USING FIXED EFFECTS TO ESTIMATE THE IMPACT OF MERIT PAY ON TEACHER JOB SATISFACTION

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ABSTRACT

The purpose of this study is to determine if merit pay has any significant effects on teacher job satisfaction. Using a large panel data set of public school teachers from the years 1999, 2004, and 2007, the results of this study suggest that teachers who work receive merit pay are more satisfied with their compensation and with their jobs in general than are teachers who do not receive merit pay. Interestingly, though, if one excludes those districts that do not have merit pay systems, then teachers who receive merit pay are no more satisfied with their jobs than teachers who do not. Finally, teachers who work in districts that have merit pay systems are no more satisfied with their jobs than are teachers who do not work in merit pay districts.

INTRODUCTION

Very little research has been conducted on the effects of a merit pay system on teacher job satisfaction. In one of the few studies that looked at this issue, Belfield and Heywood (2008) presented two opposing theories regarding the effects of merit pay on teacher job satisfaction. First, they theorized that teachers receiving merit pay would be more satisfied with their jobs because their incomes would be greater than that of the average teacher. This theory assumes that all satisfaction is derived from financial rewards.

Belfield and Heywood (2008) also presented an opposing theory that states that teachers receiving merit pay may be less satisfied with their jobs because their performance and hence their pay may be random. A teacher's performance may be defined in a number of ways. If performance is based upon student test scores, then that outcome depends upon a variety of factors outside of the teacher's control, such as the home environment of the student. If a teacher happens to have a large number of students in a given year who are ill-prepared, then their test scores may be less than satisfactory and the teacher's performance would also look less than satisfactory. Hence, under a merit pay system, such a teacher would not receive any merit-based compensation. In another year, the teacher may have a group of motivated and outstanding students which would then result in the same teacher receiving merit pay. Hence, under a merit pay system, a teacher's salary would be variable and random because there are many factors that may affect a teacher's performance that are beyond a teacher's control. Under the current system, however, a teacher's pay is not random because it is based on a teacher's experience and

level of education attained. Therefore, a teacher's compensation under a merit pay system would be somewhat random, which may be unsatisfactory from the teacher's point of view (Belfield and Heywood, 2008, p. 245). Finally, a merit pay system would require the establishment of a performance review system, which would increase the workload of all teachers; this increased workload would probably reduce satisfaction, especially if no merit pay is forthcoming for a particular teacher.

Given the lack of prior research in this area and given the increasing prevalence of merit pay systems, the purpose of the present study is to examine the effects of merit pay on teacher job satisfaction. Using a large panel data set of public school teachers from the years 1999, 2004, and 2007, the results of the present study suggest that teachers who receive merit pay are more satisfied with both their salaries and their jobs in general than are teachers who do not receive merit pay. However, if one examines only those teachers who work in districts that have merit pay plans, then there is no statistically-significant difference in job satisfaction between teachers who receive merit pay and those who do not. These results are consistent for both district-level and state-level fixed effects. Finally, teachers who work in districts that have merit pay systems are no more or less satisfied with their jobs than are teachers who do not work in such districts. These results suggest that merit pay increases teacher job satisfaction when that teacher receives merit pay. However, the existence of a merit pay system in a district does not affect, on average, teacher job satisfaction.

LITERATURE REVIEW

As noted earlier, one study that examined the effects of merit pay on teacher satisfaction was Belfield and Heywood (2008). Using 1999 data from the Schools and Staffing Survey (SASS) and an ordered probit analysis, it was found that merit pay was negatively related to teacher satisfaction, both in general and with regards to salaries and teaching. It is important to note, however, that the merit pay variable in Belfield and Heywood (2008) is individual in nature and denotes whether or not an individual teacher was awarded merit pay. Belfield and Heywood (2008) did not differentiate between teachers who worked in a district without a merit pay system, and those who worked in a merit pay district but who did not receive merit pay.

Several other studies looked at the effects of merit pay on worker satisfaction; those studies, however, looked at occupations other than teaching. The first of these studies was Heywood and Wei (2006). Using data from the 1988 wave of the National Longitudinal Study of Youth (NLSY) and an ordered probit analysis, the authors found that merit pay increased overall worker satisfaction. Merit pay, however, did not increase a workers' satisfaction with their co-workers or with their supervisors. A subsequent analysis using fixed effects substantiated these findings. The results of this study contradict the results of Belfield and Heywood (2008). Finally, just as in Belfield and Heywood (2008), Heywood and Wei (2006)

only looked at individual merit pay and did not consider the existence of a merit pay system at the worker's place of employment.

