

Rationality and Students' Misconduct at University: Empirical Evidence and Policy Implications

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Abstract

We investigate the determinants of students' misconduct at university. Using a sample of 310 surveyed students, we find that students are more likely to cheat when they have previous misconduct records, when they perceive academic integrity policy as being poorly enforced, and when they perceive that instructor tolerance toward misconduct incidents is high. Moreover, misconduct behavior tends to increase with students' seniority and the perceived level of course difficulty. Surprisingly, students' motivations toward reading, writing, and learning do not seem to have a valuable impact on the likelihood of their misconduct. Our findings have important policy implications that relate to the university culture of academic integrity, instructors' tolerance vis-à-vis students' misconduct behavior, and the effectiveness of punitive actions.

Keywords: misconduct, motivation, performance, ethics, university policy

1. Introduction

The increasing importance of competition among students and the growing emphasis on the quality of learning outcomes as an initial entry point to the job market have resulted in considerable pressure on students to perform. As a consequence, empirical evidence shows that students' misconduct at university is a global phenomenon that has experienced a pandemic increase among academic institutions over recent decades (Bernardi, Banzhoff, Martino, & Savasta, 2012; McCabe, 2005; Collison, 1990). Kerkvliet (1992) reports that 70% of faculty members find that misconduct at university are a critical problem and 50% to 70% have witnessed misconduct incidents in their classrooms. Misconduct behavior remains a global phenomenon, even if we still record differences in misconduct rates across countries. For example, students from the US, the UK, Australia, China, Ireland, and Japan self-reported respective cheating rates of 62%, 40%, 57%, 71%, 51%, and 72%, (Bernardi and Adamaitis, 2006). Similarly, McCabe et al. (2006) reported that business students cheat more than do non-business students.

Dee and Jacob (2012) discuss the consequences that cheating creates for society and individuals. At the societal level, not only does cheating diminish the signaling quality of educational credentials, it also impacts the intrinsic value of human capital as an aggregate outcome of academic institutions. This devaluation reduces the overall efficiency of a country's educational system. At the student level, cheating negatively impacts the relative performance of honest students compared with their dishonest peers and necessarily implies a fairness problem among cohorts.

In this paper, we investigate the determinants of students' misconduct behaviors at the national university of the United Arab Emirates: UAE University (UAEU). Academic misconduct is defined as an action or attempted action that may result in creating an unfair academic advantage for oneself or any other member of the academic community. To the best of our knowledge, this is the first paper to conduct an empirical analysis of university students' misconduct in a rentier state, specific to Gulf Cooperation Council (GCC) countries. The specificity of the local job market of the UAE oil-based economy motivates our research. Indeed, the provision of well-remunerated public-sector jobs has caused GCC labor markets to exhibit a high degree of segmentation between the private sector and the public sector. The private sector provides relatively low wages, mostly for expatriates, whereas the public sector offers relatively high wages, mostly for nationals. As Forstenlechner and Rutledge (2010) argued, GCC welfare systems are some of the most generous ones globally. In all GCC states, nationals enjoy free education services, health care and housing assistance, and either free or heavily discounted utilities and gasoline. Moreover, jobs in their public sector are quasi-guaranteed for nationals as part of the so-called social contract. These jobs for life provide salaries that are significantly higher than those earned by

expatriates in the private sector, and they also convey an array of benefits, such as relatively shorter working hours, longer holidays, generous pension plans, and other direct and indirect privileges. Not surprisingly, UAE nationals prefer working in the public sector because of the advantageous pecuniary and non-pecuniary working conditions, as well as the social prestige associated with public sector jobs (Al-Ali, 2008). Employment in the UAE is, in principle, guaranteed by the state, and education is free in public universities. There, the sense of academic effort, the intensity of effective competition in the job market, and the relationship to education as a free social service fundamentally differs from the situation in other countries, where education and jobs are competitive in nature and students are therefore incentivized to invest in academic learning so that they can perform well enough in job interviews to deserve their first appointment. The implications of the GCC states' form of social contract would reflect on students' behavior in educational environments through social norms, culture, and attitudes toward the services provided. In fact, education literature documents that student behavior is significantly driven by social norms (Briggs, Workman, & York, 2013), culture and attitudes toward academic integrity (Demagnet & Van Houtte, 2012), and the acceptability of cheating behavior (Jordan, 2001). This interaction makes students' misconduct at universities of rentier states a unique research topic that needs to be managed through a particular approach that accounts for the specificities of the market for education as well as the labor market in these countries.

In our work, we rely on self-reported cheating behavior in formal assessments. We conducted a survey among a diversified pool of undergraduate students to conduct our research. Using a sample of 310 collected responses, and after controlling for instructors' effects as well as for socioeconomic, cultural, and ethnic factors, we show that misconduct behavior increases when students have previous misconduct experiences, when they perceive that academic integrity policy is poorly enforced, and when they perceive that instructor tolerance toward misconduct incidents is high. In addition, misconduct rates tend to increase with students' seniority and their perception of course difficulty. However, misconduct rates decrease with a stronger motivation to obtain a high GPA. Surprisingly, students' motivations toward reading, writing, and learning do not seem to statistically impact the likelihood of their misconduct. That result may be explained by the rentier state context, which distorts students' incentives toward learning.

Our contribution complements previous work on student misconduct at university by focusing on the specific case of a university operating in a rent-based economy. Our results shed more light on academic misconduct practices and response distortions in this particular context and lead to important multilevel policy implications. First, optimal policy responses need to be designed consistently with the spirit of Becker's (1968) findings that extreme sanctions do not necessarily result in decreased rates of misconduct and that a modular or progressive framework of sanctions would be more appropriate than an exclusion of the offender from all public education institutions of the country, if the offense leads to the first, and necessarily the last, conviction. Second, embedding an institutional culture of integrity allows students to gain more knowledge of the costs of cheating, individually and collectively, and increases their awareness about what is understood about academic dishonesty, misconduct, and cheating. Finally, our work stresses the importance of signaling the seriousness of the dissuasive actions that will be used to enforce integrity policies. The role of instructors is crucial in reminding students what their boundaries are with regard to academic integrity and what the repercussions will be if those boundaries are crossed. Instructors should, and must, report cheating incidents in order to give students the right signal about the probability that misconduct will be detected and what loss function to expect as a consequence of cheating. Consistently with recommendations in previous literature, tolerance toward cheating should be maintained at minimum levels.

