilege, or ambition? Moreover, which ones crowd out PSM the most? Future studies may want to address these issues by including more variables and adopting advanced methods such as mediation analysis.

Scholars who plan to broaden the knowledge base of PSM may consider enlarging the scope of sample by including those who do not take the public service exam. Are they not interested in a public service career in an exam society? If so, is their PSM really lower? Is it possible that they are interested in a government position, but do not take the exam? If so, is it because they lack confidence in passing the exam, so they do not want to waste time preparing for the exam? Do these people have higher PSM, compared to those who take the exam? If so, should the exam be redesigned so public organizations can attract and hire these people? In sum, many questions related to public service exams in East Asia remain unanswered. The present study is a start to future incremental steps.

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Endnotes

¹ <http://news.ftv.com.tw/NewsContent.aspx?ntype=class&sno=2015B29I04M1>

² <http://www.xn--tkvz1yd1k78z.tw/%E9%AB%98%E6%99%AE%E8%80%83%E6%AD%B7%E5%B1%86%E5%A0%B1%E5%90%8D%E4%BA%BA%E6%95%B8%E5%8F%8A%E9%8C%84%E5%8F%96%E7%8E%87.aspx>

³ The two Chinese characters (科舉, Kējǔ) exist in modern Japanese, Korean, and Vietnamese languages with different pronunciations: Kakyo, Gwageo, and Khoa Cu respectively.

⁴ Related, the research on paternalistic leadership (Cheng et al. 2004, Farh and Cheng 2000) in organizational behavior also reflects the pervasiveness of this culture in Chinese societies.

⁵ Externalization (motivations moving toward controlled motivation) or internalization (motivations moving toward autonomous motivation) occurs when individuals' perceptions of autonomy, relatedness, or competence change (Ryan and Deci 2000). The focus is perceived autonomy in this article.

⁶ The Ministry of Examination refused to provide us the name list of exam participants and any of their background information due to the concerns for confidentiality and unforeseeable impact on exam participants. We thus could not use more advanced sampling techniques such as stratified sampling. However, we also note that the percentage of participants who passed the exam is 10% in the current sample, very close to the actual rate of passing the exam in 2015 (9.78%). In addition, the average of PSM is 4.79 among those who passed the exam. This is very close to the result of our earlier survey that aimed at newly hired C3-Level public servants in

2014. PSM was 4.74 among the new hires in that sample. Therefore, sample selection should be considered as one of the research limitations, but we argue that the current sample can still represent the population to a great extent.

⁷ Readers who are interested in the examination of each dimension of PSM can refer to Appendix B. As the results show, two non-affective PSM dimensions appear in the same pattern. That is, if one item is statistically significant, the other item is too; if one is not significant, the other one is not as well. Similarly, two affective PSM dimensions also appear in the same pattern.

⁸ The use of logistic regression is appropriate, according to King and Zeng (2001). Rare events (only 10% in the sample passed the exam) should not prohibit the use of logistic regression, unless there are a small number of cases on the rarer of the two outcomes. For example, there is a problem if we have a sample size of 1000 but only 20 events. However, there should not be a problem if we have a sample size of 10000 with 200 events. In the present study, we have over 300 events in the sample.

Figures and Tables

Figure 1. Motivational typology in SDT

Autonomous/controlled	Controlled motivation		Autonomous motivation	
Regulation	External regulation	Introjected regulation	Identified regulation	Intrinsic motivation
Perceived autonomy	Weak	Somewhat weak	Somewhat strong	Strong

Source: Adapted from Ryan and Deci (2000) with minor revisions

Table 1. Descriptive statistics (N=3075)

	Mean	SD	Min	Max
Passing the exam	0.10	0.30	0	1
PSM overall (AP + CP + CO + SS)	4.84	0.68	1	6
Non-affective PSM (AP + CP)	4.83	0.73	1	6
Affective PSM (CO + SS)	4.85	0.74	1	6
Volunteering time	1.77	0.71	1	6
Tuition schooling	0.70	0.46	0	1
Fulltime preparation	0.34	0.47	0	1
Male	0.37	0.48	0	1
Education	3.37	0.52	1	4
Age	30.40	6.29	22	65
Marital status	0.17	0.38	0	1
Religion	0.56	0.50	0	1
Family reliance	1.90	1.31	1	6
Number of children	0.20	0.58	0	5

Table 2. T-tests for all hypotheses

	Full sample			Male			Female		
	Fail	Pass	Sig	Fail	Pass	Sig	Fail	Pass	Sig
PSM overall	4.84	4.79		4.84	4.63	**	4.84	4.89	
Non-affective PSM	4.83	4.83		4.86	4.68	*	4.82	4.93	*
Affective PSM	4.85	4.74	*	4.82	4.58	**	4.86	4.86	
Volunteering	1.78	1.63	**	1.80	1.55	**	1.77	1.69	