Artz (2008) looked at the effects of a merit pay system on worker satisfaction using data on British workers for the year 2000. Using an ordered probit analysis, his results indicated that merit pay increased worker satisfaction in large firms but not in small firms. This result may be primarily due to the fact that worker productivity in small firms is easier to monitor; thus workers in such firms may have fewer opportunities to optimize their efforts and thus be considered meritorious.

Green and Heywood (2008) looked at a sample of British workers and attempted to determine if merit pay increased worker satisfaction. Using pooled data from 1998-2004 and a covariate analysis, the authors found that workers receiving profit sharing were more satisfied with their hours, pay, and job security than workers who did not receive profit sharing. Workers receiving profit sharing and performance pay were more satisfied with their pay and job security. Finally, workers receiving just performance pay were less satisfied with work but were satisfied with job security. The results of this study suggest that performance pay has mixed effects on worker satisfaction.

Finally, there have been numerous studies that examined various other aspects of teacher merit pay (Fryer, 2011; Glewwe, Ilias, and Kremer, 2010; Glazerman and Seifullah, 2010; Goodman and Turner, 2009; Lavy, 2009, 2002; Podgursky and Springer, 2007; Eberts, Hollenbeck, and Stone, 2002; Ladd, 1999; Cooke, 1982; Kowalczyk, 1982; and Chapman and Lowther, 1982). None of these studies, however, looked at the effect of merit pay on teacher job satisfaction.

The present study differs from this prior research in several ways. First, this study will use a much larger and much more recent data set than these prior studies; individual-level data from the years 1999, 2004, and 2007 will be used. Second, this study will look at merit pay in several ways; it looks at both individual-level merit pay and the existence of district-level merit pay systems. Prior studies only examined individual-level merit pay. This type of merit pay variable may not be adequate to capture the true effects of merit pay on worker satisfaction but may only capture the effects of a merit pay system on the satisfaction of those workers who receive merit pay. Finally, both district-level and state-level fixed effects will be used to estimate the effects of individual-level merit pay on teacher job satisfaction.

The following hypothesis will be examined in the present study:

H1 *Teachers who receive merit pay will be more satisfied with their jobs than teachers who do not receive merit pay.*

H2 *Teachers who receive merit pay will be more satisfied with their compensation than teachers who do not receive merit pay.*

DATA

All data used in the present study was obtained from the Schools and Staffing Survey (SASS) which is compiled by the US Department of Education. This survey, which is conducted every three years, collects data on teachers, administrators, schools, and districts from a randomly-selected sample. The present study uses data from the 1999, 2004, and 2007 SASS. Only full-time, public school teachers were included in the sample. Any teachers with any missing data were excluded. The final sample used in the present study contains 80,760 observations. Not all teachers had observations for every year. Sample sizes were rounded to the nearest ten due to the use of restricted data.

In order to measure teacher job satisfaction, the following two questions from the Public Teacher File of SASS were used:

(1) To what extent do you agree or disagree with the following statement? I am generally satisfied with being a teacher at this school.
(2) To what extent do you agree or disagree with the following statement? I am satisfied with my teaching salary.

The first question refers to overall job satisfaction; the second question deals with satisfaction with one's salary. These are the only two job satisfaction questions that are included in all three years of the survey. The responses to both questions are measured on a four-point scale. The four possible outcomes are "strongly agree", "somewhat agree", "somewhat disagree", and "strongly disagree."

In order to obtain data on merit pay, two questions from SASS were examined:

(1) Have you earned income from any other school sources this year, such as merit pay bonus, state supplement, etc.?
(2) Does this district currently use any pay incentives such as cash bonuses, salary increases, or different steps on the salary schedule to reward excellence in teaching?

The first question refers to the awarding of individual-level merit pay; the second questions deals with the existence of a district-level merit pay system. Both of these questions have binary responses (yes or no). Unfortunately, there are several of the shortcomings with regards to the use of these questions; those shortcomings are as follows:

(1) Regarding question (1), it is not known if the additional income was from a merit pay bonus, a state supplement, or some other pool of funds. It is reasonable to assume, however, that most teachers would only respond affirmatively to this

question if they received some type of monetary award based on excellence or merit. The reason for this assumption is because there are other questions in the SASS teacher survey that query about additional income from the school, district, or state that do not make reference to "merit pay." Hence, if a teacher received additional income for any other reason besides merit, they would probably answer affirmatively to any of the other questions regarding additional income and answer the merit pay question in the negative.