The remainder of the paper is structured as follows. The next section reviews the literature related to our research question, and the section after that describes the sample, presents the research design, and interprets the empirical findings. Then we discuss the policy implications of our results, and in the final section we present our conclusions.

2. Literature Review

The academic literature presents a massive effort to understand the determinants of cheating behavior in order to design deterrence mechanisms. To date, it has focused primarily on empirical analyses that rely on an economics-of-crime framework (Becker, 1968; Ehrlich, 1973) (Note 1). Basically, scholars have assumed that students are rational utility-maximizing agents who decide to cheat by comparing benefits against costs. For instance, Bunn et al. (1992), Kerkvliet (1992), Mixon (1996), and Kerkvliet and Sigmund (1999) focus on cheating in exams or written assignments. Bunn, Caudill, and Gropper (1992) and Mixon (1996) find that the propensity to cheat decreases with increases in a student's performance, and both studies discuss the analogy between cheating and crime, as introduced by Becker (1968). Furthermore, the literature on student misconduct documents that the propensity to cheat is larger among "heavy drinkers," residents of sororities or fraternities, students with college-educated parents, and women (Kerkvliet, 1992). Giving verbal warnings, using multiple versions of a test,

and increasing the number of proctors are found to decrease cheating rates. Kerkvliet and Sigmund (1999) explore the determinants of source-specific cheating behavior and conclude that large alcohol consumption and low previous performance increase the probability of cheating. Nowell and Laufer (1997) showed that adjunct faculties, large classes, and poor performance all lead to high cheating rates.

Most of the extant research that relates students' misconduct to the economics of crime implicitly assumes that students well understand the normative aspect of cheating. However, recent studies indicate the opposite. In fact, Power (2009) and Howard and Davies (2009) find that students do not have a clear understanding of what really constitutes academic misconduct and scholar ethics, and their perception of the boundaries between what is considered to be ethically acceptable and what is not are quite ambiguous. (Note 2) Interestingly, few studies have addressed students' perception of an act of misconduct. Moreover, Bisping, Patron, and Roskelley (2008) show that students do not perceive a cost to be associated with an act of misconduct when they believe that their professor does not consider such an act to be cheating. Bisping et al.'s (2008) results confirm Schneider's (1999) findings that the prevalence of misconduct behavior may be partially explained by the attitude of college instructors who downplay their efforts to detect misconduct and are reluctant to engage in formal punitive actions, instead choosing to resolve cases of academic misconduct informally and usually lightly. Those researchers conclude that reducing academic misconduct requires students to understand the meaning of academic misconduct and to be aware of the threat of detection and effective sanctions. Their recommendation is thus in line with that of Galles, Graves, Sexton, and Walton (2003), who argue that minimizing students' cheating behavior in the classroom requires first an augmented policy against cheating and second a decrease in instructor tolerance of cheating. (Note 3)

Interestingly, Galles et al. (2003) show that reducing the tolerance toward cheating is more efficient than increasing the harshness of policies of academic integrity is. Similarly, Burrus, McGoldrick, and Schuhmann (2007) investigate the degree to which providing a definition of cheating influences cheating behavior, all else being equal. The results show that students who believe that the severity of punishment for cheating is relatively high are less likely to cheat, and in that light, Burrus et al. conclude that well-publicized honor codes definitely reduce cheating rates. In the same vein, Dee and Jacob (2012) show that increasing student awareness of what constitutes academic misconduct helps reduce their misconduct behavior more than increasing their perception of the probability of detection and the severity of punishment does. Their argument is grounded on the study of Miller et al. (2011) highlight that students who state they would not cheat because of punitive consequences were more likely to report that they cheated in classes and took less responsibility for promoting academic integrity. On the contrary, students whose reasons related to the value of learning, personal character, and it being simply not right to cheat reported less cheating and took more responsibility for academic integrity. Finally, Bernardi et al. (2012) show that a student's immediate environment as it relates to academic integrity has a direct impact on that individual's probability of committing acts of misconduct. The perception that cheating is socially/culturally desirable, and the observation or knowledge that others have "successfully" cheated at university, are relevant factors that are positively associated with cheating rates among students (Magnus, Polterovich, Danilov, & Savvateev, 2002). MacKibban (2013) who surveys students on their perception of teaching effectiveness supports this argument. She finds that overall perception of teaching effectiveness was not related to the rate of academic misconduct across classes. However, her results suggest that the less the course is perceived as difficult and demanding, the more likely students report cheating on exams. Overall, whether we refer to economic literature or education literature, potential explanatory factors for misconduct behavior can be identified at the student level, university level, instructor level, and course level.

3. Research Design

One of the pervasive problems in studies on cheating is the inability of investigators to reach agreement on what is cheating (Thorkildsen et al., 2007). In fact, Jordan (2001) argues that definition of cheating differs among students, faculty members, and educational institutions. For instance, plagiarism and cheating are used interchangeably in many studies (McCabe et al., 2001). The broad definition of academic dishonesty encompasses homework copying among students, copying project-oriented work from the web, and violating intellectual property, among others. We follow recent studies on cheating (e.g. Anderman & Won, 2017; Murdock & Anderson, 2006; Kam et al., 2018; Eaton et al., 2017; Gullifer & Tyson, 2014; Attler et al., 2017; Stiles et al., 2018) who define cheating as academic dishonesty in formal assessments with the intention of altering student's performance.