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

Table 3. Logistic regression

	M1	M2	M3	M4	M5	M6
PSM overall	-0.07 (.44)	--	0.17 (.21)	--	--	--
Non-affective PSM	--	0.23 (.06)	--	0.47** (.00)	0.23 (.06)	0.50** (.00)
Affective PSM	--	-0.29* (.01)	--	-0.28* (.02)	-0.15 (.31)	-0.33* (.05)
Volunteering time	-0.31** (.00)	-0.31** (.00)	-0.21 (.11)	-0.21 (.12)	-0.19 (.15)	-0.20 (.13)
Tuition schooling	0.38* (.01)	0.38* (.01)	0.39* (.01)	0.40* (.01)	0.39* (.01)	0.40* (.01)
Fulltime preparation	0.58** (.00)	0.58** (.00)	0.59** (.00)	0.60** (.00)	0.59** (.00)	0.60** (.00)
Education	0.60** (.00)	0.59** (.00)	0.59** (.00)	0.58** (.00)	0.58** (.00)	0.58** (.00)
Age	-0.01 (.30)	-0.01 (.34)	-0.01 (.33)	-0.01 (.37)	-0.01 (.40)	-0.01 (.37)
Marriage	0.32 (.12)	0.33 (.11)	0.31 (.13)	0.32 (.12)	0.32 (.12)	0.32 (.12)
Religion	-0.11 (.36)	-0.11 (.39)	-0.13 (.30)	-0.13 (.31)	-0.12 (.35)	-0.13 (.31)
Family reliance	-0.01 (.80)	-0.02 (.78)	-0.01 (.83)	-0.01 (.80)	-0.02 (.79)	-0.02 (.79)
Number of children	0.12 (.34)	0.13 (.33)	0.11 (.39)	0.12 (.36)	0.12 (.35)	0.12 (.35)
Male	0.21 (.10)	0.19 (.15)	2.63** (.00)	2.75** (.00)	1.86* (.02)	2.64** (.00)
PSM overall \times Male	--	--	-0.43* (0.02)	--	--	--
Non-affective PSM \times Male	--	--	--	-0.46* (.01)	--	-0.53* (.03)
Affective PSM \times Male	--	--	--	--	-0.26 (.11)	0.10 (.68)
Volunteering \times Male	--	--	-0.23 (.28)	-0.23 (.29)	-0.27 (.21)	-0.23 (.27)
Constant	-3.62** (.00)	-3.65** (.00)	-4.87** (.00)	-4.97** (.00)	-4.52** (.00)	-4.90** (.00)
N	3075	3075	3075	3075	3075	3075
Chi2	74.17	79.99	82.07	89.58	84.90	89.76
Prob > Chi2	0.000	0.000	0.000	0.000	0.000	0.000

Null hypothesis (from M2)

 $H_0: \text{Non} - \text{affective PSM} (AP + CP)$
 $= \text{Affective PSM} (CO + SS)$

Sig

.02*

Rejecting null

**p<.01; *p<.05 (p values in parentheses)

Appendix A. The Measurement of PSM

Cronbach's alpha for Non-affective PSM (AP + CP) = .85

- (AP1) I admire people who initiate or are involved in activities to aid my community.
 (AP2) Contributing to public programs and policies helps me realize myself.
 (AP3) I am interested in helping to improve public service.
 (CP1) Everybody is entitled to a good service, even if it accompanies costs.
 (CP2) It is fundamental that public services respond to the needs of the citizens.
 (CP3) It is fundamental that the interests of future generations are taken into account when developing public policies.

Cronbach's alpha for Affective PSM (CO + SS) = .84

- (CO1) I feel sympathetic to the plight of the underprivileged.
 (CO2) I empathize with other people who face difficulties.
 (CO3) Considering the welfare of others is very important.
 (SS1) I believe in putting civic duty before self.
 (SS2) I am willing to risk personal loss to help society.
 (SS3) I would agree to a good plan to make a better life for the poor, even if it costs me money.

Appendix B. A More Careful Look at Four Dimensions of PSM

T-tests: Testing each dimension of PSM separately									
	Full sample			Male			Female		
	Fail	Pass	Sig	Fail	Pass	Sig	Fail	Pass	Sig
Non-affective PSM	4.83	4.83		4.86	4.68	*	4.82	4.93	*
Affective PSM	4.85	4.74	*	4.82	4.58	**	4.86	4.86	
AP	4.94	4.97		4.96	4.81	.06	4.94	5.08	*
CP	4.72	4.68		4.76	4.56	*	4.70	4.77	
CO	5.14	5.05	*	5.09	4.92	*	5.16	5.15	
SS	4.55	4.43	*	4.55	4.24	**	4.56	4.57	

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