(2) Regarding question (2), it is not known how "excellence in teaching" is defined by each individual school district; one district's definition of excellence may be quite different from another district's definition of excellence. In fact, a teacher who is considered to be excellent in one district may not be considered excellent in another district. Therefore, these measures are not consistent across districts.

(3) Regarding both questions, it is not known if the merit pay took the form of a one-time bonus or a permanent increase in the base pay of the teacher.

EMPIRICAL TECHNIQUE AND RESULTS

Using prior research as a guide, (Bryson, Cappellari, and Lucifora, 2010; Artz, 2010; Garcia-Serrano, 2009; Gazioglu and Tansel, 2006; Bryson, Cappellari, and Lucifora, 2004; Donohue and Heywood, 2004; Hewood, Siebert, and Wei, 2002; Clark, 1997; Gordon and Denisi, 1995; Lillydahl and Singell, 1993; Meng, 1990; and Chapman and Lowther, 1982), a model of job satisfaction was constructed. Most of this prior research included race, sex, education, and experience as explanatory variables. School- and district-specific socioeconomic variables were also included in order to capture the effects of workplace conditions on individual-level worker satisfaction. Finally, the teacher's salary was also included as an explanatory variable. Given that the satisfaction variables are measured on a four-point scale, an ordered probit analysis was used. In addition, both district-level and state-level fixed effects were used to estimate the model. Since fixed-effects were used, the standard errors may be underestimated. In order to correct the standard errors and obtain appropriate measures of statistical significance, a clustered standard error approach was used.

District-level fixed effects results are presented on Tables 1 and 2, and state-level fixed effects results are presented on Tables 3 and 4. Both sets of results indicate that teachers who received merit pay were more satisfied with both their salaries and their jobs than teachers who did not receive merit pay. These results corroborate the work of Heywood and Wei (2006) and Artz (2008). Results also suggest that female elementary school teachers who earn high salaries and who work in predominantly white schools are more likely to be more satisfied than other teachers.

Table 1: District-Level Fixed Effects Teacher is satisfied with salary		
Variable	Coefficient	Test Statistic
Male	-0.0169	-1.22
Hours worked	-0.0123	-16.452***
African-American	-0.215	-4.076***
Asian-American	0.159	2.623***
White	0.048	1.05
School enrollment	-0.0000093	-0.531
Percentage of teacher's students with an IEP	0.000229	0.804
Percentage of teacher's students who are LEP	-0.00199	-3.999***
Student-teacher ratio	-0.0038	-1.422
Percentages of teachers in school who are of a racial/ethnic minority	-0.0123	-16.452***
Percentages of students in school who are of a racial/ethnic minority	-0.00037	-0.785
Teacher's years of experience	-0.0153	-14.038***
School located in urban area	-0.0593	-1.004
School located in rural area	0.0782	0.882
Teacher has advanced degree	0.0139	0.956
Elementary school	-0.185	-9.018***
Age of teacher	0.000205	0.227
Teacher is union member	-0.0982	-5.859***
Base salary	0.000037	19.468***
Teacher received merit pay	0.0437	2.241**
Significant at 5 percent level = ** Significant at 1 percent level = ***		

In order to test the robustness of the above results, another district-level fixed effects regression was estimated that excluded those teachers who worked in districts that did not have merit pay systems; results are presented on Tables 5 and 6. In both of the satisfaction regressions, the merit pay variable is insignificant. These results indicate that, in merit pay districts, teachers who earn merit pay are no more satisfied with their jobs than are teachers who do not receive merit pay. Hence, these results suggest that merit pay does not increase or decrease job satisfaction. This result, in combination with the prior result, suggests that merit pay does not have a negative effect on teacher satisfaction. Therefore, if the primary reason why a school district implements merit pay is to improve student academic achievement, then the district administrators should take solace in the fact that merit pay will have no adverse effect on teacher job satisfaction.