3.1 Sample

We surveyed a sample of 310 undergraduate students from different colleges, cohorts, and majors. The survey of our pool of 310 students was handled by their instructors during the period from November 15 to November 30,

2016, and the students self-reported their answers on the spot. Courses, sections, and instructors were randomly selected. The classes were surveyed over a very short period (2 weeks) to avoid a time effect in the results. Moreover, we controlled for instructors' bias in the multivariate analysis by introducing a dummy by instructor and hence by capturing the instructors' effects. Results of the survey are presented in Table 1 under student-level, course-level, and university-level sections

Our results show a cheating rate of 41%. We define cheating here as "*effectively cheating in person.*" If we use an alternative, broader definition of cheating, "*planning to cheat or to help someone else to cheat,*" the recorded cheating rate is 47%. These rates are comparable to those reported in other countries (Bernardi & Adamaitis, 2006).

Approximately 18% of our sample was male students, which reflects the distribution of university students by gender. Most were young adults (72% were between 20 and 25 years old) and most were UAE nationals (78%). Nearly all of them were Arab (ethnicity) and Muslim (religion): 96% and 98%, respectively. Approximately 80% perceived themselves to belong to middle-class families. In terms of seniority in the curriculum, 40% were junior (below 40 credit hours) and 28% were senior (above 80 credit hours).

Whereas the students' self-reported motivations toward reading, writing, and learning were relatively high (rates for "*very high motivation*" were 37%, 32%, and 58%, respectively), their highest motivation rates were related to obtaining a high GPA (63%), securing a university degree (81%), and getting a job upon graduation (77%). This is consistent with the above discussion in which obtaining a university degree was a precondition to getting a well-paid job in the public sector of a rentier state.

Interestingly, approximately 56% of the surveyed students acknowledged having had a prior cheating experience. Consistent with previous literature, more than one third of the sample felt that academic cheating is somehow acceptable, hence confirming previous findings (Power, 2009; Howard & Davies, 2009) documenting that students lack a clear understanding of academic misconduct and scholar ethics.

Finally, more than half of the surveyed students thought that instructors' tolerance toward cheating matters in shaping their propensity to cheat, and approximately two thirds of the sample felt that effective and serious punitive actions are important dissuasive tools that reduce the temptation to cheat.

Table 1. Self-Reported Survey results

Dependent							
University Misconduct 1: Effectively cheating in person		Yes	41 %	No	59 %		
University Misconduct 2: Planning to cheat or to help a classmate to cheat		Yes	47 %	No	53 %		
Independent							
1. Student level							
1.1.	Gender	M	16 %	F	84 %		
1.2.	Age	15-20	27 %	20-25	72 %	25-30	1%
1.3.	Nationality	UAE	78 %	Other	22 %		
1.4.	Ethnicity	Arab	96 %	Other	4%		
1.5.	Religion	Muslim	98 %	Other	2%		
1.6.	Socio-economic condition	Low-revenue	7%	Medium-revenue	80 %	High-revenue	13 %
1.7.	Seniority (# cumulated credit hours)	0-40	40 %	40-80	32 %	80-120	28 %
1.8.	Motivation toward reading	Very high	37 %	High	42 %	Moderate	17 %
1.9.	Motivation toward writing	Very high	32 %	High	44 %	Moderate	18 %
1.10	Motivation toward learning	Very high	58 %	High	32 %	Moderate	7%
1.11.	Motivation toward having a higher GPA	Very high	63 %	High	29 %	Moderate	7%
1.12	Motivation toward getting a university degree	Very high	81 %	High	17 %	Moderate	2%
1.13	Motivation toward getting a job	Very high	77 %	High	19 %	Moderate	4%
1.14	Acceptability of cheating	Yes	35 %	No	65 %		
1.15	Prior cheating experience(s)	Yes	56 %	No	44 %		
2. University level							
2.1	Severe punitive actions decrease cheating rates	Yes	65 %	No	35 %		
3. Instructor/Course level							
3.1	Instructors' tolerance toward cheating is high	Yes	54 %	No	46 %		
3.2	Course difficulty level increases cheating rates	Yes	80 %	No	20 %		
3.3	Course boredom increases cheating rates	Yes	53 %	No	47 %		

This table reports the results of the survey conducted on 310 students. For each question, it shows the breakdown of answers for each answer in % of total answers.

3.2 Univariate Analysis

Cheating rates may differ from one subsample to another, depending on the segmentation criteria. Table 2 shows the cheating rates for numerous subsamples and the results of statistical tests for the difference in means between

these rates. First, the results show that cheating rates are high for most senior students (beyond 80 credit hours). Assuming that students are rational, our finding supports the idea that students learn from their cumulative experience during their two first years at university. Accordingly, senior students become more familiar with university policies and build their perception of instructor tolerance toward misconduct. Hence, the cheating rate for senior students is approximately 51%, compared with 37% for less senior ones. The difference is statistically significant at conventional levels, suggesting that seniority is a relevant factor that could partially explain cheating behavior.

Second, Table 2 shows that non-national students recorded a cheating rate that was significantly higher statistically than that of UAE nationals (47% vs. 39%, respectively). Nationality seems to be a relevant factor in explaining academic misconduct behavior. This is not the case for other factors, such as ethnicity, economic condition, age, and religion, probably because our sample was relatively homogeneous. Moreover, gender does not seem to be a relevant factor, as cheating rates do not significantly differ between male and female students.

Third, students having previously experienced academic cheating had significantly higher misconduct rates than did those who self-reported that they had no such experience (58% vs. 19%, respectively). That was also the case for students who thought the courses were boring or difficult. Those results are consistent with our findings about student performance: those who are motivated to perform have significantly lower cheating rates than do those who lack motivation (39% vs. 58%, respectively). Interestingly, motivations toward learning and reading do not seem to be statistically relevant factors that could potentially explain cheating behavior.

Finally, and consistently with Galles et al. (2003) and Schneider (1999), we found that cheating rates were significantly higher for students who perceived that instructors were more tolerant toward academic misconduct (47% vs. 35%). Cheating rates were also higher for those who found the university integrity policy to be poorly enforced or ineffective (45% vs. 39%).

3.3 Regression Analysis

In this analysis, we used a multivariate setting to investigate the factors that explain misconduct behavior. More specifically, we used a probit regression to identify the statistically relevant factors that explained variations in cheating rates. The empirical model is presented as follows:

$$\text{Cheating} = f(\text{Student level factors}; \text{Course level factors}; \\ \text{Instructor level factors}; \text{University level factors}),$$

where cheating is a dummy variable that takes a value of 1 if the student self-reports misconduct and is 0 otherwise. Student-level explanatory factors were: (1) having had, or not having had, prior cheating experiences (1 if yes, 0 otherwise), (2) seniority in the curriculum (1 if above 80 credit hours and 0 otherwise), (3) acceptability of the act of cheating, from a student perspective (1 if acceptable and 0 otherwise), motivation (1 if high motivation and 0 otherwise) toward: (4) reading, (5) writing, (6) learning, (7) having a high GPA, (8) getting a university degree, and (9) obtaining a good job upon graduation. Course-level explanatory factors were: (10) course boredom (1 if the course was perceived as boring and 0 otherwise) and (11) course difficulty (1 if the course was perceived as difficult and 0 otherwise). A university-level factor was captured through (12) students' perception of the effectiveness, or lack of effectiveness, of punitive actions, per university policies (1 if yes, 0 otherwise). Finally, an instructor-level factor was captured through (13) instructor tolerance, or intolerance, toward cheating behavior (1 if yes, 0 otherwise). Probit specification was used to account for the dichotomy of the dependent variable. In all regressions, we controlled for the students' gender, age, nationality, ethnicity, religion, and socioeconomic condition. We also controlled for instructor identity, in order to mitigate any possible bias related to an instructor's psychological impact on the students, which could potentially alter the self-reported outcomes.

Table 2. Univariate analysis - Difference in means of cheating rates by sub-samples

	Gender - Males (1)	Gender - Females (2)	(1) - (2) [t-stat]
Cheating Rate	44.89%	40.23%	(4.66%) [0.6081]
	Age - Under 20 (1)	Age - Above 20 (2)	(1) - (2) [t-stat]
Cheating Rate	39.28%	41.59%	(-2.31%) [-0.3660]
	National Students (1)	Non-National Students (2)	(1) - (2) [t-stat]
Cheating Rate	39.16%	47.14%	(-7.98%)* [-3.9546]
	Dominant Ethnicity (1)	Non-dominant Ethnicity (2)	(1) - (2) [t-stat]
Cheating Rate	40.74%	46.15%	(-5.41%) [-0.3873]
	Dominant Religion (1)	Non-dominant Religion (2)	(1) - (2) [t-stat]
Cheating Rate	41.17%	25.00%	(16.17%) [0.6520]
	Socio-economic cond. - High revenu (1)	Socio-economic cond. - Med./Low revenu (2)	(1) - (2) [t-stat]
Cheating Rate	51.22%	39.41%	(11.81%) [1.4331]
	Seniority - Above 80 Cr. hrs (1)	Seniority - Below 80 Cr. hrs (2)	(1) - (2) [t-stat]
Cheating Rate	51.16%	37.05%	(14.11%)* [3.2732]
	Prior cheating experience(s) (1)	No Prior cheating experience(s) (2)	(1) - (2) [t-stat]
Cheating Rate	58.38%	18.98%	(39.40%)* [7.6119]
	Acceptability of cheating (to students) (1)	Non-Acceptability of cheating (to students) (2)	(1) - (2) [t-stat]
Cheating Rate	42.00%	39.09%	(2.91%) [0.4969]
	Motivation toward reading - Yes (1)	Motivation toward reading - No (2)	(1) - (2) [t-stat]
Cheating Rate	39.43%	46.88%	(-7.45%) [-1.0773]
	Motivation toward writing - Yes (1)	Motivation toward writing - No (2)	(1) - (2) [t-stat]
Cheating Rate	37.71%	51.35%	(-13.54%)* [-3.0897]

	Motivation toward Learning - Yes (1)	Motivation toward Learning - No (2)	(1) - (2) [t-stat]
Cheating Rate	40.56%	44.83%	(-4.27%) [-0.4427]
	Motivation toward Graduation - Yes (1)	Motivation toward Graduation - No (2)	(1) - (2) [t-stat]
Cheating Rate	40.92%	42.86%	(-1.94%) [-0.1025]
	Motivation toward GPA - Yes (1)	Motivation toward a GPA - No (2)	(1) - (2) [t-stat]
Cheating Rate	39.51%	58.33%	(-18.82%)** * [-3.8047]
	Motivation toward getting a Job - Yes (1)	Motivation toward getting a Job - No (2)	(1) - (2) [t-stat]
Cheating Rate	40.80%	45.45%	(-4.65%) [-0.3072]
	Course Boredom - Yes (1)	Course Boredom - No (2)	(1) - (2) [t-stat]
Cheating Rate	45.45%	35.86%	(9.59%)** [2.7162]
	Course Difficulty - Yes (1)	Course Difficulty - No (2)	(1) - (2) [t-stat]
Cheating Rate	44.76%	25.80%	(18.96%*** [3.7380]
	Instructor tolerance toward cheating (1)	Instructor non-tolerance toward cheating (2)	(1) - (2) [t-stat]
Cheating Rate	46.98%	35.40%	(11.58%*** [3.0785]
	Effectiveness of punitive actions (1)	Non-Effectiveness of punitive actions (2)	(1) - (2) [t-stat]
Cheating Rate	38.61%	45.37%	(-6.76%)** [-2.7513]