Table 2: District-Level Fixed Effects Teacher is satisfied with job		
Variable	Coefficient	Test Statistic
Male	-0.0489	-2.317**
Hours worked	-0.00193	-2.333**
African-American	0.204	3.552***
Asian-American	0.0259	0.397
White	-0.0337	-0.675
School enrollment	-0.000069	-3.672***
Percentage of teacher's students with an IEP	0.00011	0.351
Percentage of teacher's students who are LEP	-0.00065	-1.227
Student-teacher ratio	0.0076	2.618***
Percentages of teachers in school who are of a racial/ethnic minority	-0.00378	-5.558***
Percentages of students in school who are of a racial/ethnic minority	-0.0039	-7.519***
Teacher's years of experience	-0.00172	-1.421
School located in urban area	-0.0536	-0.842
School located in rural area	-0.034	-0.365
Teacher has advanced degree	-0.088	-5.446***
Elementary school	0.105	4.655***
Age of teacher	0.00417	4.148***
Teacher is union member	-0.0431	-2.317**
Base salary	0.0000061	2.867***
Teacher received merit pay	0.0532	2.461**
Significant at 5 percent level = ** Significant at 1 percent level = ***		

The last set of regressions estimated excluded the individual-level bonus variable and included instead a district-level variable indicating whether or not the teacher in questions worked in a school district that had a merit pay system. These regressions were only estimated using state-level fixed effects. Results for these regressions are presented on Tables 7 and 8. These results suggest that teachers who worked in districts that used merit pay were no more satisfied with their jobs than teachers who worked in districts without merit pay. These results suggest that teachers in merit pay districts are no more dissatisfied with their jobs than are teachers in non-merit pay districts. The effects of the other explanatory variables were similar to those found in the other regressions

Table 3: State-Level Fixed Effects Teacher is satisfied with salary		
Variable	Coefficient	Test Statistic
Male	-0.0149	-1.199
Hours worked	-0.0118	-17.818***
African-American	-0.309	-6.399***
Asian-American	0.186	0.329
White	-0.0526	-1.226

Table 3: State-Level Fixed Effects Teacher is satisfied with salary		
Variable	Coefficient	Test Statistic
School enrollment	-0.0000118	-1.055
Percentage of teacher's students with an IEP	0.000325	1.292
Percentage of teacher's students who are LEP	-0.000599	-1.429
Student-teacher ratio	-0.00145	-1.082
Percentages of teachers in school who are of a racial/ethnic minority	-0.0119	-17.818***
Percentages of students in school who are of a racial/ethnic minority	-0.000479	-1.771*
Teacher's years of experience	-0.0177	-18.559***
School located in urban area	-0.0744	-1.915*
School located in rural area	0.0584	3.404***
Teacher has advanced degree	-0.02466	-1.902*
Elementary school	-0.151	-10.579***
Age of teacher	-0.000575	-0.703
Teacher is union member	-0.0897	-6.201***
Base salary	0.000049	31.862***
Percentage of students in districts who receive free or reduced-fee lunches	0.000415	1.011
Length of school year in days	0.00212	1.368
Teacher received merit pay	0.0414	2.413**
Significant at 10 percent level = * Significant at 5 percent level = ** Significant at 1 percent level = ***		

Table 4: State-Level Fixed Effects Teacher is satisfied with job		
Variable	Coefficient	Test Statistic
Male	-0.0589	-4.358***
Hours worked	-0.00241	-3.351***
African-American	0.0776	1.492
Asian-American	-0.064	-1.06
White	-0.091	-1.964**
School enrollment	-0.0000345	-2.839***
Percentage of teacher's students with an IEP	0.000079	0.289
Percentage of teacher's students who are LEP	-0.000319	-0.717
Student-teacher ratio	0.00254	1.63
Percentages of teachers in school who are of a racial/ethnic minority	-0.0034	-7.939***
Percentages of students in school who are of a racial/ethnic minority	-0.00281	-9.63***
Teacher's years of experience	-0.0016	-1.542
School located in urban area	-0.0327	-0.787
School located in rural area	0.023	-1.249
Teacher has advanced degree	-0.904	-6.404***

Table 4: State-Level Fixed Effects Teacher is satisfied with job		
Variable	Coefficient	Test Statistic
Elementary school	0.122	7.816***
Age of teacher	0.00336	3.774***
Teacher is union member	-0.0476	-3.026***
Base salary	0.0000106	6.282***
Percentage of students in districts who receive free or reduced-fee lunches	-0.00339	-7.617***
Length of school year in days	0.00994	0.588
Teacher received merit pay	0.05338	2.85***
Significant at 5 percent level = ** Significant at 1 percent level = ***		

Finally, as a test of the robustness of the above results, all of the above regressions were re-estimated, but the salary variable was eliminated. The results for these regressions were the same as the results of the regressions that included the salary variable. These results are not presented but are available upon request.