Note. This table presents the results of t-tests for differences in mean of the cheating rates, run on different subsamples built using student-level, university-level, and instructor/course-level specific factors. Student-level factors are: (1) gender, (2) age (below or above 20 years), (3) nationality (national vs. non-national students), (4) ethnicity, (5) religion, (6) socio-economic condition (high revenue vs. medium/low revenue), (7) seniority in the curriculum (below or above 80 credit hours), (8) having had, or not, prior cheating experiences, (9) acceptability, or not, of the act of cheating from a student perspective, (10) motivation of the student, or not, toward reading, (11) writing, (12) learning, (13) getting a university degree, (14) having, or not, a high GPA, (15) getting, or not, a good job upon graduation, (16) course perceived boredom, or not, for students, (17) course perceived difficulty, or not, for students, (18) instructor tolerance, or not, toward cheating behavior, and (19) effectiveness, or not, of punitive actions as per University policies. Significance levels are as follows: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 3 reports the results of our multivariate analysis, in which we defined cheating as “*effectively cheating in person.*” Being consistent with theoretical expectations, the likelihood of the students’ misconduct increased with their seniority, their perception that a course was difficult, their perception that their instructor was tolerant toward

cheating, their perception that the institutional integrity policy was ineffective, and their having prior records of academic misconduct. Also, the likelihood of students' misconduct was negatively related to the students' motivation toward performance. Surprisingly, student motivations toward learning, reading, and writing did not explain the cross-sectional differences in cheating rates. Moreover, acceptability of cheating did not matter, nor did course boredom.

Table 3. Regression of misconduct rates on student-level, instructor/course-level, and university-level factors

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Prior cheating experience	1.120*** (6.378)	1.117*** (6.348)	1.119*** (6.361)	1.115*** (6.294)	1.124*** (6.361)	1.118*** (6.357)	1.113*** (6.324)
Policy effectiveness	-0.416** (-2.279)	-0.414** (-2.264)	-0.435** (-2.368)	-0.416** (-2.274)	-0.403** (-2.190)	-0.414** (-2.263)	-0.423** (-2.310)
Instructor tolerance	0.371** (2.146)	0.369** (2.135)	0.370** (2.133)	0.369** (2.131)	0.357** (2.049)	0.369** (2.132)	0.365** (2.102)
Course boredom	0.172 (1.006)	0.171 (1.005)	0.172 (1.008)	0.172 (1.007)	0.178 (1.039)	0.187 (1.093)	0.190 (1.104)
Course difficulty	0.526** (2.374)	0.522** (2.347)	0.509** (2.294)	0.526** (2.372)	0.499** (2.238)	0.509** (2.283)	0.543** (2.433)
Student seniority	0.255* (1.783)	0.252* (1.757)	0.250* (1.743)	0.254* (1.777)	0.241* (1.676)	0.250* (1.752)	0.244* (1.706)
Misconduct acceptability	0.170 (0.973)	0.170 (0.974)	0.172 (0.981)	0.173 (0.987)	0.191 (1.085)	0.181 (1.034)	0.181 (1.032)
Motivation – Reading		-0.0299 (-0.295)					
Motivation – Writing			-0.116 (-1.214)				
Motivation – Learning				-0.0264 (-0.231)			
Motivation – GPA					-0.218* (-1.709)		
Motivation – Univ. degree						-0.175 (-0.949)	
Motivation – Good job							-0.131 (-0.788)
Constant	-2.145** (-2.357)	-2.073** (-2.196)	-1.912** (-2.040)	-2.074** (-2.157)	-1.790* (-1.871)	-1.771* (-1.778)	-1.793* (-1.759)
Pseudo-R ²	0.2259	0.2261	0.2294	0.2260	0.2329	0.2281	0.2274
Observations	310	310	310	310	310	310	310

Note. This table presents the results of regressing students' misconduct on different student-level, university-level, and instructor/course-level specific explanatory factors. *Student misconduct takes 1 if the student self-reports misconduct and 0 otherwise.* Explanatory factors are: (1) having had, or not had, prior cheating experiences (1 if yes, 0 otherwise), (2) effectiveness, or not, of punitive actions as per university policies (1 if yes, 0 otherwise), (3) instructor tolerance, or not, toward cheating behavior (1 if yes, 0 otherwise), (4) course boredom (1 if the course is perceived as boring and 0 otherwise), (5) course difficulty (1 if the course is perceived as difficult and 0 otherwise), (6) student seniority in the curriculum (1 if above 80 credit hours and 0 otherwise), (7) acceptability of the act of cheating from a student perspective (1 if acceptable and 0 otherwise), (8) motivation (1 if motivation and 0 otherwise) toward: reading, (9) writing, (10) learning, (11) having a high GPA, (12) getting a university degree, and (13) getting a good job upon graduation. Probit specification is used to account for the dichotomy of the dependent variable. In all regressions, we control for the students' gender, age, nationality, ethnicity, religion, socioeconomic condition, and the instructor's identity. Robust *t*-statistics are reported in parentheses. Significance levels are as follows: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 4. Using an alternative definition of student misconduct

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Prior cheating experience	1.143*** (6.312)	1.158*** (6.295)	1.133*** (6.305)	1.117*** (6.345)	1.144*** (6.337)	1.131*** (6.327)	1.152*** (6.299)
Policy effectiveness	-0.404** (-2.198)	-0.411** (-2.246)	-0.422** (-2.327)	-0.413** (-2.310)	-0.407** (-2.197)	-0.409** (-2.236)	-0.413** (-2.288)
Instructor tolerance	0.451** (2.125)	0.448** (2.145)	0.428** (2.117)	0.402** (2.142)	0.394** (2.088)	0.397** (2.117)	0.441** (2.131)
Course boredom	0.182 (1.023)	0.189 (1.056)	0.190 (1.081)	0.165 (1.005)	0.171 (1.062)	0.183 (1.077)	0.195 (1.084)
Course difficulty	0.577** (2.402)	0.582** (2.360)	0.546** (2.339)	0.604** (2.349)	0.587** (2.289)	0.622** (2.315)	0.588** (2.414)
Student seniority	0.284* (1.790)	0.281* (1.793)	0.295* (1.811)	0.298* (1.788)	0.284* (1.796)	0.286* (1.782)	0.279* (1.736)
Misconduct acceptability	0.183 (0.992)	0.181 (0.994)	0.182 (0.987)	0.179 (0.990)	0.196 (1.105)	0.188 (1.027)	0.191 (1.024)
Motivation – Reading		-0.0312 (-0.305)					
Motivation – Writing			-0.131 (-1.195)				
Motivation – Learning				-0.0428 (-0.207)			
Motivation – GPA					-0.287* (-1.756)		
Motivation – Univ. degree						-0.154 (-1.002)	
Motivation – Good job							-0.227 (-0.714)
Constant	-2.578** (-2.472)	-1.849** (-2.275)	-2.028** (-2.277)	-1.475** (-2.004)	-1.481* (-1.968)	-1.381* (-1.274)	-1.652* (-1.850)
Pseudo-R ²	0.2347	0.2353	0.2368	0.2391	0.2504	0.2381	0.2302
Observations	310	310	310	310	310	310	310

Note. This table presents the results of regressing an alternative measure of student misconduct on different student-level, university-level, and instructor/course-level factors. *Student misconduct takes 1 if the student plans to cheat or to help someone to cheat, and 0 otherwise.* Explanatory factors are: (1) having had, or not had, prior cheating experiences (1 if yes, 0 otherwise), (2) effectiveness, or not, of punitive actions as per university policies (1 if yes, 0 otherwise), (3) instructor tolerance, or not, toward cheating behavior (1 if yes, 0 otherwise), (4) course boredom (1 if the course is perceived as boring and 0 otherwise), (5) course difficulty (1 if the course is perceived as difficult and 0 otherwise), (6) student seniority in the curriculum (1 if above 80 credit hours and 0 otherwise), (7) acceptability of the act of cheating from a student perspective (1 if acceptable and 0 otherwise), (8) motivation (1 if motivation and 0 otherwise) toward: reading, (9) writing, (10) learning, (11) having a high GPA, (12) getting a university degree, and (13) getting a good job upon graduation. Probit model is used to account for the dichotomy of the dependent variable. In all regressions, we control for the students' gender, age, nationality, ethnicity, religion, socioeconomic condition, and for the instructor's identity. Robust *t*-statistics are reported in parentheses. Significance levels are as follows: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

As a test of robustness, we used an alternative, broader definition of cheating: “*planning to cheat or to help someone else to cheat.*” Table 4 reports our empirical findings. Basically, the results support our initial conclusions reported in Table 3.

4. Policy Implications

Our findings shed more light on the determinants of academic cheating in the specific context of a rentier state. In our case of the UAE, the job market is segmented between private and public sectors, with the public sector being more accessible and rewarding to UAE nationals and the private sector being more accessible to expatriates, likely without a comparable reward.

That said, our findings have important policy implications that relate to (1) the university's culture of academic integrity, (2) instructors' tolerance vis-à-vis students' misconduct behavior, and (3) the effectiveness, and hence the dissuasive effect, of punitive actions.

First, 35% of our sample self-reported that they considered cheating in an academic setting to be acceptable. This reflects a common state of mind in which academic honesty and scholar ethics are definitely misunderstood or, at the least, unclear. Among that population, two students out of five would cheat. Consistently with the literature (Dee & Jacob, 2012), we concluded that universities should increase student awareness about academic ethics and should clarify the boundaries between what is acceptable among scholars and what is not. The results of our multivariate analysis show that the acceptability of cheating does not matter empirically in explaining variations in cheating rates, although it matters theoretically. That finding underscores the importance of investing in **building a culture of academic integrity** and scholar honesty, because theoretically the more aware and sensitive students are about ethics in academia, the lower their misconduct rates will be. Moreover, it is unusual that our participants did not report a relationship between misconduct rates and their motivations toward learning, reading, or writing. This result may be specific to our sample, because students behave in accordance with the job market's incentives in the specific case of a rentier state. Universities need to **enhance motivation toward learning** as a driver for academic performance. This result is in line with Miller et al. (2011) who showed that valuing learning and personal character reduces the propensity to cheat.

Also, results show that course difficulty seems to be a driver for misconduct behavior. In line with MacKibban (2013)'s results, efforts should be invested to make course material more intelligible for students, especially for the most conceptual courses in the curriculum. More intense **mentoring efforts** as well as **closer monitoring of student performance** are also solutions that may be interesting to explore, as our results show that when course difficulty decreases, cheating rates are more likely to decrease.

Second, our results show how rational university students behave as they adapt their behavior according to their perception of instructors' tolerance toward misconduct events. We found that the higher that perceived tolerance was, the higher the cheating rates were. As the literature documents, and especially recently by Sattler et al. (2017), instructors tend to report misconduct events rarely because of the cost of the procedure in terms of time and effort. Consequently, on one hand, **universities should improve their institutional environments in a way that eases the administrative process for instructors who report misconduct events** and thereby reduces those costs. On the other hand, **instructors should reduce to a minimum their tolerance of student misconduct**, by assiduously reporting cheating events as part of their duties and in so doing enforcing the policy for academic integrity.

Finally, as Becker (1968) pointed out, punitive actions are more effective when they are implemented effectively and also have the desired dissuasive effect. Becker proved that harshening punishment is not optimal because it is more costly for society. Instead, a **gradual punitive system** that accounts for a student's abilities and make-up while it imposes a required punitive action that is commensurate with the gravity of the offense is shown to be more valuable than enforcing radical punitive actions is. Such a gradual but appropriate punishment system would incentivize instructors to report more misconduct events because they would not fear being the main instigator of an expeditious, harmful, and no-return process.