Table 5: District-Level Fixed Effects Merit Districts Only Teacher is satisfied with salary		
Variable	Coefficient	Test Statistic
Male	0.077	1.885*
Hours worked	-0.0152	-6.814***
African-American	-0.35	-2.509**
Asian-American	-0.0502	-0.304
White	-0.14	-1.082
School enrollment	-0.0000518	-1.439
Percentage of teacher's students with an IEP	-0.000704	-0.886
Percentage of teacher's students who are LEP	-0.00329	-2.904***
Student-teacher ratio	-0.00279	-0.391
Percentages of teachers in school who are of a racial/ethnic minority	-0.003399	-2.157**
Percentages of students in school who are of a racial/ethnic minority	0.00078	0.584
Teacher's years of experience	-0.0111	-3.466***
School located in urban area	0.0447	0.344
School located in rural area	0.334	0.927
Teacher has advanced degree	-0.034	-0.768
Elementary school	-0.222	-4.03***
Age of teacher	0.00144	0.554
Teacher is union member	-0.0194	-0.423
Base salary	0.0000429	7.55***
Teacher received merit pay	-0.02	-0.428
Significant at 10 percent level = * Significant at 5 percent level = ** Significant at 1 percent level = ***		

Table 6: District-Level Fixed Effects Merit Districts Only Teacher is satisfied with job		
Variable	Coefficient	Test Statistic
Male	0.00341	0.077
Hours worked	-0.00586	-2.474**
African-American	-0.111	-0.729
Asian-American	-0.407	2.283**
White	-0.278	-1.934*
School enrollment	0.0000444	1.175
Percentage of teacher's students with an IEP	-0.000359	-0.425
Percentage of teacher's students who are LEP	-0.00101	-0.892
Student-teacher ratio	-0.0119	-1.617
Percentages of teachers in school who are of a racial/ethnic minority	-0.00326	-1.987**
Percentages of students in school who are of a racial/ethnic minority	-0.0057	-3.948***
Teacher's years of experience	-0.00118	-0.339
School located in urban area	-0.023	-0.165
School located in rural area	0.0598	0.146
Teacher has advanced degree	-0.057	-1.193
Elementary school	0.228	3.904***
Age of teacher	0.00656	2.333***
Teacher is union member	-0.0837	-1.694*
Base salary	0.00000106	0.176
Teacher received merit pay	0.0349	0.689
Significant at 10 percent level = * Significant at 5 percent level = ** Significant at 1 percent level = ***		

Table 7: State-Level Fixed Effects District-level merit pay variable Teacher is satisfied with salary		
Variable	Coefficient	Test Statistic
Male	-0.016	-1.289
Hours worked	-0.0118	-17.786***
African-American	-0.309	-6.399***
Asian-American	0.0194	0.344
White	-0.0516	-1.202
School enrollment	-0.00000116	-1.041
Percentage of teacher's students with an IEP	0.000322	1.279
Percentage of teacher's students who are LEP	-0.00059	-1.418
Student-teacher ratio	-0.00144	-1.078
Percentages of teachers in school who are of a racial/ethnic minority	-0.00016	-0.401
Percentages of students in school who are of a racial/ethnic minority	-0.000474	-1.754*
Teacher's years of experience	-0.01766	-18.49***
School located in urban area	-0.0744	-1.916*

Table 7: State-Level Fixed Effects District-level merit pay variable Teacher is satisfied with salary		
Variable	Coefficient	Test Statistic
School located in rural area	0.0584	3.404***
Teacher has advanced degree	-0.023	-1.808*
Elementary school	-0.152	-10.614***
Age of teacher	-0.00061	-0.743
Teacher is union member	-0.0892	-6.167***
Base salary	0.0000496	31.842***
Percentage of students in districts who receive free or reduced-fee lunches	0.00041	0.996
Length of school year in days	0.00213	1.377
District has merit pay system	0.0115	0.483
Significant at 10 percent level = * Significant at 1 percent level = ***		