5. Conclusions

Our work continues previous research on academic dishonesty and scholar ethics. Our innovation lies in the uniqueness of our sample, because it reflects the rational behavior of students who are targeting jobs in a rent-based economy.

Our results show that students' misconduct behavior is related to their seniority, prior experience with cheating, perception of course difficulty, motivation for high performance, and perception of instructor tolerance toward cheating, and also to the effectiveness of the university's policy about integrity.

Our research has straightforward policy implications at the institutional level, instructor level, and student level. The objective is to build a culture of academic integrity in order to enhance the quality of learning outcomes in the educational systems of rentier states. Because of the scarcity of studies that focus on academic misconduct in rentier states, future research should dedicate more attention to looking for optimal responses to scholar misconduct problems in those countries. Such information would provide reliable guidance to policymakers and pave the way for further work on academic misconduct issues, with a particular focus on the region.

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References

- Al-Ali, J. (2008). Emiratisation: Drawing UAE nationals into their surging economy. *International Journal of Sociology and Social Policy*, 28, 365-379, <https://doi.org/10.1108/01443330810900202>
- Anderman, E. M., & Won, S. (2017). Academic Cheating in Disliked Classes. *Ethics and Behavior*, 1-22.
- Asefa, S., & Coalter, T. (2007). Factors That Influence Faculty Decisions Regarding Academic Dishonesty: A Study of a Private Liberal Arts University. *The Journal of Academic Administration In Higher Education*, 3, 43-51.
- Becker, G. S. (1968). Crime and punishment: An economic approach. *Journal of Political Economy*, 76(2), 169-217. https://doi.org/10.1007/978-1-349-62853-7_2
- Bernardi, R. A., & Adamaitis, K. L. (2006). Data contamination by social desirability response bias: An international study of students' cheating behavior. *Research on Professional Responsibility and Ethics in Accounting*, 11, 157-184.
- Bernardi, R. A., Banzhoff, C. A., Martino, A. M., & Savasta, K. J. (2012). Challenges to academic integrity: Identifying the factors associated with the cheating chain. *Accounting Education*, 21(3), 247-263, <https://doi.org/10.1080/09639284.2011.598719>
- Bisping, T. O., Patron, H., & Roskelley, K. (2008). Modeling academic dishonesty: The role of student perceptions and misconduct type. *Journal of Economic Education*, 39(1), 4-21, <https://doi.org/10.3200/JECE.39.1.4-21>
- Blau, I., & Eshet-Alkalai, Y. (2017). The ethical dissonance in digital and non-digital learning environments: Does technology promotes cheating among middle school students? *Computers in Human Behavior*, 73, 629-637. <https://doi.org/10.1016/j.chb.2017.03.074>
- Briggs, K., Workman, J. P., & York, A. S. (2013). Collaborating to cheat: A game theoretic exploration of academic dishonesty in teams. *Academy of Management Learning and Education*, 12(1), 4-17, <https://doi.org/10.5465/amle.2011.0140>
- Bunn, D. N., Caudill, S. B., & Gropper, D. M. (1992). Crime in the classroom: An economic analysis of undergraduate student cheating behavior. *Journal of Economic Education*, 23(3), 197-207. <https://doi.org/10.1080/00220485.1992.10844753>
- Burrus, R. T., McGoldrick, K., & Schuhmann, P. W. (2007). Self-reports of student cheating: Does a definition of cheating matter? *Research in Economic Education*, 38(1), 3-16, <https://doi.org/10.3200/JECE.38.1.3-17>
- Collison, M. N.-K. (1990). Apparent rise in student cheating has college officials worried. *Chronicle of Higher Education*, 36, A33-A34.
- Coren, A. 2011. Turning a Blind Eye: Faculty Who Ignore Student Cheating. *Journal of Academic Ethics*, 9, 291-305. <https://doi.org/10.1007/s10805-011-9147-y>
- Dee, T. S., & Jacob, B. A. (2012). Rational ignorance in education: A field experiment in student plagiarism. *Journal of Human Resources*, 47(2), 397-434. <https://doi.org/10.3368/jhr.47.2.397>
- Demagnet, J., & Van Houtte, M. (2012). Teachers' attitudes and students' opposition: School misconduct as a reaction to teachers' diminished effort and affect. *Teaching and Teacher Education*, 28(6), 860-869, <http://dx.doi.org/10.1016/j.tate.2012.03.008>
- Eaton, S. E., Guglielmin, M., & Otoo, B. (2017). Plagiarism: Moving from punitive to pro-active approaches. *Selected Proceedings of the IDEAS Conference 2017 Leading Educational Change* (pp. 28-36). Calgary, Canada.
- Ehrlich, I. (1973). Participation in illegitimate activities: A theoretical and empirical investigation. *Journal of Political Economy*, 81(3), 521-565. <https://doi.org/10.1086/260058>
- Forstenlechner, I., & Rutledge, E. (2010). Unemployment in the Gulf: Time to update the "Social Contract." *Middle East Policy*, 17(2), 38-51, <https://doi.org/10.1111/j.1475-4967.2010.00437.x>
- Galles, G., Graves, P. E., Sexton, R. L., & Walton, S. M. (2003). Monitoring costs and tolerance levels for classroom cheating. *American Journal of Economics and Sociology*, 62(4), 713-719,

<https://doi.org/10.1111/1536-7150.00242>

- Gullifer, J. M., & Tyson, G. A. (2014). Who has read the policy on plagiarism? Unpacking students' understanding of plagiarism. *Studies in Higher Education, 39*, 1202-1218. <https://doi.org/10.1080/03075079.2013.777412>
- Howard, R. M., & Davies, L. J. (2009). Plagiarism in the Internet Age. *Educational Leadership, 66*(6), 64-67. Retrieved from www.ascd.org/.../educational-leadership/mar09/.../Plagiarism-in-the-Internet-Age.aspx
- Jordan, A. E. (2001). College student cheating: The role of motivation, perceived norms, attitudes, and knowledge of institutional policy. *Ethics and Behavior, 11*(3), 233-247. https://doi.org/10.1207/S15327019EB1103_3
- Kam, C. C. S., Hue, M. T., & Cheung, H. Y. (2018). Plagiarism of Chinese secondary school students in Hong Kong. *Ethics and Behavior, 28*, 316-335. <https://doi.org/10.1080/10508422.2017.1333909>
- Kerkvliet, J. (1992). Cheating by economics students: A comparison of survey results. *Journal of Economic Education, 25*(2), 121-133. <https://doi.org/10.1080/00220485.1994.10844821>
- Kerkvliet, J., & Sigmund, C. L. (1999). Can we control cheating in the classroom? *Journal of Economic Education, 30*(4), 331-343. <https://doi.org/10.1080/00220489909596090>
- MacKibban, A. R. (2013). Students' Perceptions of Teacher Effectiveness and Academic Misconduct: An Inquiry into the Multivariate Nature of a Complex Phenomenon. *Ethics and Behavior, 23*(5), 378-395. <https://doi.org/10.1080/10508422.2013.787918>
- Magnus, J. R., Polterovich, V. M., Danilov, D. L., & Savvateev, A. V. (2002). Tolerance of cheating: An analysis across countries. *Journal of Economic Education, 33*(2), 125-35. <https://doi.org/10.1080/00220480209596462>
- McCabe, D. L. (2005). Cheating among college and university students: A North American perspective. *International Journal for Educational Integrity, 1*, 1. <http://dx.doi.org/10.21913/IJEL.v1i1.14>
- McCabe, D. L., Butterfield, K. D., & Trevino, L. K. (2006). Academic Dishonesty in Graduate Business Programs: Prevalence, Causes and Proposed Action. *Academy of Management Learning and Education, 5*(3), 294-305. <https://doi.org/10.5465/amle.2006.22697018>
- McCabe, D. L., Treviño, L. K., & Butterfield, K. D. (2001). Cheating in academic institutions: A decade of research. *Ethics and Behavior, 11*, 219-232. https://doi.org/10.1207/S15327019EB1103_2
- Miller, A., Shoptaugh, C., & Wooldridge, J. (2011). Reasons Not to Cheat, Academic-Integrity Responsibility, and Frequency of Cheating. *The Journal of Experimental Education, 79*, 169-184. <https://doi.org/10.1080/00220970903567830>
- Mixon, F. G. Jr. (1996). Crime in the classroom: An extension. *Journal of Economic Education, 27*(3), 195-200. <https://doi.org/10.1080/00220485.1996.10844907>
- Murdock, T. B., & Anderman, E. M. (2006). Motivational perspectives on student cheating: Toward an integrated model of academic dishonesty. *Educational psychologist, 41*, 129-145. https://doi.org/10.1207/s15326985ep4103_1
- Nowell, C., & Laufer, D. (1997). Undergraduate student cheating in the fields of business and economics. *Journal of Economic Education, 28*(1), 3-12. <https://doi.org/10.1080/00220489709595901>
- Power, L. G. (2009). University students' perceptions of plagiarism. *Journal of Higher Education, 80*(6), 643-622. <https://doi.org/10.1080/00221546.2009.11779038>
- Sattler, S., Wiegel, C., & Veen, F. V. (2017). The use frequency of 10 different methods for preventing and detecting academic dishonesty and the factors influencing their use. *Studies in Higher Education, 42*, 1126-1144. <https://doi.org/10.1080/03075079.2015.1085007>
- Schneider, A. (1999). Why professors don't do more to stop students who cheat. *Chronicle of Higher Education, 45*(20), A8-A10.
- Shanahan, K. J., Hopkins, C. D., Carlson, L., & Raymond, M. A. (2013). Student Identification of Academic Cheating Typology And The Link To Shoplifting Motivation. *Marketing Education Review, 23*, 163-178. <https://doi.org/10.2753/MER1052-8008230205>
- Stiles, B. L., Wong, N. C. W., & LaBeff, E. E. (2018). College Cheating Thirty Years Later: The Role of Academic Entitlement. *Deviant Behavior, 39*, 823-834. <https://doi.org/10.1080/01639625.2017.1335520>

Notes

Note 1. Although we focus on studies that rely on the economics-of-crime framework, Shanahan et al. (2013) provides an excellent survey on wider motivations of cheating. They highlight studies on time versus efforts, peer influence, perceived risk of getting caught and unattainable grades.

Note 2. Interestingly, a recent study by Blau and Eshet-Alkalai (2017) explores the rapidly expanding phenomenon of technology-based academic dishonesty. These findings indicate that students conduct academic dishonesty despite its perception as unethical. In the digital setting, plagiarism is the most common type of academic dishonesty, perceived as the most legitimate. In the non-digital setting, cheating and fabrication are the most common types of academic dishonesty, perceived as the most legitimate.

Note 3. However, it is worth mentioning that little is known about the role of faculty member's actions against integrity violations (Asefa and Coalter 2007; Volpe, Davidson, and Bell 2008; Coren 2012; Teh and Paull 2013). Recently, Sattler et al. (2017) examines the use frequency by German faculty of 10 different methods for preventing and detecting cheating on exams, plagiarism, and falsification and/or fabrication of data. They show that the use of different prevention and detection methods varies strongly depending on the targeted type of academic dishonesty. Despite relatively strong moral objections to academic dishonesty, not all faculty vigorously engaged in detection and prevention methods. Their decisions to apply a method were most consistently influenced by the perceived effort needed to apply it, its efficacy, and external expectations that it be applied.

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