Table 8: State-Level Fixed Effects District-level merit pay variable Teacher is satisfied with job		
Variable	Coefficient	Test Statistic
Male	-0.0604	-4.465***
Hours worked	-0.0023	-3.305***
African-American	0.078	1.507
Asian-American	-0.0625	-1.033
White	-0.0895	-1.929*
School enrollment	-0.000034	-2.816***
Percentage of teacher's students with an IEP	0.000073	0.266
Percentage of teacher's students who are LEP	-0.00031	-0.698
Student-teacher ratio	0.00252	1.629
Percentages of teachers in school who are of a racial/ethnic minority	-0.00339	-7.916***
Percentages of students in school who are of a racial/ethnic minority	-0.0028	-9.607***
Teacher's years of experience	-0.0015	-1.456
School located in urban area	-0.0327	-0.787
School located in rural area	0.0239	1.278
Teacher has advanced degree	-0.088	-6.303***
Elementary school	0.121	7.767***
Age of teacher	0.00331	3.715***
Teacher is union member	-0.0474	-3.01***
Base salary	0.0000106	6.28***
Percentage of students in districts who receive free or reduced-fee lunches	-0.00338	-7.592***
Length of school year in days	0.00103	0.609
District has merit pay system	-0.0077	-0.300
Significant at 10 percent level = * Significant at 1 percent level = ***		

One problem with much of the prior research on this topic is that typically the "merit pay" variable equals one if a teacher receives merit pay and zero otherwise. Defining merit pay in this manner may create problems when estimating the determinants of satisfaction. For example, when using such a definition of merit pay, it would probably be highly unlikely to find a teacher who receives merit pay who is unsatisfied with their job. Thus, the use of this definition of merit pay may bias the results such that one is much more likely to find a positive relationship between merit pay and job satisfaction. In addition, in districts that do not have merit pay systems, all teachers would have a zero for the merit pay variable. Hence, the inclusion of teachers from non-merit pay districts may be problematic from a statistical standpoint since they do not contribute to the variation of the merit pay variable. In order to correct for that problem in the present study, several different merit pay scenarios were estimated, including a universal sample that included all teachers and a merit pay sample that included only teachers who worked in merit pay districts. When estimated with these different data sets, the relationship between merit pay and satisfaction went from being positive for the universal sample to insignificant for the merit pay sample.

Another way in which this problem was controlled was to see whether or not a district-level merit pay system exists. Instead of including an individual-level merit pay variable, a binary variable equaling one if the district had a merit pay system and zero otherwise was included. There are potential statistical issues with the use of this treatment of merit pay as well. For example, there may be many teachers in a merit pay district who do not receive merit pay; hence, they may skew the results since they would probably be unsatisfied and would outweigh the possibly positive reactions of the more meritorious teachers in their district. Results of the present study confirm this theory because the effect of a district-level merit pay system on teacher job satisfaction was found to be insignificant.

CONCLUDING REMARKS

Due to increasing demands of accountability, school districts are putting additional pressure on teachers to perform better in the classroom. Merit pay has been proposed as one way to encourage teachers to do better. Even though merit pay systems are becoming more common, they are not very popular, especially among teachers. Most teachers believe that merit pay, with its emphasis on testing and annual assessments, discourages cooperation and creates few incentives to be creative in the classroom. In addition, teachers believe that they are being unfairly treated because the influences of other agents in the educational process (parent, students, and other teachers) are ignored; all of the blame for the failure of the student is placed squarely on the teacher.

Very few prior studies have examined the relationship between merit pay and teacher job satisfaction (Belfield and Heywood, 2008). In order to fill that void, the present study uses several different methodologies in order to examine the effects of merit pay on teacher job

satisfaction. Results of this study suggest that teachers who receive merit pay are more satisfied with their jobs than are other teachers. However, if only merit pay districts are examined, then that effect becomes insignificant. Finally, teachers who work in merit pay districts are no more satisfied with their jobs than are teachers who work in non-merit pay districts. All of these results are consistent across a series of different estimations.

The present study is significant in this body of research because, as noted above, this is one of the first studies on the topic of the effects of merit pay on teacher satisfaction. One major difference between this study and Belfield and Heywood (2008) is that, in the present study, one of the ways in which merit pay is defined is whether or not a teacher works in a merit pay district. In Belfield and Heywood (2008), the variable was defined as whether or not the teacher receives merit pay. That definition is more problematic, especially with regards to teachers in non-merit pay districts. The present study, however, provides a clearer distinction between teachers who work in a merit pay district and who are thus eligible to receive merit pay and those teachers who work in non-merit pay districts and who will never be able to obtain merit pay, regardless of how proficient they are as teachers. This distinction is important since it highlights more clearly the differences in satisfactions that may result when merit pay systems are used in an educational setting.

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